OCS Study MMS 2006-020

North Slope Economy, 1965 to 2005

Final

Prepared for the

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April 2006

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OCS Study
MMS 2006-020

Final Report

North Slope Economy
1965 to 2005

Prepared for:

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Alaska Region
Social and Economic Studies Program
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Abbreviations

ACCI	ASRC Contracting Company, Inc.
ADF&G	Alaska Department of Fish and Game
AEF	Arctic Education Foundation
AEWC	Alaska Eskimo Whaling Commission
AHFC	Alaska Housing Finance Corporation
AIDEA	Alaska Industrial Development and Export Authority
DOLWD	Alaska Department of Labor and Workforce Development
ANCSA	Alaska Native Claims Settlement Act
ANILCA	Alaska National Interest Lands Conservation Act
ANTHC	Alaska Native Tribal Health Corporation
ANWR	Arctic National Wildlife Refuge
APC	Alaska Petroleum Contractors
ASCG	Arctic Slope Consulting Group
ASRC	Arctic Slope Regional Corporation
ASWS	Arctic Slope World Services
BEA	U.S. Bureau of Economic Analysis
BIA	U.S. Bureau of Indian Affairs
BIDCO	Business and Industrial Development Corporation
BLM	U.S. Bureau of Land Management
BMC	Bowhead Manufacturing Company, LLC
CFFR	Consolidated Federal Funds Report
CGP	Comprehensive Grant Program
CIP	NSB Capital Improvement Program
COE	U.S. Army Corps of Engineers
CPI	Consumer Price Index
DCCED	Alaska Department of Commerce, Community, and Economic Development
DEC	Alaska Department of Environmental Conservation
DEW	Distant Early Warning
DHSS	U.S. Department of Health and Social Services
DoD	U.S. Department of Defense
DOL	U.S. Department of Labor
DOLWD	Alaska Department of Labor and Workforce Development

DOT	U.S. Department of Transportation
DOT & PF	Alaska Department of Transportation and Public Facilities
DWM	NSB Department of Wildlife Management
EA	Environmental Assessment
EED	Alaska Department of Education and Early Development
EIS	Environmental Impact Statement
FAA	Federal Aviation Authority
FIRE	Finance, Insurance, and Real Estate
FY	Fiscal Year
GAO	U.S. General Accounting Office
HUBZone	Historically Underutilized Business Zone
HUD	U. S. Department of Housing and Urban Development
IHLC	Iñupiat History Language and Culture Commission
IRA	Indian Reorganization Act
ISER	Institute of Social and Economic Research, University of Alaska Anchorage
JV	Joint Venture
KIC	Kaktovik Iñupiat Corporation
LLC	Limited Liability Corporation
MGL	Municipal Grants and Loans
MMS	U.S. Minerals Management Service
NAICS	North American Industry Classification System
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOL	Net Operating Loss
NPR-A	National Petroleum Reserve - Alaska
NSB	North Slope Borough
O&M	Operations and Maintenance
OCS	Outer Continental Shelf
PMC	Piquniq Management Corporation
SBA	U.S. Small Business Administration
SBCs	Small Business Concerns
SIC	Standard Industrial Classification
TAPS	Trans-Alaska Pipeline System

TCU	Transportation, Communications, and Utilities
TNHA	Tagiugmiullu Nunamiuulu Housing Authority
TOW	Top of the World Hotel
TT	Tundra Tours
UIC	Ukpeagvik Iñupiat Corporation
UICC	UIC Construction LLC
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
VSW	Village Safe Water

Executive Summary

The Minerals Management Service (MMS) commissioned this study to provide a basis for socioeconomic analyses required by the Outer Continental Shelf lands Act and the National Environmental Policy Act (NEPA). Information from this study establishes a baseline for the required analyses for environmental impact statements (EIS's), environmental assessments (EA's), and other NEPA documentation. These analyses are for lease sales, development and production plans, and related OCS activity in the Beaufort Sea, Chukchi Sea, and Hope Basin planning areas. In general, this study is intended to provide a historical region-wide perspective of the changes in the economy of the North Slope from 1965 to 2005.

While change has been a constant for the inhabitants of the North Slope, several major events occurring during the last few decades contributed to key structural changes that created the North Slope economy as it exists today; these events include Alaska statehood in 1959, the discovery of oil in Prudhoe Bay in 1968, the enactment of the Alaska Native Claims Settlement Act (ANCSA) in 1971, the establishment of the North Slope Borough (NSB) in 1972, passage of the Alaska National Interest Lands Conservation Act in 1980, and opening of the National Petroleum Reserve-Alaska for oil and gas development. This study explores the structural changes that have had significant economic, institutional, and social impacts on the region. The following sections describe some of the major highlights of the report.

Changes in Employment and Economic Activities

Prior to 1968, employment opportunities on the North Slope were primarily limited to federal and state activities, and North Slope villages could only afford limited local government. The discovery of oil in Prudhoe Bay in 1968, formation of the regional and village Alaska Native corporations after passage of the ANCSA in 1971, and formation of the NSB in 1972 dramatically changed the physical and economic infrastructure of the region. These events created a more diverse economy with increased activities in construction, oil and gas extraction, and support sectors such as transportation, communications, and utilities, and other service sectors. While employment and total earnings in the region increased significantly, the wealth created (from net earnings) did not necessarily create significant effects in the regional economy, as most of these dollars were earned by non-residents and were not re-spent in the regional economy. The local government sector is the region's major employer of North Slope residents.

The Role of Local Government

Through its ability to levy taxes on oil and gas properties within the Borough, the NSB government has provided employment and services to all North Slope communities and has been the largest employer of North Slope Iñupiat. The NSB has financed major infrastructure projects primarily with property tax revenues. The NSB has also leveraged federal and state funds to provide for public services to all North Slope communities. As oil and gas production and pipeline property depreciates, tax revenues to the Borough also decline. The declining revenues are causing significant budgetary challenges, leading to reductions in the scale of capital projects and increased efforts in efficiently managing operating income.

The Role of For-Profit Alaska Native Corporations

The Arctic Slope Regional Corporation (ARSC) and eight village corporations that were formed under ANCSA have been a significant economic force in the region, providing jobs to residents and opportunities to be involved in all sectors of the economy (i.e. construction, oilfield activities, retail and service sector, etc.). Since 1973, ASRC has increased its revenues at an average rate of 39 percent per year. In 2003, the corporation's gross revenues amounted to about $1 billion. Both ASRC and the village corporations have served as vehicles to channel Native assets and capital toward productive investments on behalf of their shareholders. While they are required by law to make good faith efforts at earning financial returns for their shareholders, they also put emphasis on hiring their shareholders, providing for educational needs of their shareholders and children, and remaining involved in political and social issues.

The Role of Federal, State, and Tribal Governments and Non-Profit Organizations and Important Economic Linkages in the Region

Aside from the large, multinational corporations that produce oil on the North Slope, the major players in the North Slope economy are the Alaska Native corporations and the various government sectors (federal, state, and local governments). Most of these entities own and manage lands in the region, provide employment to North Slope residents, and provide resources to carry out infrastructure development and community operations. The NSB, given its functions and powers, is at the center of the web of linkages among these various entities, funneling federal and state dollars as well as property tax revenues to manage its physical/natural resources and provide public services for its residents.

Individual and Household Economic Impacts and Responses

The substantial expansion of public facilities and services that has occurred in North Slope communities over the past 25 years has significantly improved the quality of village life. Significant improvements have occurred in water and sanitation facilities, health and social services, education, housing, public safety, transportation and communication. While long-standing income inequalities between Iñupiat and non-Iñupiat households continue, income increases among Iñupiat households appear to be fairly evenly distributed. To some extent, the income increases experienced by North Slope households have been offset by the high cost of living. Surveys indicate that subsistence resources continue to be of economic and cultural importance to residents, although the adoption of modern technology has raised the cost of participating in subsistence activities. While North Slope residents generally agree that the overall quality of life in their communities has improved, they continue to express concern about the social effects of rapid economic development in the region.

1 Introduction

The Minerals Management Service (MMS) commissioned this study to provide a basis for socioeconomic analyses required by the Outer Continental Shelf lands Act and the National Environmental Policy Act (NEPA). Information from this study establishes a baseline for the required analyses for environmental impact statements (EIS's), environmental assessments (EA's), and other NEPA documentation. These analyses are for lease sales, development and production plans, and related OCS activity in the Beaufort Sea, Chukchi Sea, and Hope Basin planning areas. In general, this study is intended to provide a historical region-wide perspective of the changes in the economy of the North Slope from 1965 to 2005.

1.1 Analytical Framework/Approach

The analytical approach is dictated by the following objectives:

1) To define and document changes in the North Slope regional economy in terms of:
   a) Structure
   b) Composition
   c) Operation/Function
   d) Linkage of the economic dimensions listed above (from a to c) to key historic institutional milestones
2) To provide a historical account of economic activities in the NSB and present trend lines, charts, and diagrams that would depict the changes in the economy of the region through the years.
3) To characterize the evolution of the NSB economy with respect to six key components:
   a) The structure of the North Slope economy in terms of employment and income within sectors or industries, and the demographic composition of labor.
   b) Revenue and expenditure patterns of the NSB and city governments.
   c) The role of ASRC and village for-profit Alaska Native corporations in the economy.
   d) The role of non-profit corporations, tribal governments, and federal and state governments.
   e) Linkages among the various entities described above.
   f) The response to change of household economies and the effects of economic change on traditional subsistence practices.

The following aspects of the "North Slope economy" are included in this report:

- Permanent residential communities of the North Slope which are now within the boundaries of the NSB.
- The NSB as a government.
- The NSB property tax, which includes the substantial revenues received from the oil industry infrastructure centered at Prudhoe Bay.
- Linkages among public and private entities, including the North Slope oil industry centered at Prudhoe Bay.

Except for the linkages identified above, the term "North Slope economy" is not meant to include the North Slope oil industry and all revenues, expenditures and employment thereof.

The following sections describe the specific issues investigated and the analytical approach used for each of the six major tasks called for in the study.

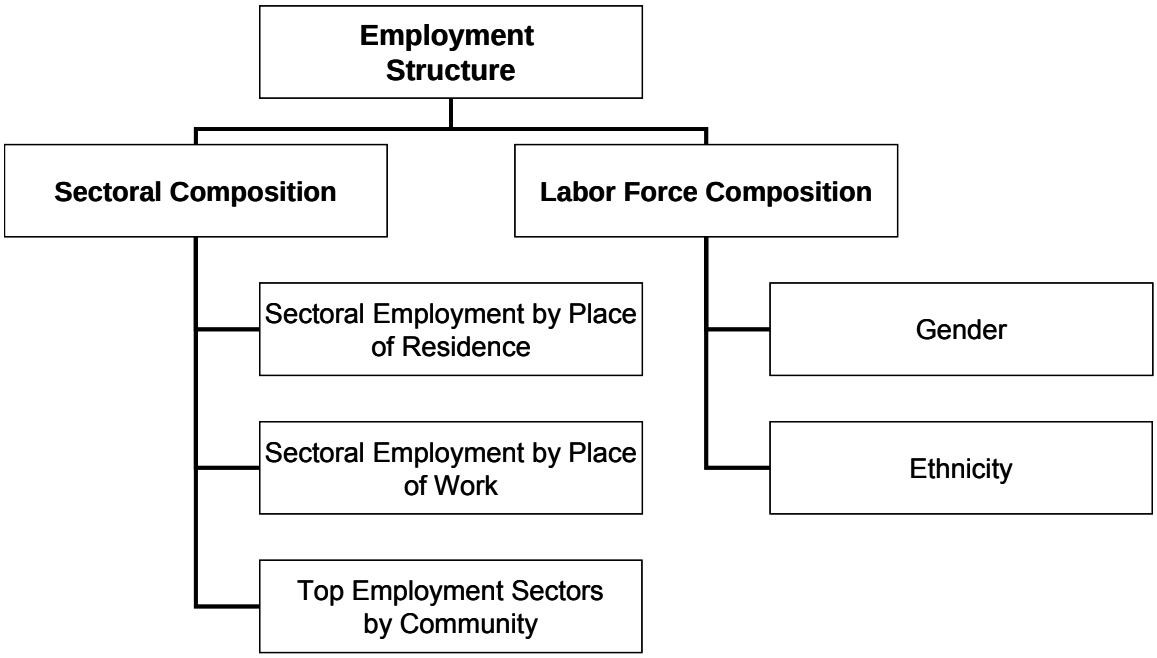
Task 1: Structure of the North Slope economy

As an economy moves from a limited cash economy to a more diverse and cash-based economy, shifts in its structure or composition occur. In the North Slope, several major events resulted in changes in employment sectors and in demographic composition of the labor force. This study documents the shifts in employment within sectors or industries and employment by major employers. These indicators will show the shifts in the level of economic diversity or shifts in major economic drivers in the communities.

Resident employment data were obtained from the North Slope Borough Department of Planning and Community Services and Alaska Department of Labor and Workforce Development (DOLWD) for the major sectors of the North Slope economy, including construction, trade, services, and government. Employment data by place of work from DOLWD, which include the employees of the multinational oil producers, are also presented to illustrate the difference between the resident and non-resident employment on the North Slope. DOLWD data also shows year-to-year changes in employment from the late 1960s to present while the U.S. Census and the NSB Censuses are based on periodic surveys. Beyond the provision of quantitative trend data, one of the major subtasks for this study element was to synthesize and provide a narrative interpretation of employment data and its fluctuations through the years[1]. Data by sector, type of employment, and by major employer (to the extent available) are presented in graphic form where possible to illustrate direction and magnitude of trends. Figure 1-1 provides a conceptual framework for examining the structure of the North Slope economy.

[1] Historical income data are presented and discussed under *Task 6: Individual and Household Economic Response to Change;* as part of the discussion on quality of life indicators.

Figure 1-1. Analytical Framework for the Structure of the North Slope Economy



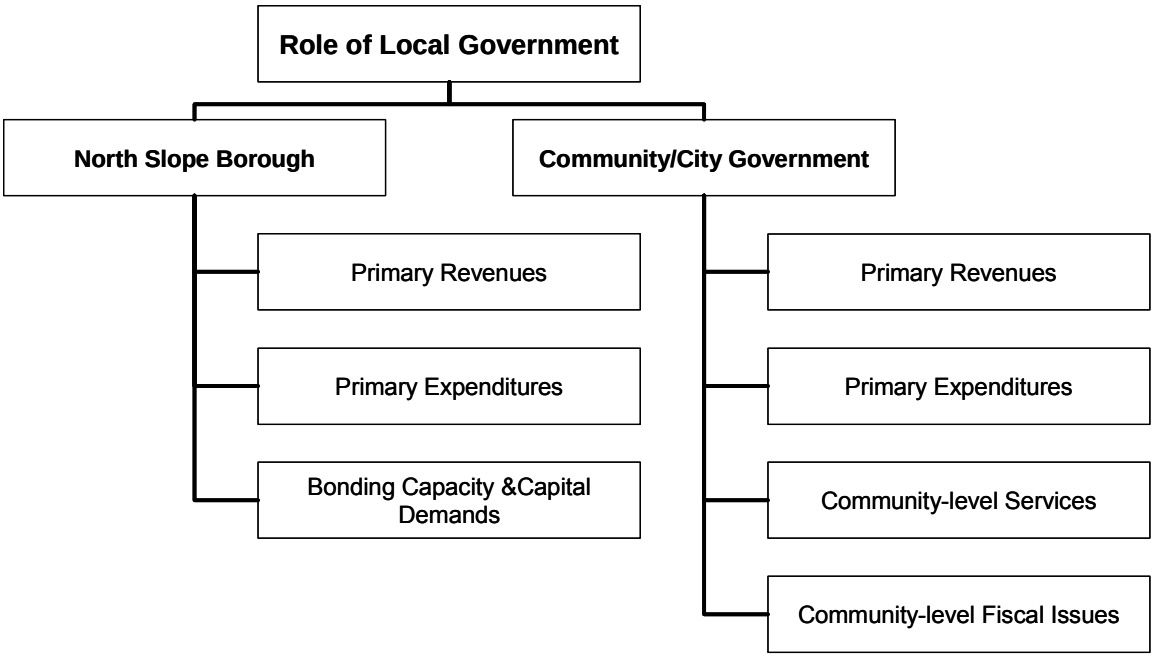
Task 2: The role of local governments

The purpose of this task is to determine the role of local governments (NSB and city governments) in shaping the North Slope economy. To that end, the amount and distribution of NSB revenues and expenditures from 1965 to the present are examined, including the NSB's fiscal policy, revenue sharing, and its budgeting process. Revenues are classified by major source, such as taxes, service charges, enterprise fund revenues, other locally generated revenues, federal assistance, state revenue sharing, state municipal assistance, other external revenues, educational funds, and capital project revenues. Expenditures are also classified by major budget categories such as administrative/finance, council/assembly, planning/zoning, other government, public safety, public works, health care, other public services, education, capital projects, and debt retirement. Revenue and expenditure categories may differ by political entity and time period (as dictated by the availability of data). The study also touches on the interplay between bonding and debt retirement and annual operating general-fund expenditures.

Documenting the pattern of government revenues and expenditures in the North Slope is critical due to the significant role played by the Borough and city governments in the regional economy. The regional economy and separate local economies are largely driven by government expenditures, with the exception of the Prudhoe Bay industrial complex at Deadhorse. The significant role of government in the economy is examined using revenue and expenditure patterns, as well as quantitative measures of housing and infrastructure investments and other public service improvements. The NSB and state government are the dominant entities in the region capable of undertaking large capital projects.

Data were collected from the NSB and city governments within the Borough, and other publicly available reports. The data series are as complete as possible for each government entity. In addition, each series is explained (documentation of patterns include a discussion of revenues and expenditures for each government entity). Figure 1-2 shows the different parameters examined in analyzing the role of local governments in shaping the North Slope economy.

Figure 1-2. Analytical Framework for the Role of Local Government in Shaping the North Slope Economy



Task 3: The role of for-profit Alaska Native corporations

The primary objective of Task 3 is to identify, describe, and assess the role and impact of for-profit Alaska Native corporations on the North Slope economy. Overlaying the North Slope is one regional corporation, ASRC, and eight village corporations that were established after passage of ANCSA (Table 1-1). The major contributions of the Alaska Native corporations, their subsidiaries, and joint ventures to the North Slope economy include local investment, employment, and tax payments.

Table 1-1. Village Corporations on the North Slope

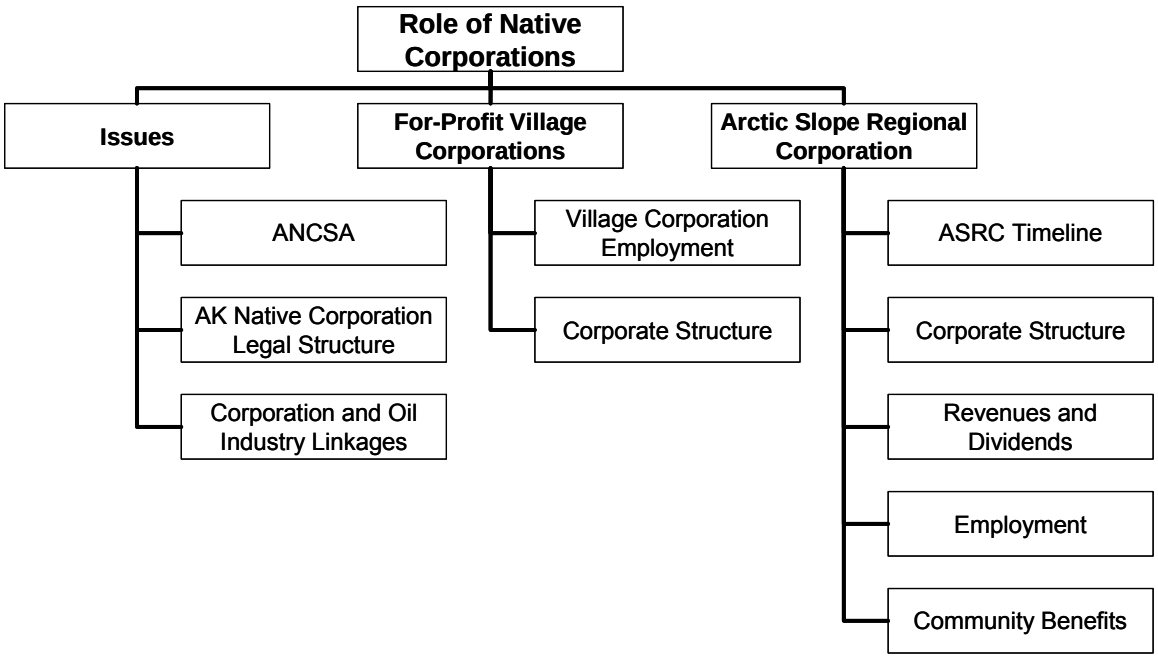
Village	Village Corporation
Anaktuvuk Pass	Nunamiut Corporation
Atqasuk	Atqasuk Corporation
Barrow	Ukpeagvik Iñupiat Corporation
Kaktovik	Kaktovik Iñupiat Corporation
Nuiqsut	Kukpik Corporation
Point Hope	Tikigaq Corporation (formerly Tigara)
Point Lay	Cully Corporation
Wainwright	Olgoonik Corporation

An important step in this analysis was to clarify economic relationships between the ASRC and its for-profit affiliates within and outside NSB boundaries and with the village corporations enumerated above.

Where possible, information was obtained from the Alaska Native corporations regarding their operations, investments and employees for both non-profit and for profit affiliates and their joint ventures and subsidiaries. The study presents diagrams, bar charts, trend lines, and other appropriate

illustrations of the changes in employment, income, and tax revenues as related to the contributions of Alaska Native corporations to the regional economy. The figure below (Figure 1-3) shows the different components of the analysis.

Figure 1-3. Analytical Framework for the Role of Alaska Native Corporations in Shaping the North Slope Economy



Task 4: The role of federal and state governments, tribal governments, and non-profit organizartions

The goal of Task 4 is to describe the role of these various entities in the economies of North Slope communities over time. Information on their revenues, expenditures, and the number of jobs provided is presented. The federal and state governments have historically played a significant role in the North Slope economy by providing employment and basic public services. In recent years, tribal governments and various non-profit organizations have also become important players in the provision of public sector services on the North Slope.

Task 5: Economic linkages among various entities

The goal of Task 5 is to provide an overview of the relational ties or linkages among the various entities described in previous chapters and describe the importance of these linkages to the North Slope economy. The relational ties or linkages that have evolved over the years form a complex web or network of federal, state, local, and tribal government agencies and for-profit Alaska Native corporations and non-profit organizations that provides services to residents of the North Slope. These linkages act as a means through which there can be a transfer and flow of resources—whether material (money, equipment) or non-material (information, support, training). They also link up not only the organizations, agencies, and actors themselves, but their actions: policies, programs, and projects.

Task 6: Individual and household economic impacts and responses

The goal of Task 6 is to link higher-level economic changes seen on the North Slope over the 1965-2005 period, as described in Tasks 1 through 5, to economic impacts and responses at the individual and household level. Clearly, one of the most important components in reflecting changes in the North Slope economy through the years is the change in lifestyle and quality of life of its residents. This has been a major focus of NSB activities over the years, with direct and indirect initiatives being undertaken to improve the quality of life, including a range of large capital improvement program undertakings, from infrastructure and utilities improvements to the upgrading of individual dwelling units. Beyond these more or less formal initiatives, as structural economic changes occur, people (as individuals and groups, including households) are presented with new opportunities and/or face new constraints, and react according to their evaluation of the situation. This component of the study describes changes in individual and household economics based on changes in real household income and other indicators of quality of life (type of sanitation services, educational attainment, etc).

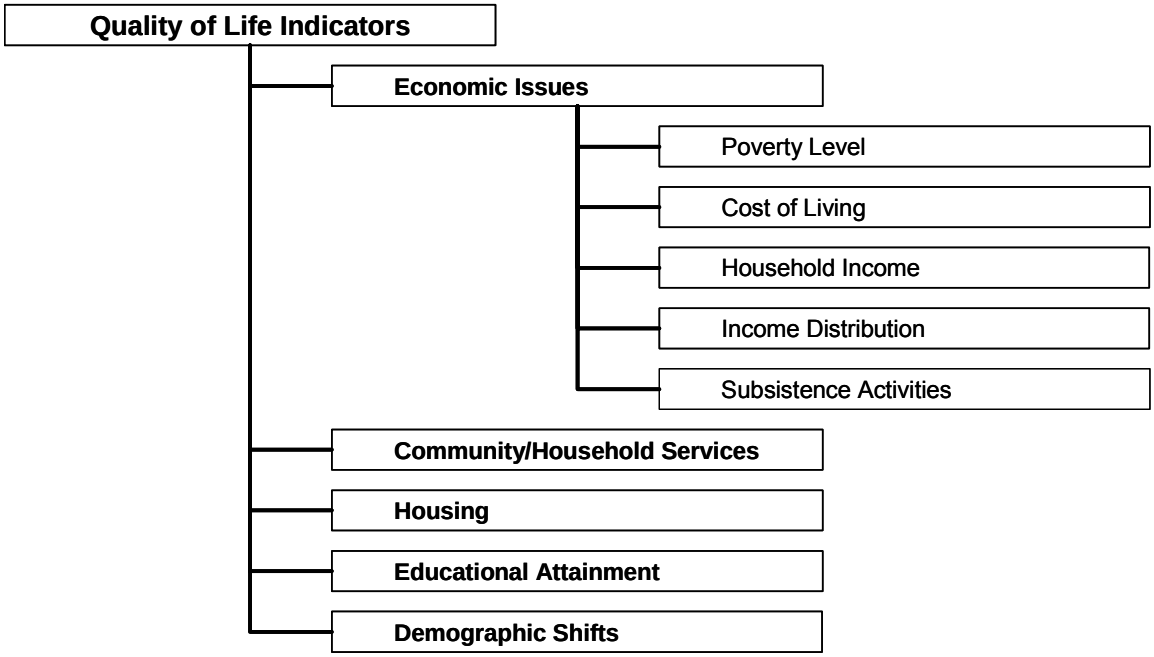
Furthermore, the relationship between the cash economy and traditional subsistence practices in the non-cash household economy and how this has changed over time is an important focus in this task. The fundamental question is "To what extent is the cash income (and the effort to procure it) complementary to subsistence participation and outcomes?" Clearly, as mechanized transportation has replaced dog sleds and skins boats, income is required for subsistence pursuits. However, factors that influence participation in subsistence activities are many and complex. These include inter-household sharing relationships, the availability of game, wage opportunities, and the annual leave policies of employers, as well as short- and long-run considerations, such as the conveyance of traditional ecological knowledge. The focus of this sub-task was to summarize in meaningful ways empirical data from studies depicting subsistence effort and outcomes and to relate this information to other measures of conventional economic indicators, including wage income, labor force participation, and demography. Several sources of data were used in this discussion; including those summarizing research sponsored by both MMS and the Alaska Department of Fish and Game, as well as research supported by the NSB and the National Science Foundation studies of sustainability in the Arctic.

A second specific sub-task was to investigate socio-economic differences between Iñupiat and non-Iñupiat individuals or households using census and other data. Differences between these two groups were expected, as the sole reason that many non-Iñupiat are on the North Slope is to take advantage of employment opportunities.

The data for this task were drawn from many of the same sources listed for the previous tasks.

The framework for analyzing economic impacts and responses at the individual and household level is provided in Figure 1-4.

Figure 1-4. Analytical Framework for Individual and Household Economic Impacts and Responses



1.2 Data Issues

The analysis of economic trends on the North Slope was constrained by the availability and consistency of data for the period 1965 to the present. Detailed data on some socio-economic indicators for the region were limited to those provided by periodic censuses or surveys. Because economic and demographic data were not available for every year within the time frame of the study, trend lines were projected in years that have missing data when appropriate.

Changes in the geographic scope and collection methods used by the U.S. Census Bureau for the decennial censuses and the employment and earnings data by DOLWD created difficulties and challenges in providing comparable year-to-year data. The NSB was incorporated in 1972. Prior to the formation of the Borough, the U.S. Census data for 1960 and 1970 covered a smaller geographic region (known as the Barrow Census Division) that included the communities of Anaktuvuk Pass, Barrow, and Wainwright. By 1980, the Census data covered all the eight communities in the NSB geographic region: Anaktuvuk Pass, Atqasuk, Barrow, Kaktovik, Nuiqsut, Point Hope, Point Lay, and Wainwright. Similarly, DOLWD provides two data series that encompass differences in geographic scope similar to those that occur in the U.S. Census data. The employment figures in the first data series (1965 to 1979) are for the Barrow-North Slope Division, while the figures in the second data series (1980 to present) are for the NSB region.

The socio-economic data collected for the North Slope were primarily obtained through surveys. In general, surveys are sensitive to factors such as the time of the year in which the survey is administered (often referred to as the reference week), the types of questions asked, and the manner in which they are asked. Changes in the surveys conducted on the North Slope since the 1960s affect the comparability of time series data. For example, the recording of employment status by the U.S. Census Bureau has changed over time; the 1960 employment status data were presented for people 14 years old and over, while employment status for the 1970 tabulations included people 16 years

old and over. This change was made in 1970 to conform to the official measurement of the labor force as revised in 1967 by the U.S. Department of Labor.

The NSB economic profile and census report series contain information that is directly applicable to some of the above tasks, particularly the description of economic impacts and responses at the individual and household level. Unfortunately, the data provided in these economic profile and census reports do not evenly cover the time span covered by this study. Consequently, the study relies primarily on U.S. Census data, which cover the entire study period and provide a more even basis for illustrating change.

Finally, employment and income data of the for-profit and non-profit village corporations were not easily accessible due to confidentiality and non-disclosure clauses. The data for the village corporations presented in this report are spotty, but represent the level of detail that is available from public documents (i.e. annual reports, the state's employment database, and other existing documents).

Additional discussions of specific data issues are provided in the separate chapters.

2 Historical Economic and Political Context

The focus of this study is on changes in the North Slope economy between 1965 and 2005. However, a full understanding of the nature of these changes requires some knowledge of the events that shaped the North Slope economy before statehood and the period of oil wealth. Moreover, the political transformation that occurred on the North Slope during the years immediately prior to and after the major Prudhoe Bay oil discovery were instrumental in directing change in the regional economy. To provide this broad economic perspective and political context, a brief narrative description of the North Slope economy before 1965 is presented below, together with an overview of the key political events of the 1960s and 1970s.

2.1 Commercialization and Acculturation

An underlying theme in this chapter is the adaptation of the Iñupiat people to multiple change agents. Prior to extended contact with Europeans in the late 19th century, North Slope Iñupiat households were composed of extended families living in multi-chambered dwellings with whalebone and driftwood frames covered by turf. When families grew too large for a single dwelling, others would be built nearby, resulting in kin-group clusters that grew into semi-permanent villages situated near prime hunting grounds, often along the seacoast. These villages constituted a society well-adapted to the extremes of the arctic environment: hunters cooperated in pursuing seasonally-available sea mammals and other game while women dressed game, gathered greens, berries, and other foods. Iñupiat hunting methods and technology adapted to changing environmental conditions and the behavior of the game they pursued (Nelson, 1982; Lowenstein, 1986). Iñupiat culture also fostered this adaptation by emphasizing values and beliefs about cooperation and the sharing of resources that further contributed to household and group survival. The social institutions of the North Slope Iñupiat were consistent with these values and supported the capacity to adapt to a harsh and changing environment.

The adaptive capacity of Iñupiat culture is an important characteristic that influences any assessment of change in the North Slope economy, regardless of the agents of change. Indeed, post-contact Iñupiat society and culture shows an ongoing capacity to blend new beliefs, values, foods, and technology with traditional Iñupiat lifestyles (Peat, Marwick, Mitchell & Company, 1978). The introduction of stores, churches, hospitals, schools, government agencies, and facilities added to the centralization and westernization of the Native population. However, each technological and institutional change brought about a new adaptation between traditional and modern ways of life. Intermittent periods of intense economic development (e.g., commercial whaling (1860-1910), trapping (1917-1930), military construction (1946-1953), oil and gas production (1977-present) allowed time for accommodation to socioeconomic change and cultural adaptation. At the same time, however, the "boom and bust" nature of some of these economic activities underscored the vulnerability of village economies to the vagaries of external economic forces.

The following sections describe the commercialization and acculturation of the North Slope across various time periods.

2.1.1 Arrival of Euro-Americans and the Period of Commercial Whaling

Long before contact with Western European culture, subsistence whaling and migratory hunting of other animals were the primary means of sustenance among the North Slope Iñupiat. Iñupiat who are knowledgeable in their oral history say the bowhead hunt reaches back many thousands of years,

deep into time immemorial (Hess, 1999). By the early 19th century the indigenous people of the Bering Sea region were regularly obtaining tobacco, metal vessels, firearms, knives and other goods from European traders in exchange for furs and ivory (Bockstoce 1986). These trade goods were carried far from the Bering Sea via well-integrated Native trade networks. Consequently, the North Slope Iñupiat had access to Western goods long before direct contact with Europeans. Direct commerce between the indigenous people of the North Slope and outsiders commenced in the mid-1800s, when foreign whaling vessels, predominately American, began sailing through the Bering Sea to the Arctic Ocean in pursuit of the bowhead whale (Bockstoce 1986). The Iñupiat provided the whaling crews baleen, ivory and furs in exchange for foreign trade goods. At the same time, the indigenous people of the region also began acquiring trade goods directly by working aboard the whaling ships, first as interpreters and guides and later as ordinary seamen and occasionally as boatsteerers (harpooners) (Bockstoce, 1986). As some ships began wintering over for earlier access to the migrating whales, whole families were signed aboard as "ships Natives," the women to serve as seamstresses, the men as hunters and dog drivers in the winter and as seamen in the summer (Bockstoce, 1986).

Contact with Euro-Americans intensified during the 1880s when commercial whaling stations were established at various points along the Arctic coast in order to conduct whaling from shore (VanStone, 1958). By hunting whales in the spring, long before the whaling ships could make their way into the area, the catch and amount of baleen shipped south later in the year could be considerably increased (Allen, 1978). By 1897-98, 13 such stations were strung out at intervals along the coast between Point Hope and Cape Seppings. These stations hired many indigenous residents to help crew the boats during the whaling season. In 1890, 400 Iñupiat were engaged in shore whaling at Point Barrow alone, using 70 *umiat* (skin boats; s. *umiak*) and ten wooden whaleboats (Freeman et al., 1998). A mutually beneficial arrangement soon evolved whereby the indigenous whalers hunted bowheads, exchanged the baleen at the stations for money or trade goods and kept the carcasses for food (Braund and Moorehead, 1995). With the pressing need of the shore-whaling stations for labor, most of the people from the Bering Sea to the Canadian border became involved in the whaling industry (Bockstoce, 1986).

Steadily, the coastal communities of the North Slope Iñupiat adopted the whaling gear of the Yankee whalers. Given the critical importance of subsistence whaling to the coastal villages there was some reluctance to deviate from the traditional practices of their ancestors (Bockstoce, 1986; Rainey, 1947). By 1880, however, a foreign observer reported that nearly every *umiak* that he saw equipped for whaling was fitted out with iron lances, darting guns and manila lines (VanStone, 1958). In addition, many Iñupiat boat captains replaced their *umiat* with sail-powered wooden whaleboats provided by the land stations or acquired from the whaling ships in exchange for baleen, ivory or furs (Allen, 1978; Braund, 1988).[2] With the adoption of this new and more effective technology, participation by the indigenous people in commercial whaling became very lucrative, and Rainey (1947:281) notes that, "many Eskimo made a small fortune out of the sale of baleen." Some accumulated sufficient capital to organize their own commercial whaling crews,[3] and by the early 20th century many had purchased schooners for whaling and trading (Bockstoce, 1986). During this period the indigenous people of the region became integrated into the market economy in other ways as

[2] Whaleboats were also often used to remunerate "ship's Natives" at the end of their contracts, as they became highly prized for their seaworthiness, speed and maneuverability under sail (Bockstoce, 1986; Braund, 1988). The Iñupiat seemed to have preferred wooden whaleboats for open-water whaling under sail but continued to use lighter *umiat* for spring hunting in the leads (Bockstoce 1986).

[3] In 1908, for example, the explorer-anthropologist Stefansson found several Iñupiat at Point Barrow maintaining as many as six boat crews and paying equal wages with Euro-Americans (Chance, 1990).

well. For example, the residents of Wainwright found employment in nearby mines that provided coal to the whaling ships (steam powered since the 1880s) (Jorgensen, 1990).

Contact with Euro-Americans brought more than economic change to North Slope communities. Pre-contact religiosity and ceremonialism changed in the late 19th century, partly as a result of contact with white traders and whaling crews, and in part as a result of the arrival of Christian missionaries (Lowenstein, 1986). Shown by the Yankee whalers that bowhead could efficiently be taken without elaborate traditional ceremonies, and rather quickly convinced by early missionaries of the Christian message, traditional belief systems about whaling were transformed in a matter of decades.[4] The close interpersonal alliances within whaling crews remained, but the former religious and ceremonial underpinnings of these alliances disappeared (Spencer, 1959). In many North Slope communities, Christian prayers soon replaced the traditional rituals associated with the whale hunt (Chance, 1990).

Rapid and dramatic social change also resulted from a severe demographic shock caused mainly by the introduction of foreign diseases and famine. Throughout the latter half of the 19th century the Native population of northwest Alaska and the Arctic coastal plain was in general decline. Small settlements disappeared and larger ones lost many of their members (Burch, 1975). In some Arctic coastal villages that were severely depopulated following contact with Euro-Americans, the previous residents were replaced by inland Iñupiat (referred to as Nunamiut) who came to the coastal settlements and maintained the whaling focus, joining and sustaining decimated whaling crews (Sheehan, 1995).[5]

As a result of these demographic changes, the previously coherent network of kinship ties throughout the region was disrupted, and some clans and descent lines were erased (Burch, 1975). The population decline, together with the participation in commercial whaling and trading, also appears to have allowed already influential individuals in some communities to accumulate even more wealth, power and prestige and led to a greater socioeconomic differentiation within villages (Bockstoce, 1986).[6] After the U.S. Bureau of Education began introducing domesticated reindeer into the region in 1892 out of concern over the dwindling food resources[7], the rapid growth of large reindeer herds intensified socioeconomic differences in Iñupiat society (Worl and Smythe 1986). According to Rainey (1941), in a short time most of the reindeer were owned by few wealthy individuals who hired members of their extended family to herd them.[8]

[4] Chance (1990) suggests that the educational, medical, and economic services offered by missionaries helped considerably in converting the Iñupiat to Christianity. Nevertheless, it took a number of decades for shamanism to die out. The last of the shamans at Barrow was still practicing in 1935 (Spencer, 1959).

[5] The movement of many inland peoples to the coast during the end of the 19th century was also prompted by a severe cyclical decline in the caribou herds (Bockstoce, 1986). In 1938, several Nunamiut families left the coast and returned to the mountains at Killik River and Chandler Lake. In 1949, the Chandler Lake group moved to Anaktuvuk Pass ("the place of caribou droppings"), where they were later joined by the Killik River group. Over time, the settlement attracted Nunamiut from many other locations.

[6] In this period of time, for example, a number of individuals, such as Attungoruk of Point Hope, acquired enough economic and political power to almost completely dominate their communities (Bockstoce, 1986).

[7] Reindeer husbandry became a vocational part of the school system in participating villages (Lopp, 2001). Although the reindeer herds were primarily a subsistence resource, some reindeer herders also sold the skins and meat to traders (Bodfish 1991). However, it was difficult to develop a market for reindeer products outside of Alaska due to competition from the beef industry (Schneider 1991).

[8] Rainey (1941) stated that in 1926 the Bureau of Education introduced a system of community or company ownership in an apparent attempt to distribute the reindeer among a greater number of people. According to Rainey, the elimination of the possibility of increasing one's wealth through individual enterprise contributed to the disappearance of most of the reindeer herds by the 1940s.

Social change was also caused by the adoption of Euro-American technology in other subsistence activities besides whaling. Although the Iñupiat continued to hunt land animals for food, modern firearms soon replaced their traditional hunting weapons. By the early 1880s, for instance, the residents of Point Barrow had acquired the most up-to-date repeating rifles (Bockstoce, 1986). The use of the rifle made hunting seals, walruses and caribou easier and reduced the need for sharing and cooperation within kin groups (Chance, 1990). The disappearance of feuds and warfare during the 19th century also diminished the necessity of maintaining large cooperative kinship groups, and by the early 1900s, smaller family households had assumed a more important social and economic role (Rainey, 1941).

In short, during the sixty or so years that commercial whaling was pursued in the western Arctic, the traditional society of the indigenous people of the North Slope underwent some far-reaching and permanent transformations. In the 1980s, a village elder remarked that the problems experienced by contemporary Iñupiat were "only approaching" the turmoil of that earlier era (R. Brower, Sr. quoted in Bodenhorn, 1989:32). Notwithstanding this social upheaval, the Iñupiat, in contrast to other indigenous Americans of the 1800s such as the Plains Indians, were able to retain access to their traditional resource base (although the bowhead population had been severely depleted by the end of the century). Moreover, the participation of the Iñupiat in the whaling industry may actually have helped preserve traditional leadership roles, economic ties among extended family members and sharing practices within the broader community at a time when other outside forces threatened to sweep away the foundations of their culture (cf. Stevenson, 1997). Through a complex process of assimilation (of Western technology, wage employment, capitalist ventures, etc.), North Slope communities used commercial whaling as a vehicle to adapt to Western culture, much as other groups of Alaska Natives used commercial fishing (National Park Service, 1998).

2.1.2 Post-Commercial Whaling Period

Between 1908 and 1914, the commercial whaling industry in the western Arctic gradually ended. The drastic depletion of the bowheads by commercial whaling operations and the invention of baleen substitutes such as spring steel and celluloid both contributed to its demise (Allen, 1978). Some Alaskan trading companies continued to deal in small amounts of baleen into the 1920s (National Marine Fisheries Service, 1977),[9] but the Arctic whaling industry's virtual collapse ushered in the return to whaling as primarily a subsistence activity (Bockstoce et al., 1982).

At the conclusion of World War I, however, the worldwide fur trade accelerated sharply and the Iñupiat quickly turned to this activity in order to supply their commodity needs (Bockstoce, 1986; National Science Foundation, 2000). For some individuals, income from trapping exceeded what had been possible from commercial whaling. An annual income of $3,000 to $4,000 (about $30,000 to $40,000 in current dollars) was not unusual (Chance, 1990). By the 1920s, Iñupiat were using the large sums that could be garnered from running trap lines to capitalize their subsistence pursuits (Jorgensen, 1990). Outboard motor-powered boats, shotguns, rifles and binoculars were purchased to harvest and transport sea mammals, and portable camping goods, from thermos bottles to stoves, soon came to be used. Data on the subsistence bowhead catch shows a substantial increase for the period 1920-1929 (Table 2-1). However, unlike commercial whaling, trapping required that some subsistence activities be less actively pursued, mainly early and mid-winter sealing and late winter-early spring caribou hunting (Chance, 1990). Furthermore, trapping cut deeply into the winter period

[9] In addition, after the demise of the Arctic whaling industry baleen and other whale parts were made into arts and crafts products by the Iñupiat and sold (Lee, 1983; Worl, 1980). This practice has continued to the present day.

previously devoted to community activities and affected long-standing patterns of family and village cohesion (Chance, 1990).

Table 2-1. Bowhead Whales Landed per Year by Decade during the Post-Commercial Subsistence Whaling Era

Decade	Number of Villages with Reported Takes[1]	Average Number of Whales Landed per Year	Total Landings	Approximate Annual Number of Whaling Crews
1915-1919	8	10	50	49
1920-1929	8	16	157	47
1930-1939	9	12	122	52
1940-1949	9	12	120	36
1950-1959	7	10	101	41
1960-1969	8	14	144	62
1970-1979	10	27	266	85
1980-1989	9	16	158	95
1990-2000	10	51	506	>100

[1] According to the International Whaling Commission (1982), from 1920 to 1970, crews were based continuously in five communities (Barrow, Wainwright, Point Hope, Wales and Gambell) and for less than the full-time span at four others (Savoonga, Point Lay, Kivalina and Kaktovik). Nuiqsut was resettled in 1973 and landed a whale that same year (Okakok, 1973).

Sources: Braham, 1995; International Whaling Commission, 2004.

The collapse of the market for furs caused by the stock market crash of 1928 and repeal of the embargo on Russian furs following the recognition by the United States of the Soviet Union in 1933 caused another economic downturn in North Slope communities (Bockstoce, 1986). As this source of income disappeared, a more self-sufficient subsistence mode of life and earlier patterns of cooperation and interdependence reemerged (Chance, 1990; Spencer, 1959). Contact with the outside world continued in the form of visits from federal officials (most notably Bureau of Indian Affair employees) and longer stays of school teachers and missionaries (Lee, 1998).

But not until the onset of World War II did North Slope villages experience economic relief, this time mainly in the form of public sector jobs. Military bases were established along the Arctic coast, and many Iñupiat served in the Alaska Territorial Guard or were absorbed into the regular ranks of the U.S. Army (Chance, 1990; Klausner and Foulks, 1982). World War II-era military exploration of petroleum reserves and post-war government defense projects such as the Distant Early Warning sites (DEW Line) led to a further increase in employment opportunities (Chance, 1990). The exploration on Naval Petroleum Reserve No. 4 (now the National Petroleum Reserve-Alaska) prompted the establishment of the Naval Arctic Research Laboratory near Barrow in 1947, which added employment. To take advantage of these job opportunities, some Iñupiat relocated to be near employment sites, such as Barrow and Kaktovik. Iñupiat found jobs as tractor drivers, carpenters, mechanics, machine operators, boat skippers, office support, and laborers and received standard wages. Although these jobs were taken primarily by men, women started to enter the labor force as new jobs opened in education, health and other government services (Kruse 1984). In addition to wage employment, government assistance programs, such as Old Age Pensions, Aid to Dependent Children, and General Relief, were made available to qualifying Iñupiaq households.

The boost in village purchasing power during this period led to almost complete "Americanization" of household and personal material goods, together with those items involving the subsistence economy (VanStone, 1960). Worl and Smythe (1986:38) note that the people they spoke with generally agreed that life became easier with the availability of wage income. For example, one woman recalled that the first item her husband purchased was a washing machine. On the other hand, there were not always enough cash jobs, especially in some of the smaller North Slope villages, nor did the government construction season last long enough for money to support extended family groups throughout the year. Moreover, construction projects occurred cyclically, leaving depressed troughs and high unemployment in their wake, which were only alleviated by the next construction project (Hippler, 1969).

In conclusion, the economy of the North Slope during the early to mid-20th century remained highly susceptible to boom-and-bust disruptions. Trapping had an even more precipitous trajectory than commercial whaling (National Research Council, 2003). After a brief period of economic prosperity, North Slope residents were forced to revert to more subsistence-based livelihoods due to a downturn in the U.S. market for furs. The wage jobs introduced from the mid-1940s through the 1960s brought economic relief for some households, but the boom-bust conditions persisted as a result of the cyclical nature of government construction projects. As a result of the intermittent nature of wage-earning jobs on the North Slope during this period, subsistence activities continued to supply the majority of food for most families (National Research Council, 2003).

Apart from the economic necessity of relying on subsistence activities between periods of high economic opportunity, there was a widespread feeling among the Iñupiat that sources of cash income would continue to be undependable and that survival and cultural integrity would depend on continuing subsistence practices. At the same time, however, the increasing reliance on Western technology tightly tied the subsistence economies of North Slope villages to wage work and cash transfers of various kinds (Jorgensen, 1990). As Hippler (1969:23) noted, "Since hunting takes at least some money ([e.g., to buy] snow machines, maintain and fuel them), it is almost necessary to combine these two activities. The very poor have a hard time hunting effectively."

2.2 Political Transformation of the Region

Despite some improvements in economic conditions during the post-war years, the overall quality of life in North Slope villages through the 1960s continued to be poor in comparison with that in most communities in the United States:

> Schools were poorly equipped and did not offer classes beyond the elementary grades. School policy was set by the U.S. Bureau of Indian Affairs. … Students were punished for speaking their own language, and their Native culture was made to seem inferior to that of an invading world; something that must be put aside and forgotten.
>
> Students who desired a high school education had to travel to boarding schools hundreds, even thousands of miles from home. The traditional part of their education was severely neglected. At boarding school, they had no opportunity to follow their fathers and grandfathers on the whale hunt, or to help cut up and prepare maktak and mikigaq. …
>
> The young people lived in homes constructed largely of driftwood and scrap lumber left by the military, and from the timbers of old shipwrecks. Fires broke out frequently in these structures. Most often, the equipment was not available to fight the fires, and the homes burned to the ground. On a per capita basis, more people were killed in accidental fires on the North Slope than anywhere else in the world. Modern medical care was often days away,

> if it could be had at all. Water had to be scooped or chopped from freshwater lakes. There was no good, sanitary disposal system for honey buckets.[10] Roads did not exist in the villages. There were no cars and trucks. A village was lucky to have even one phone, and, if it did, the voices on that phone would come across scratchy and broken.
>
> Village airstrips were too short to serve anything but bush planes. Pilots had no navigational aids to guide them into these strips when the weather was poor, which was often.
>
> Other than periodic work at the military outposts, such as the Dewline stations and the Naval Arctic Research Laboratory, there were few jobs to be had. …
>
> The Federal Field Committee Report, funded by the United States government in the late 1960s, revealed that, along with other rural regions of Alaska, the economy of the North Slope was the poorest in the nation (Hess, 1993).

Through the 1960s, none of the villages, with the exception of Barrow,[11] had a central plant capable of generating electricity for the entire community (NSB Department of Planning and Community Services, 1989). Although Barrow's Iñupiat population was located near the nation's largest military petroleum reserve, it was not until 1963 that it acquired access to this source of heating fuel (Dupere and Associates, Inc., 1973). Law enforcement services were minimal, and there were no public libraries, community centers, or recreational facilities.

It was during this period of gradual development that a number of events transpired that would dramatically alter the economic situation of North Slope residents. In particular, the post-war years saw the emergence of the settlement of Native land claims as a prime social, political and economic issue among North Slope communities (Chance, undated). Initial activity on land claims resulted from the Indian Claims Commission Act of 1946, which permitted the federal government to be sued by "Indian tribes" on certain kinds of claims not previously allowed. The doctrine of aboriginal dominion was the basis on which most of these claims were contested. Through 1951, there was renewed interest in village petitions for reservation lands authorized by the Indian Reorganization Act of 1936. The North Slope villages of Point Hope, Point Lay and Wainwright filed petitions for reservation lands with no results. Alaskans generally opposed reservations, and there was a national movement towards Native acculturation and assimilation. However, the Alaska Statehood Act of 1958 brought the issue of Native land claims into sharper focus. The Statehood Act gave Alaska the right to select more than 100 million acres of land as its own to develop. Some of the development projects proposed for Alaska threatened to disrupt the relationship of the North Slope Iñupiat to their land and traditional way of life.[12] Native groups all over the state filed protests. Among the most important of these protests was the claim of the Arctic Slope Native Association on 58 million acres—virtually all the land

[10] Toilets typically consisted of 5-gallon buckets fitted with toilet seats (Dupere and Associates, Inc., 1973). These "honey buckets" were emptied into 55-gallon drums stored outside each house. When the drums became full, it was the responsibility of each tenant to dispose of the waste. Water wastes associated with cooking, washing and cleaning were generally disposed of on the ground outside each house. These waste disposal practices in North Slope villages undoubtedly contributed to the regular epidemic outbreaks of infectious diseases (Dupere and Associates, Inc., 1973).

[11] In 1946, generators were introduced to Barrow to supply electricity (Worl and Smythe, 1986).

[12] In 1962, for example, the U.S. Atomic Energy Commission considered a proposal to set off a nuclear explosion at Cape Thompson to create a harbor for shipping minerals and other goods from northwest Alaska. This proposal was shelved, but in 1966, the State announced the opening of large blocks of land on the North Slope to oil and gas leasing.

north of the Brooks Range—based on aboriginal use and occupancy (Chance, undated).[13] Native leaders pressed for a freeze on all land conveyances to the state from the federal government until Native claims had been resolved, a freeze that U.S. Interior Secretary Stewart Udall granted in 1966.

The major Prudhoe Bay oil discovery late in 1967 brought force and economic urgency to the need to reach an agreement on how much land and money Alaska Natives should receive in settlement of land claims. A number of large oil companies joined the ranks of those trying to gain access to land tied up in those claims. The unresolved claims covered land that the proposed trans-Alaska pipeline would cross, and the claims, as well as court suits brought by environmental organizations opposed to pipeline construction, were delaying the start of the project. Finally, state and federal leaders found a settlement acceptable to Native leaders, and Congress passed ANCSA in 1971.

ANCSA settled Alaska Native land claims with a grant of 44 million acres and payment of nearly one billion dollars. Congress had decided that it would not be existing Native institutions such as tribal governments that would receive and manage the settlement. Instead, ANCSA created village and regional corporations to manage the lands and capital on behalf of the Alaska Natives.[14] Land and money were channeled to North Slope villages through ASRC, a for-profit regional corporation formed under ANCSA. Under the terms of ANCSA, ASRC was designated to receive about 4.6 million acres and $22.5 million from which each of the region's eight village corporations was to receive a portion. ASRC enrolled approximately 3,700 Iñupiat shareholders in 1971. Anyone born as of the date of the enactment of ANCSA who was at least one-quarter Alaska Native was eligible. Amendments to ANCSA in the late 1980s gave corporations the option to add those born later. Currently, ASRC automatically enrolls shareholders' children when they are born.[15]

The North Slope Iñupiat also took advantage of state legislation that made it possible to form regional governments (boroughs) with a taxing authority on property (Jorgensen, 1990). Through the persistent efforts of Eben Hopson, Joseph Upicksoun, Charlie Edwardsen, Jr. and other community leaders, the NSB was incorporated as a first-class borough in 1972 (it became a home-rule borough in 1974);[16] and through its taxing authority received large revenues from Prudhoe Bay oil production (Hess, 1993).[17]

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[13] The Arctic Slope Native Association came into being in 1966, at a meeting organized by Charles Edwardsen, Jr, an Iñupiat resident of Barrow (Hess, 1993). Board members of the Association were elected from the North Slope villages.

[14] The delegates of the Arctic Slope Native Association were suspicious of Congress' scheme to use profit-making corporations as the means for receiving settlement monies and lands, and they put forward an alternative proposal urging that the land be owned "tribally" (i.e., collectively) through the medium of regional Indian Reorganization Act (IRA) Councils (Chance undated). Moreover, the Association opposed ANCSA because it objected to Congress' decision to use size of population as the key criteria for the allocation of land and money rather than size and value of the land.

[15] Adding the next generation of Iñupiat to the rolls has increased ASRC's shareholder list to about 8,000. The newly issued stock reverts to the Corporation when the shareholder dies.

[16] Adoption of a home rule charter promotes maximum local self-government under the Constitution of the State of Alaska. The home rule charter of the NSB describes the powers of the borough, including procedures for establishing the school board, levying taxes, issuing bonds, planning and zoning, and for carrying out all the other functions of a home rule borough government.

[17] Kruse (1984) notes that the State of Alaska, viewing Prudhoe Bay oil as a statewide tax resource, opposed formation of the North Slope Borough. In addition, the oil companies, who wanted to limit and stabilize their tax liability, fought the formation of the borough in the courts. When the NSB was created in 1972, normal commercial sources for local government financing were unavailable to the borough because of the oil company litigation. To raise funds for operations the NSB adopted a resolution authorizing the sale of $500,000 worth of "revenue anticipation bonds." Among the major purchasers of these bonds was the United Presbyterian Church (The Presbytery of the Yukon, 2005).

The North Slope Iñupiat demonstrated a remarkable ability to develop and adapt the NSB and Alaska Native corporations organized under ANCSA, and to utilize them to promote their political and economic welfare (Worl and Smythe, 1986). The meaning and importance of these institutions were incorporated into and expressed through the existing "traditional" Iñupiaq cultural rhetoric and ideology as part of this adaptation. Iñupiaq values were still paramount even within a political and economic structure imposed by an outside authority. Referring to the traditional whaling culture of the Iñupiat, one community leader called ANCSA and the Alaska Native corporations the "new harpoon" and described the economic self-determination they afforded the Iñupiat:

> [ANCSA] contains a tool that can be implemented to fulfill the socioeconomic needs of the Alaska Native people. So with the Native claims bill it was not really the size of the land grant or the amount of the cash settlement that was important. It was the concept, the mechanism that was created. …Now the Eskimo has a new harpoon. He has the tool in the Alaska Land Claims Settlement Act—a regional corporation—to manage his own internal affairs, with dignity, as an owner.

The NSB was viewed as the vehicle to unify Barrow with the other North Slope villages, to maintain their political autonomy, and to protect their land ownership and utilization, while allowing the Iñupiat to benefit from petroleum development on the North Slope (Worl and Smythe 1986). The Borough was politically controlled by the Iñupiat, who elected a mayor and assembly members. Although this arena became subject to substantial competition among Iñupiat families and factions, the creation and control of the NSB allowed the Iñupiat to use tax revenues derived from Prudhoe Bay oil-field facilities in ways that were congruent with Iñupiat values (Worl and Smythe, 1986). As Worl and McMillan (1981:32-3) note:

> …the NSB functions within the context of a culturally distinct society…Although it performs the usual functions of a borough government, the NSB's interests and activities have demonstrated a commitment to maintaining the traditional values, language, and culture of the Iñupiat people.

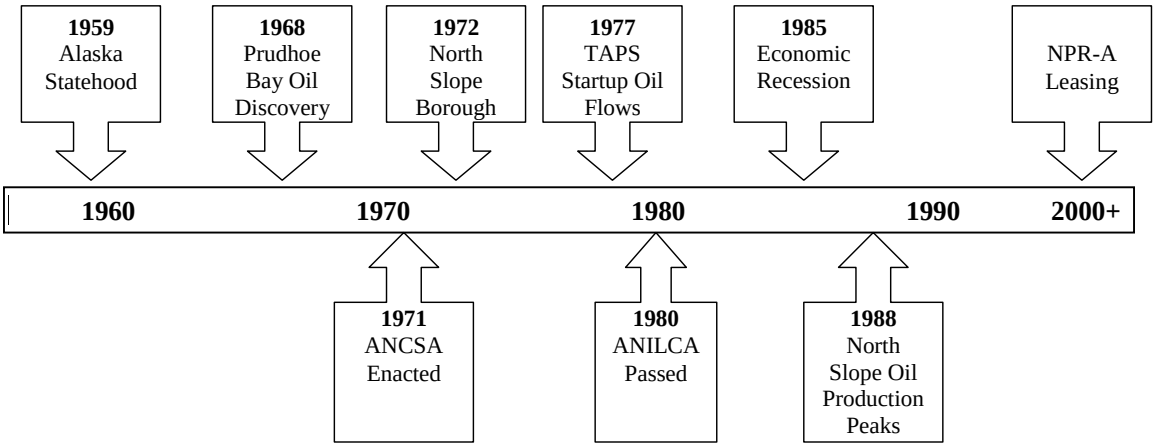
Much of the credit for the Borough's formative years goes to the late Eben Hopson, a widely respected Iñupiaq elder, visionary and statesman, who defined the primary goal as providing residents with the same basic services enjoyed by other Americans (North Slope Borough School District, 2005a). For further information about Eben Hopson and his influence during the formative years of the NSB and economy of the North Slope region, see http://www.ebenhopson.com/bio/FinalBio.html.

In short, the discovery of oil accelerated political processes for resolving complex issues of land tenure and rights without which investment in, and development of, the oil fields would have been impossible (National Research Council, 2003). Of major importance was passage of ANCSA, which established the ASRC and village corporations and led to the founding of the NSB. These events have been the primary factors in the growth, concentration, and development of the communities and populations on the North Slope (National Research Council, 2003).

2.3 Major Milestones

While change has been a constant for the inhabitants of the North Slope, several major events occurring during the last few decades contributed to key structural changes that created the North Slope economy as it exists today. These events are described in the following paragraphs (the time line is depicted in Figure 2-1).

Figure 2-1. Milestones in the North Slope Economy since Alaska Statehood



Alaska Statehood

On January 3, 1959, President Eisenhower signed the official declaration that made Alaska the 49th state. State agencies were established and programs were implemented. Even though the time frame of this study is 1965 to 2005, this particular event is deemed relevant because the impacts of statehood carried over from 1959 as various state programs were developed and implemented.

Discovery of Prudhoe Bay Oil Field

The discovery of the Prudhoe Bay oil field in 1968 proved to be one of the most important events in the economic development of the North Slope and the State of Alaska. Construction of the Trans-Alaska Pipeline System (TAPS), the only means to move crude oil from Alaska's North Slope fields to tankers in Valdez, began in 1975 and was completed in 1977. At peak production, the Prudhoe Bay oil field supplied 3 percent of the world's oil. The state government, which owns the Prudhoe Bay oil field, has collected $69 billion in petroleum revenues through 2004 (AOGA, 2005). These revenues have paid almost all state general expenses since 1978. The NSB's revenues from taxes levied on oil and gas properties have also been substantial.

Alaska Native Claims Settlement Act

The passage of ANCSA in 1971 established 12 regional and more than 200 village Alaska Native corporations throughout the state. While by no means being the only factor in determining the settlement of aboriginal land claims, the timing and structure of this Act can be directly traced to the Prudhoe Bay discoveries and the desire to develop the finds.

Forty-four million acres and $1 billion were appropriated to the various Alaska Native corporations. As a result, these corporations became the largest private land owners (12 percent of Alaska lands) in the state. In the NSB, ASRC, Ukpeagvik Iñupiat Corporation, and other village corporations were formed. The formation of these corporations granted the North Slope Iñupiat a vehicle for further economic development and consequently affected village lifestyles. The annual dividends paid out to their shareholders have increased significantly since the corporations were formed.

Establishment of the North Slope Borough

The NSB was incorporated as a first class borough on July 2, 1972 under the laws of the State of Alaska. The borough is a regional local government, similar to the county form of government in most of the lower 48 states, and the timing of its formation, like ANCSA, can be traced back to factors

related to regional oil development. Incorporation of the Borough allowed local residents a chance to overcome the influence of the federal government with respect to education and health care (Harcharek, 2004). The State of Alaska's neglect in delivering basic services that were afforded to many other communities in the State was also an important determining factor in the Borough's creation. The NSB assumed responsibilities for providing services such as sewer, water, light, power and heating systems, housing, health facilities, transportation infrastructures, police and fire protection. In this and numerous other ways, the Borough substantially improved the quality of life of North Slope residents.

Alaska National Interest Lands Conservation Act

In 1980, Congress passed the Alaska National Interest Lands Conservation Act (ANILCA). The Act made 104 million acres of Alaskan land into national parks and preserves, national forests, and national fish and wildlife preserves (Alaska History and Cultural Studies, 2005). On the North Slope, in addition to adding lands to park and preserve status in the Gates of the Arctic National Park and the Noatak National Preserve, this Act established the Arctic National Wildlife Refuge. ANILCA challenged federal land managers to balance the national interest in Alaska's scenic and wildlife resources with recognition of Alaska's fledgling economy and infrastructure, and its distinctive rural way of life (Alaska Department of Natural Resources, 2005).

Economic Recession and Recovery

The economic boom in Alaska associated with the construction of TAPS and subsequent oil production on the North Slope came to an abrupt halt in 1985, when the world oil price fell below $10 per barrel. The resultant drop in Alaska's oil revenues led to severe cutbacks in government services and programs, and economic activity in the state declined markedly. There was a dramatic increase in home loan foreclosure rates, business bankruptcy rates, and high rates of out-migration from Alaska. In 1989, clean-up activities after the *Exxon Valdez* oil spill in Prince William Sound created a high level of economic activity, and Alaska's economy started to rebound. Since the 1990s, Alaska has experienced a period of relative economic stability.

Opening of National Petroleum Reserve-Alaska to Industry

Oil exploration of Alaska's North Slope began in the 23 million acre area known as the Naval Petroleum Reserve in 1923. In 1976, with the passage of the Naval Petroleum Reserve Production Act, Congress transferred management of the Reserve from the U.S. Navy to the U.S. Department of the Interior and re-named it the National Petroleum Reserve-Alaska (NPR-A). In 1980, the NPR-A was opened to oil company leasing and development. The Bureau of Land Management in the U.S. Department of Interior, conducted lease sales during the early 1980s. The leases eventually expired, but interest in re-opening lease sales within the NPR-A occurred in 1997 with the announcement of the Alpine oil development in the Colville River Delta adjacent to the Reserve. The Bureau of Land Management held lease sales in the NPR-A in 1999 and 2002. Under the NPR-A Impact Mitigation Program, North Slope municipalities have received approximately $68 million in grants to mitigate adverse impacts due to oil and gas developments in the Reserve.

3 Structure of the North Slope Economy

The discovery of oil in Prudhoe Bay, the inception of the NSB in 1972, and the formation of the regional and village Alaska Native corporations changed the structure of the North Slope economy. Prior to these developments, both public and private employment opportunities on the North Slope were limited. The North Slope villages could only afford limited local government, and the year-round jobs were mostly associated with federal and state agencies. The U.S. Naval Arctic Research Laboratory and the U.S. Air Force Distant Early Warning (DEW) Program, established in 1947 and 1954, respectively, provided the majority of the steady paying jobs in the region at that time.

Major economic changes occurred with the formation of the NSB and its ability to tax oil development at Prudhoe Bay and related industrial facilities. Between 1973 and 1980, the NSB collected about $150 million in property taxes from oil companies operating out of Prudhoe Bay, and an additional $88 million in state and federal monies (ISER, 1984). As a result, the Borough took over from the state and federal entities many public services in the villages. During this time, the Borough implemented major infrastructure projects (i.e. schools, houses, utility systems, airports, roads, etc.); and the Borough soon after became the largest employer of North Slope residents with jobs created for government administration and construction projects.

The oil industrial complex on the North Slope has limited direct linkages to the rest of the region's economy. Some of the oilfield service companies operating in the Prudhoe Bay and Alpine areas are subsidiaries (or joint ventures) of ASRC and village corporations (see Chapter 5). These service companies have provided jobs to a number of local residents. However, few North Slope residents have been employed by the large, multinational corporations that produce the oil (some of the reasons for the low resident employment are discussed in Chapter 7). Although the oil producing companies are the largest employers in the region, nearly all their employees are non-residents, and virtually all of the income earned by these employees is spent outside of the North Slope communities. The oil producers do, however, indirectly support jobs in the communities through property tax payments, the main source of capital and operating revenue for the NSB.

According to the Alaska Department of Labor and Workforce Development, about 15 percent of the total private sector jobs in the NSB were held by North Slope residents. In contrast, 86 percent of the local government jobs in 2003 were held by local residents; and about 51 percent of state jobs were held by local residents (ADOLWD *Alaska Economic Trends*, January 2005).

This chapter describes the changes in the structure of the North Slope economy by examining historical employment information by sector, top employment sectors, and demographic shifts in labor force composition. The discussion highlights shifts in the composition of the regional economy by indicating changes in employment by industry through the years. Community-level trends in employment by sector are also discussed. Changes in the demographic composition of labor are also analyzed. The sectors included in the analysis correspond with the standard industrial classification. It is important to recognize that on the North Slope, subsistence is an integral component of the non-cash economy. The relationship between the cash economy and traditional subsistence practices is discussed in detail in Chapter 7. Income trends are also discussed in Chapter 7 as part of the quality of life indicators.

3.1 North Slope Employment by Industry

The focus of this report is the economy of North Slope communities. (Figure 3-1) Unfortunately, there is no consistent source of annual employment data from 1965 to present of residents of North Slope

communities. Annual employment data by place of work obtained from DOLWD, which includes non-resident workers, are also presented in this section. The data contrast the number and types of jobs held by residents and non-residents.

For resident employment, data for the years 1980, 1988, 1993, 1998, and 2003 are available from the economic profiles and census reports prepared by the NSB. Resident employment data were also obtained from DOLWD for the years 1993 to 2002. DOLWD uses information obtained from the permanent fund dividend applications to the State of Alaska to track residency and employment.

Figure 3-1. Map of North Slope Communities.

Source: North Slope Borough (www.north-slope.org/ihlc/_private/pages/map.htm)

3.1.1 Employment by Place of Residence based on Data from NSB Census Reports

The NSB publishes economic profiles and census reports that contain data from survey efforts designed to collect economic and demographic information from the eight communities on the North Slope. Although the NSB census reports are conducted only periodically, this data source provides historical employment information on North Slope residents, showing more detailed employment sectors particularly on regional/village corporations, and the public sectors. This section presents data for the years 1980, 1988, 1993, 1998, 2003. Other published research reports are also referenced to get additional information for the years prior to 1980. Table 3-1 and Table 3-2 show the estimated total number of jobs held by of the North Slope residents, by sector. Table 3-3 through Table 3-10 present the number of jobs and the percent share of each sector, by community for the years 1980, 1988, 1993, 1998, 2003.

Government continues to be the primary source of employment for North Slope residents. There was a shift however from a period of limited local government to a period where the local government through the NSB became the most important source of jobs for North Slope residents. Since 1980,

the general trend in federal government jobs has been declining, while the number of state government jobs held by North Slope residents has been more stable.

The ASRC and the village corporations also developed into major employers. In the past decade, over 15 percent of the total jobs held by North Slope residents have been associated with the regional and village corporations. ASRC, village corporations, and affiliated firms became involved in construction contracts to implement capital improvement projects, in support services for the oil and gas industry, and in the retail sector. A more detailed discussion of employment in these corporations is provided in Chapter 5 of this report.

Table 3-1. Estimated Number of Resident Jobs by Sector, North Slope Borough, 1980, 1988, 1993, 1998, and 2003

	1980	1988	1993	1998	2003
Federal Government	100	83	37	39	61
State Government	12	20	25	35	26
City Government		71	61	57	66
NSB Government	642	1,087	893	989	777
NSB School District		419	345	289	409
Private Construction	201	95	21	66	43
Regional/Village Corporation		311	304	407	383
Transportation	107	122	45	43	53
Oil Industry	30	46	21	16	23
Service	71	84	53	83	108
Other	176	168	138	368	242
Total	**1,689**	**2,506**	**1,943**	**2,392**	**2,191**

Sources: Circumpolar Research Associates, 1999, 2004; North Slope Borough Department of Planning and Community Services, 1989, 1995; Alaska Consultants, Inc., 1981

Table 3-2. Percent of Total Resident Employment by Sector, North Slope Borough, 1980, 1988, 1993, 1998, and 2003

Sector	1980	1988	1993	1998	2003
Federal Government	7	3	2	2	3
State Government	1	1	1	1	1
City Government		3	3	2	3
NSB Government	48	43	46	41	35
NSB School District		17	18	12	19
Private Construction	15	4	1	3	2
Regional/Village Corporation		12	16	17	17
Transportation	8	5	2	2	2
Oil Industry	2	2	1	1	1
Service	5	3	3	3	5
Other	13	7	7	15	11
Total	**100**	**100**	**100**	**100**	**100**

Sources: Circumpolar Research Associates, 1999, 2004; North Slope Borough Department of Planning and Community Services, 1989, 1995; Alaska Consultants, Inc., 1981

Table 3-3. Estimated Number of Resident Jobs by Sector, North Slope Communities, 1980

Sector	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Point Hope	Point Lay	Wainwright
Mining	0	0	15	3	6	6	0	0
Private Construction	18	5	91	16	31	35	1	4
Transportation	0	0	94	10	0	1	0	2
Trade	4	2	49	1	1	7	0	5
Finance, Insurance, and Real Estate	0	1	76	4	5	11	0	10
Services	0	1	53	2	2	2	1	10
Federal Government	9	0	65	15	7	2	0	2
State Government	1	0	8	0	0	3	0	0
Local Government non-construction	34	19	398	25	29	57	19	61
Local Government construction	36	17	203	22	17	0	5	50
Total	**102**	**45**	**1,052**	**98**	**98**	**124**	**26**	**144**

Source: Alaska Consultants, Inc., 1981

Table 3-4. Percent of Total Resident Employment by Sector, North Slope Communities, 1980

Sector	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Point Hope	Point Lay	Wainwright
Mining	0	0	1	3	6	5	0	0
Private Construction	18	11	9	16	32	28	4	3
Transportation	0	0	9	10	0	1	0	1
Trade	4	4	5	1	1	6	0	3
Finance, Insurance, and Real Estate	0	2	7	4	5	9	0	7
Services	0	2	5	2	2	2	4	7
Federal Government	9	0	6	15	7	2	0	1
State Government	1	0	1	0	0	2	0	0
Local Government non-construction	33	42	38	26	30	46	73	42
Local Government construction	35	38	19	22	17	0	19	35
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Alaska Consultants, Inc., 1981

Table 3-5. Estimated Number of Resident Jobs by Sector, North Slope Communities, 1993/1994

Sector	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Point Hope	Point Lay	Wainwright
Federal Government	1	0	25	1	1	6	1	2
State Government	1	0	22	0	0	2	0	0
City Government	3	4	23	2	3	17	0	9
NSB Government	35	27	558	23	39	53	30	48
NSB School District	22	15	165	16	16	57	16	38
NSB CIP	6	6	28	4	5	15	9	7
Private Construction	2	1	14	3	0	0	0	1
ASRC	2	2	62	0	1	2	0	2
Village Corporation	24	8	105	10	18	37	2	29
Transportation	1	0	31	2	7	3	0	1
Oil Industry	0	0	14	0	3	1	0	3
Service	0	0	47	0	0	3	0	3
Other	0	1	116	3	3	6	2	7
Total	**97**	**64**	**1210**	**64**	**96**	**202**	**60**	**150**

Source: North Slope Borough Department of Planning and Community Services, 1995

Table 3-6. Percent of Total Resident Employment by Sector, North Slope Communities, 1993/1994

Sector	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Point Hope	Point Lay	Wainwright
Federal Government	1	0	2	2	1	3	2	1
State Government	1	0	2	0	0	1	0	0
City Government	3	6	2	3	3	8	0	6
NSB Government	36	42	46	36	41	26	50	32
NSB School District	23	23	14	25	17	28	27	25
NSB CIP	6	9	2	6	5	7	15	5
Private Construction	2	2	1	5	0	0	0	1
ASRC	2	3	5	0	1	1	0	1
Village Corporation	25	13	9	16	19	18	3	19
Transportation	1	0	3	3	7	1	0	1
Oil Industry	0	0	1	0	3	0	0	2
Service	0	0	4	0	0	1	0	2
Other	0	2	10	5	3	3	3	5
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Source: North Slope Borough Department of Planning and Community Services, 1995

Table 3-7. Estimated Number of Resident Jobs by Sector, North Slope Communities, 1998/1999

Sector	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Point Hope	Point Lay	Wainwright
Federal Government	1	1	23	3	2	5	1	3
State Government	1	1	30	0	1	1	1	6
City Government	0	0	30	4	7	9	1	0
NSB Government	34	31	616	32	31	49	32	52
NSB School District	16	5	176	7	8	33	16	28
NSB CIP	2	3	55	3	7	12	12	18
Private Construction	0	2	30	5	12	10	1	6
ASRC	0	0	108	2	0	4	4	14
Village Corporation	16	5	81	15	33	71	6	48
Transportation	0	0	38	1	2	1	0	1
Oil Industry	1	0	11	0	3	1	0	0
Service	0	0	71	2	1	2	0	7
Other	9	8	272	2	17	24	6	56
Total	**80**	**56**	**1,541**	**76**	**124**	**222**	**80**	**239**

Source: Circumpolar Research Associates, 1999

Table 3-8. Percent of Total Resident Employment by Sector, North Slope Communities, 1998/1999

Sector	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Point Hope	Point Lay	Wainwright
Federal Government	1	2	1	4	2	2	1	1
State Government	1	2	2	0	1	0	1	3
City Government	0	0	2	5	6	4	1	0
NSB Government	43	55	40	42	25	22	40	22
NSB School District	20	9	11	9	6	15	20	12
NSB CIP	3	5	4	4	6	5	15	8
Private Construction	0	4	2	7	10	5	1	3
ASRC	0	0	7	3	0	2	5	6
Village Corporation	20	9	5	20	27	32	8	20
Transportation	0	0	2	1	2	0	0	0
Oil Industry	1	0	1	0	2	0	0	0
Service	0	0	5	3	1	1	0	3
Other	11	14	18	3	14	11	8	23
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Circumpolar Research Associates, 1999

Table 3-9. Estimated Number of Resident Jobs by Sector, North Slope Communities, 2003

Sector	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Point Hope	Point Lay	Wainwright
Federal Government	1	0	45	1	0	10	2	2
State Government	2	0	22	0	1	0	1	0
City Government	12	1	21	3	5	14	2	8
NSB Government	51	20	464	27	29	44	24	48
NSB School District	30	20	194	21	27	62	29	44
NSB CIP	0	0	4	0	2	0	1	3
Oil Industry	3	0	14	1	3	2	0	0
Private Construction	4	0	23	5	3	1	4	4
ASRC	3	0	69	5	3	1	4	3
Village Corporation	19	27	87	18	37	60	9	38
Finance	0	0	5	0	0	0	1	0
Transportation	0	0	48	0	1	3	1	1
Communications	0	0	8	0	0	0	0	0
Trade	0	1	27	0	0	2	0	1
Service	4	0	103	0	0	0	1	0
Ilisagvik College	0	0	58	0	0	2	1	1
Other	2	3	132	3	10	25	5	18
Total	**131**	**72**	**1,324**	**84**	**121**	**226**	**85**	**171**

Source: Circumpolar Research Associates, 2004

Table 3-10. Percent of Total Resident Employment by Sector, North Slope Communities, 2003

Sector	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Point Hope	Point Lay	Wainwright
Federal Government	1	0	3	1	0	4	2	1
State Government	2	0	2	0	1	0	1	0
City Government	9	1	2	4	4	6	2	5
NSB Government	39	28	35	32	24	19	28	28
NSB School District	23	28	15	25	22	27	34	26
NSB CIP	0	0	0	0	2	0	1	2
Oil Industry	2	0	1	1	2	1	0	0
Private Construction	3	0	2	6	2	0	5	2
ASRC	2	0	5	6	2	0	5	2
Village Corporation	15	38	7	21	31	27	11	22
Finance	0	0	0	0	0	0	1	0
Transportation	0	0	4	0	1	1	1	1
Communications	0	0	1	0	0	0	0	0
Trade	0	1	2	0	0	1	0	1
Service	3	0	8	0	0	0	1	0
Ilisagvik College	0	0	4	0	0	1	1	1
Other	2	4	10	4	8	11	6	11
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Circumpolar Research Associates, 2004

3.1.2 Employment by Place of Residence based on Data from Alaska Department of Labor and Workforce Development

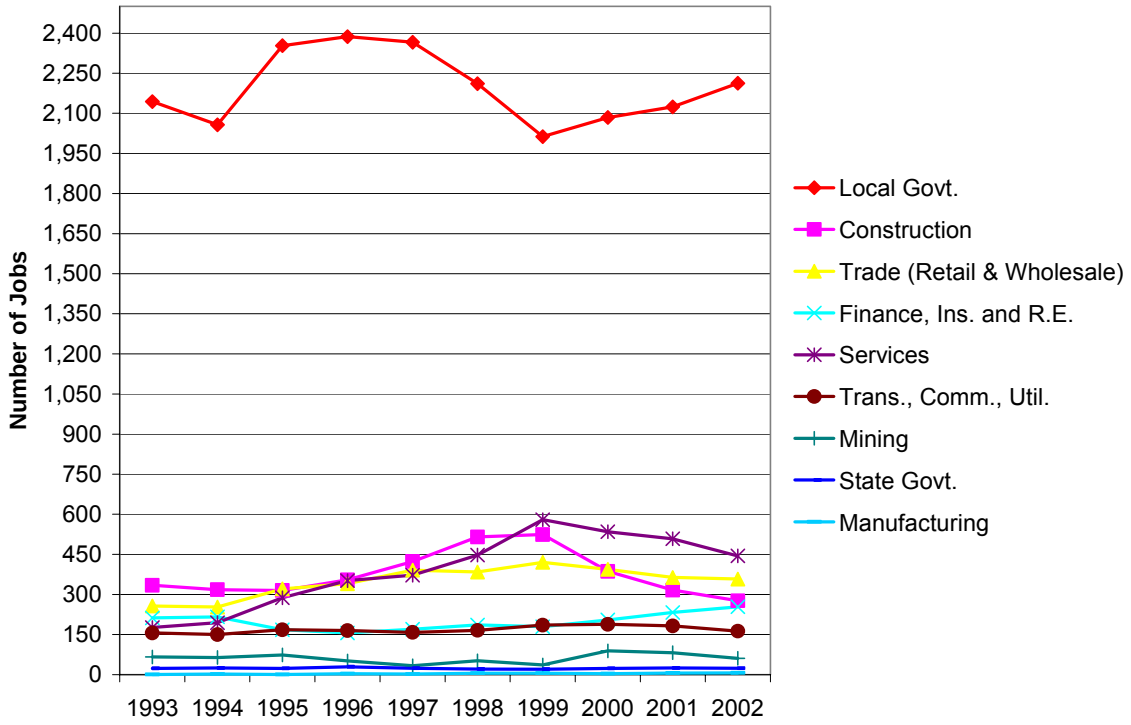
DOLWD provided annual resident employment data from 1993 to 2002 that correspond with the standard industrial classification (SIC) system. This annual data allows examination of the trends in resident employment by sector[18]. It can be noted that there have been significant changes in the level of employment in the government, construction, and services sectors during the period 1993 to 2002. Recent trends indicate that employment in the services sector is growing; the number of jobs in the construction sector is declining; and recent employment levels in the local government sector are lower compared to the employment levels in the mid-1990s.

Figure 3-3 though Figure 3-10 show the top employment sectors in the nine North Slope communities. Community employment trends indicate an increasing level of employment in community local government after year 2000; with the exception of Nuiqsut where there was a decline in local government jobs from 2001 to 2002 but also a sharp increase in jobs in the heavy construction sector.

General merchandise stores, construction, and holdings and other investment offices (mostly joint-ventures and subsidiaries of Alaska Native corporations) are also major employment sectors in the North Slope communities.

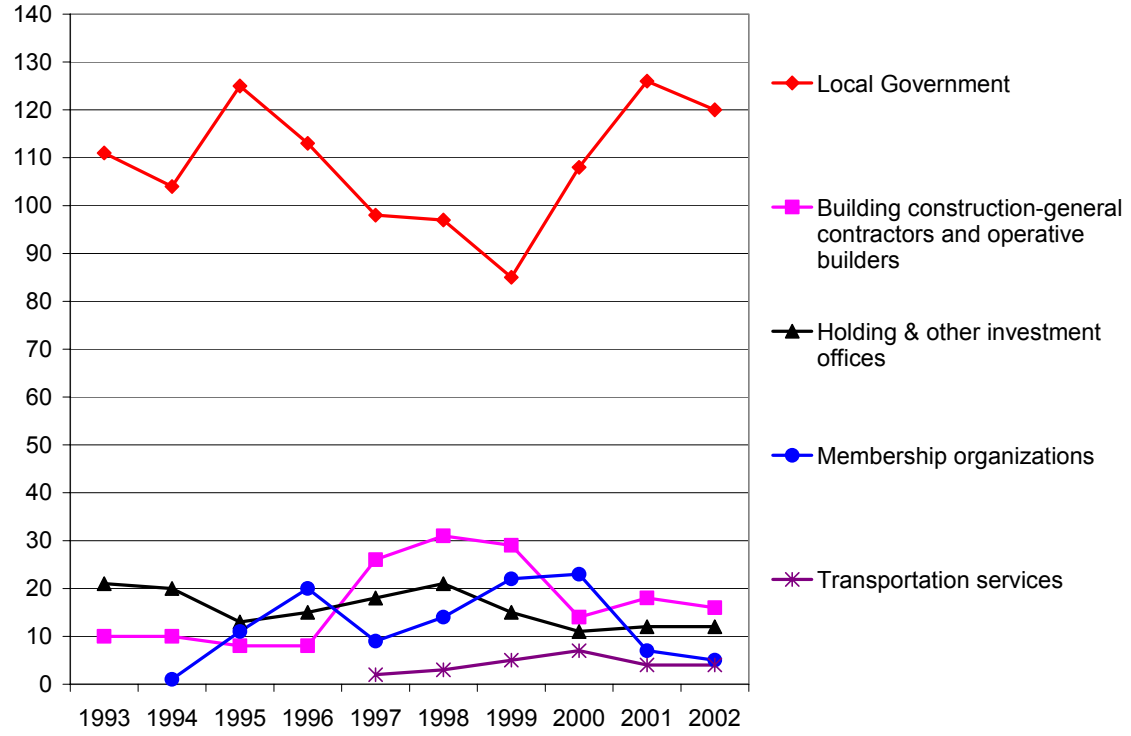
[18] It should be noted that data obtained from DOLWD are collected and estimated differently from the data provided in Section 3.1.1 which presents employment information estimated by the North Slope Borough. Data are not directly comparable.

Figure 3-2. Estimated Number of Resident Jobs by SIC Sector, North Slope Borough, 1993-2002



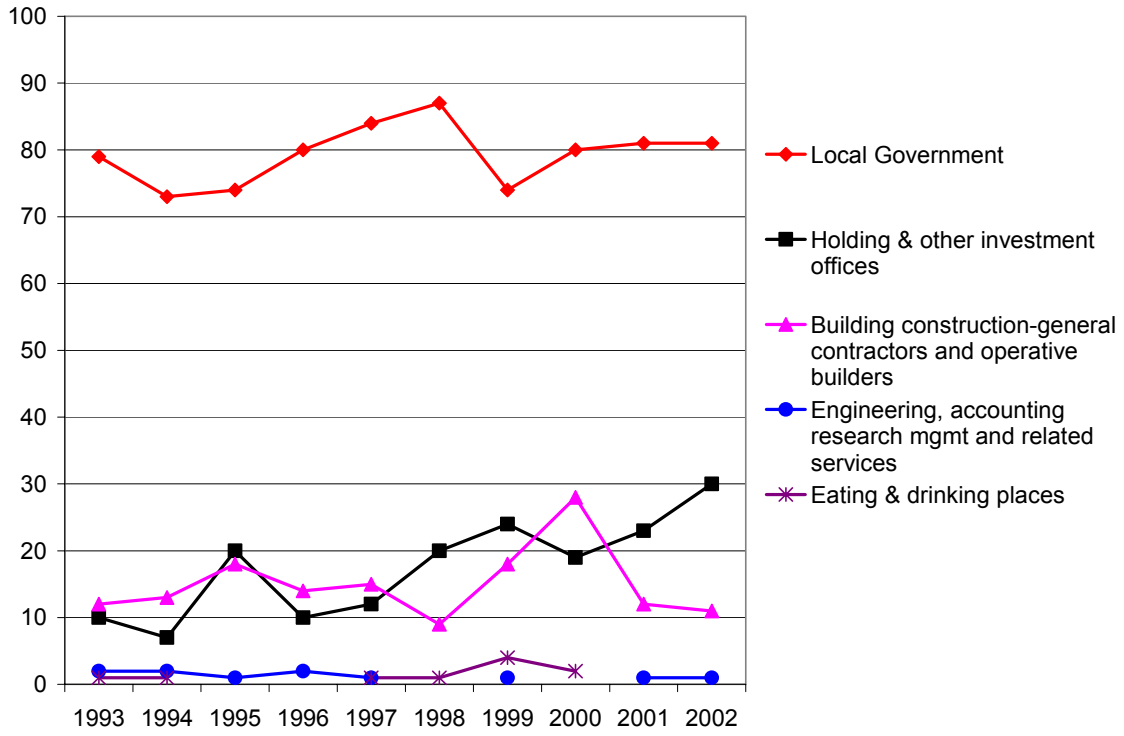
Source: Alaska Department of Labor and Workforce Development

Figure 3-3. Estimated Number of Resident Jobs by Employment Sector, Anaktuvuk Pass, 1993-2002



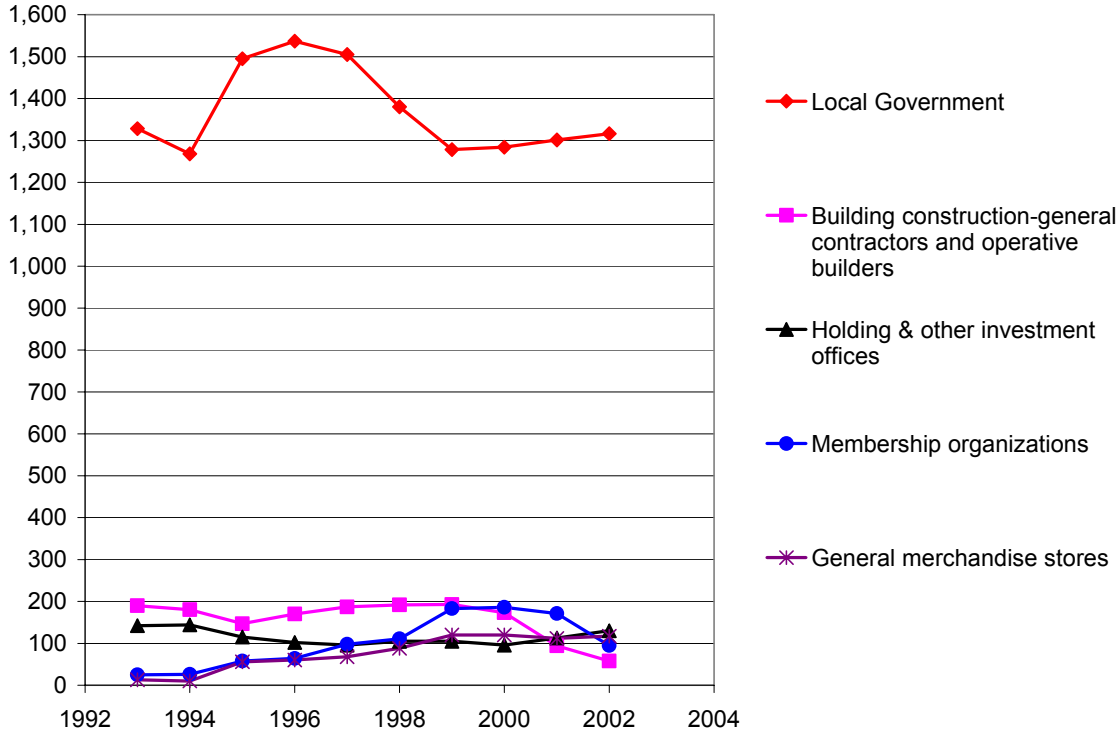
Source: Alaska Department of Labor and Workforce Development

Figure 3-4. Estimated Number of Resident Jobs by Employment Sector, Atqasuk, 1993 to 2002



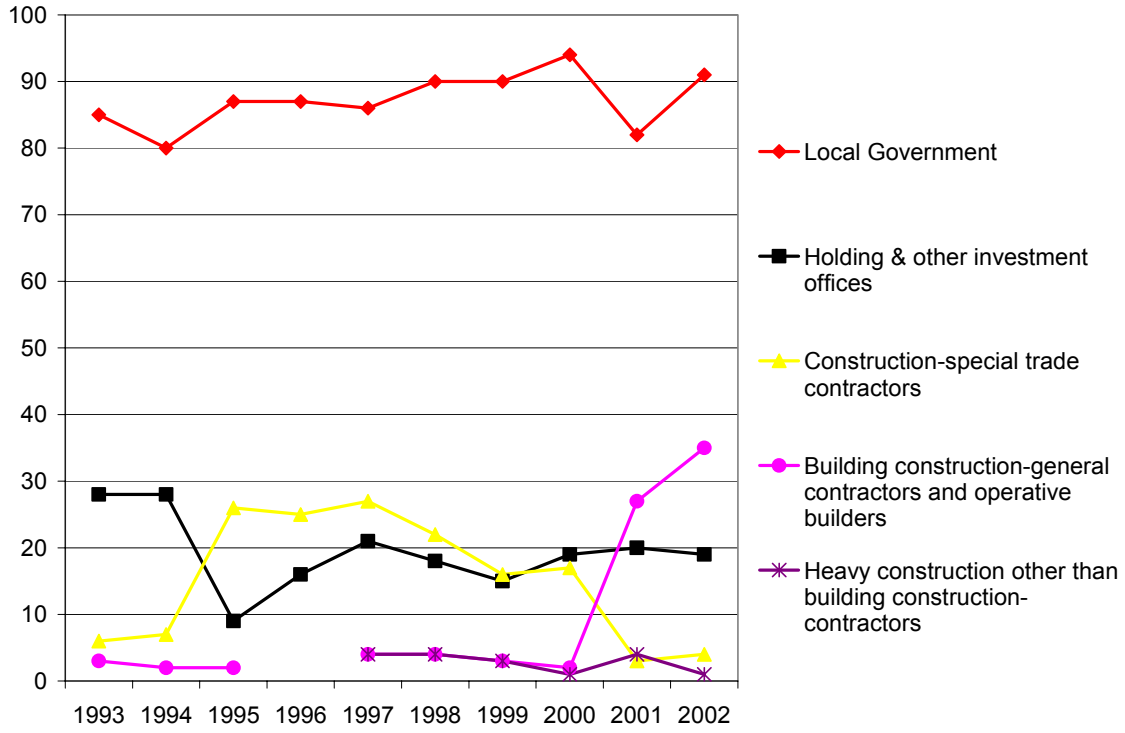
Source: Alaska Department of Labor and Workforce Development

Figure 3-5. Estimated Number of Resident Jobs by Employment Sector, Barrow, 1993-2002



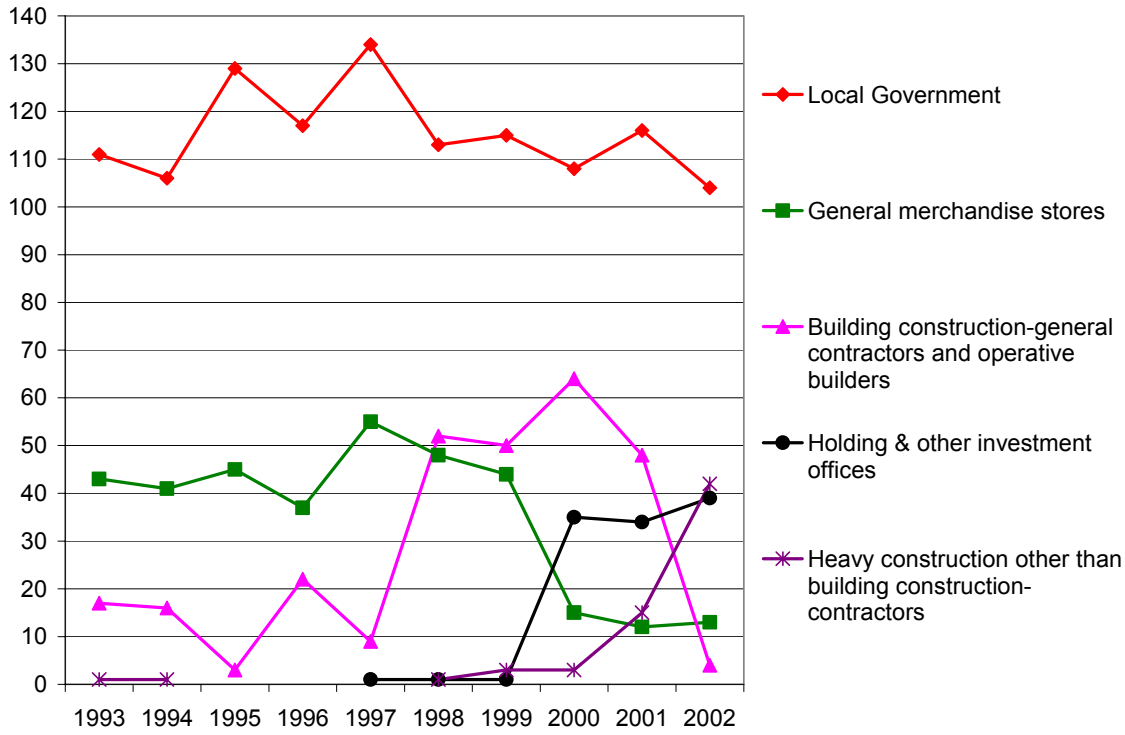
Source: Alaska Department of Labor and Workforce Development

Figure 3-6. Estimated Number of Resident Jobs by Employment Sector, Kaktovik, 1993-2002



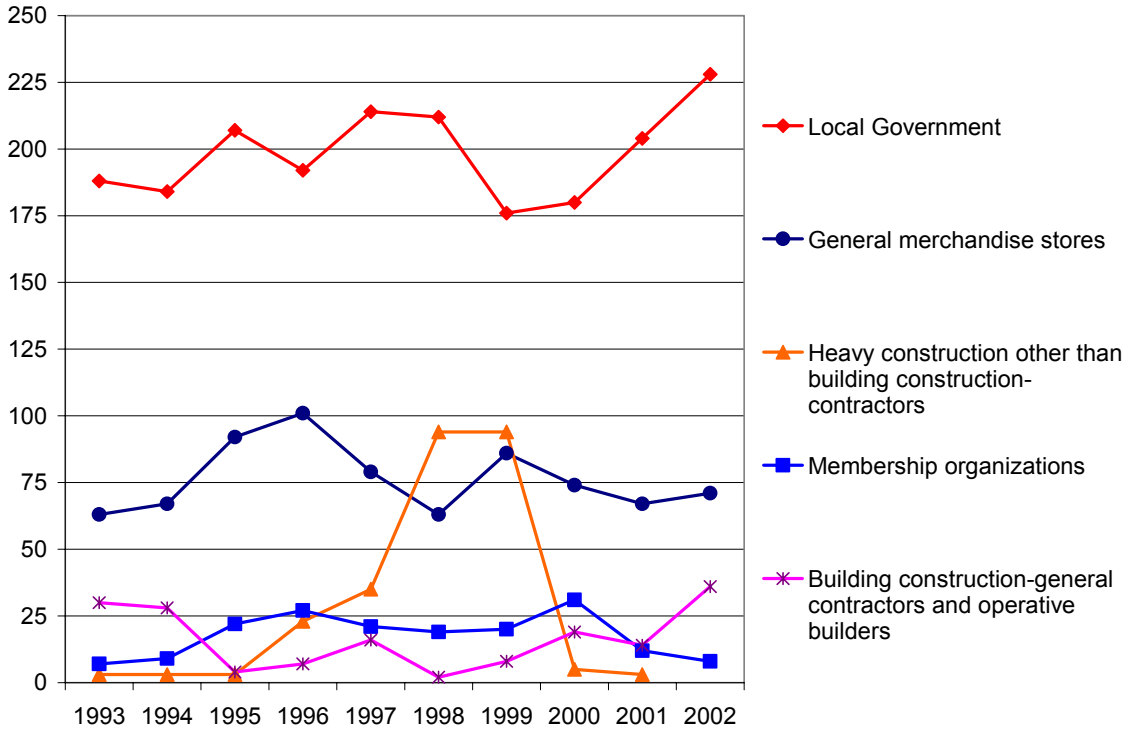
Source: Alaska Department of Labor and Workforce Development

Figure 3-7. Estimated Number of Resident Jobs by Employment Sector, Nuiqsut, 1993-2002



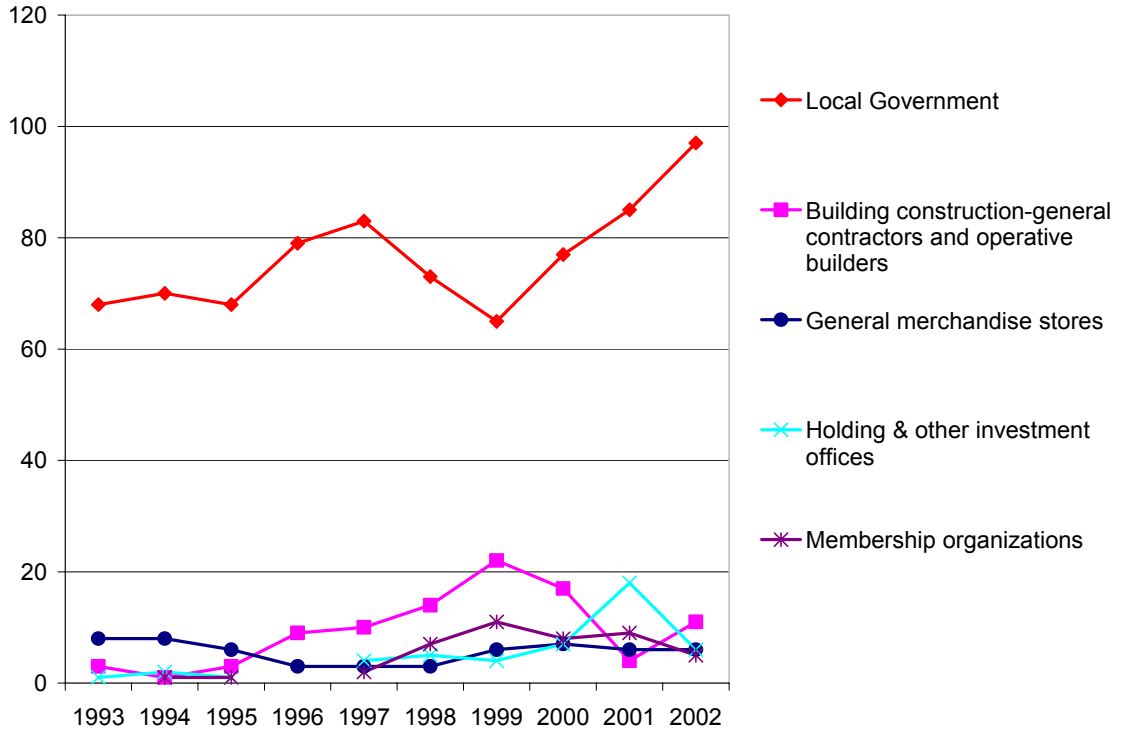
Source: Alaska Department of Labor and Workforce Development

Figure 3-8. Estimated Number of Resident Jobs by Employment Sector, Point Hope, 1993-2002



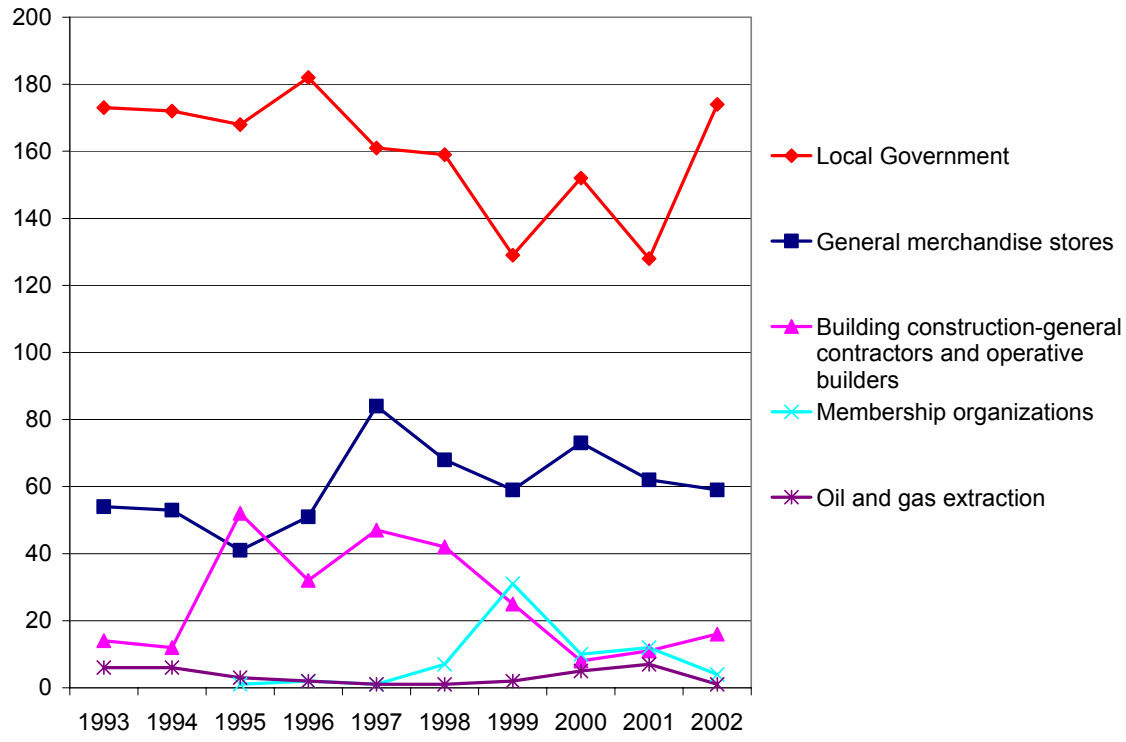
Source: Alaska Department of Labor and Workforce Development

Figure 3-9. Estimated Number of Resident Jobs by Employment Sector, Point Lay, 1993-2002



Source: Alaska Department of Labor and Workforce Development

Figure 3-10. Estimated Number of Resident Jobs by Employment Sector, Wainwright, 1993-2002



Source: Alaska Department of Labor and Workforce Development

3.1.3 Resident and Non-resident Employment by Place of Work

Figure 3-11 shows the trend in total employment on the North Slope from 1965 to 2003; these jobs include both residents and non-residents of the North Slope Region. As noted in Section 1.2, historical U.S. Census Bureau data correspond to two slightly different geographic areas. The employment figures in the first data series (1968 to 1979) are for the Barrow Census Division (which only included the communities of Anaktuvuk Pass, Barrow, and Wainwright), while the figures in the second data series (1980 to 1998) are for the North Slope Borough and cover all eight North Slope communities.

Total employment in the region increased sharply between 1974 and 1975. The total number of non-agricultural wage and salary employees on the North Slope peaked in 1983 (10,318 jobs), due primarily to a peak construction year. The period from 1983 to 1987 saw a decline in the total number of jobs in the region as a result of lost employment in the construction and transportation, communications, and utility (TCU) sectors.

In the 1970s, employment opportunities greatly expanded. Numerous jobs were created to support local services provided by the newly formed NSB government, to support major construction projects (i.e., oil field facilities, the Trans-Alaska Pipeline System, and the Dalton Highway), and to support the newly established operations of ASRC and the village corporations. During this decade, the number of non-agricultural wage and salary jobs grew by 192 percent, with most of the job growth attributable to the significant increase in construction jobs. On the average, the construction sector supported about thirty percent of the jobs in the region from 1970 to 1980. The oil production facilities at Prudhoe Bay are the single most important employer in the region. However, the jobs in the oil industry are predominantly held by non-resident workers.

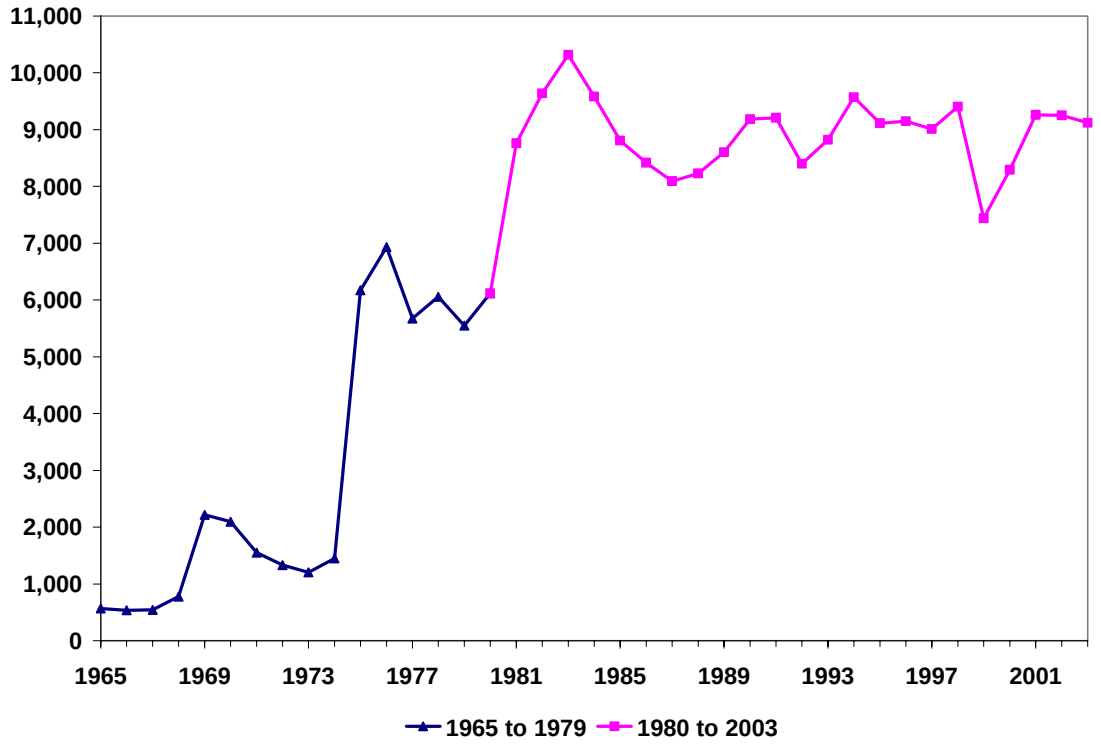
The early 1980s saw a continuation of the construction boom, primarily associated with the capital improvement projects of the NSB. Starting in the late 1970s, the Borough began construction of new schools, houses, utility systems, airports, and roads in North Slope communities. The number of construction jobs declined from 3,242 in 1983 to 373 in 1989. However, the number of mining jobs increased during the 1983-1989 period from 3,324 to 5,126. Government jobs continued to grow at a modest rate (about 3 percent per year) and employment in the services sector began to expand.

The 1990s was the decade of stabilized growth in employment, with less volatility in the construction and government sectors compared to the previous two decades. Towards the end of the 1990s, the mining sector experienced a sharp decline in employment followed by a rebound. Employment in other sectors continued to slowly expand throughout the 1990s.

Today, expansion in the private support sector is still largely dependent on developments in the oil and gas industry and government expenditures. The recent budgetary problems of the NSB and the consequent reductions in both capital and operating expenditures will continue to constrain economic activities in the region, affecting employment and income growth.

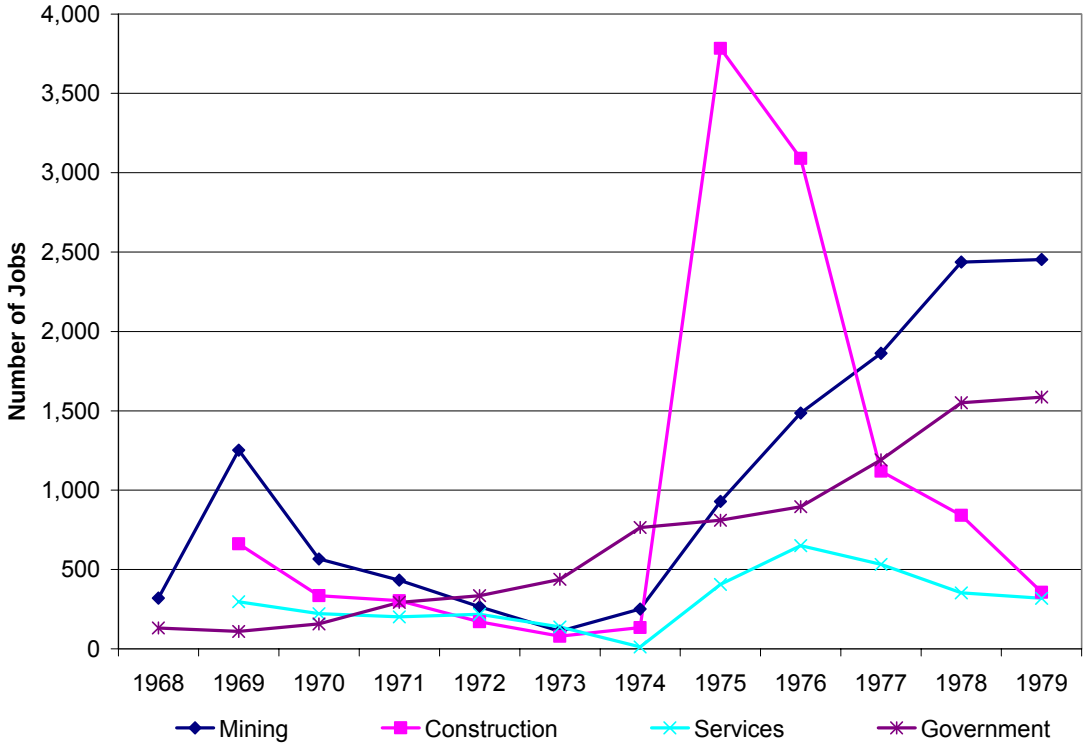
Figure 3-12 and Figure 3-13 show the annual trends in employment by top employment sectors in the North Slope region.

Figure 3-11. Estimated Number of Resident and Non-resident Jobs, North Slope Borough,1965-2003



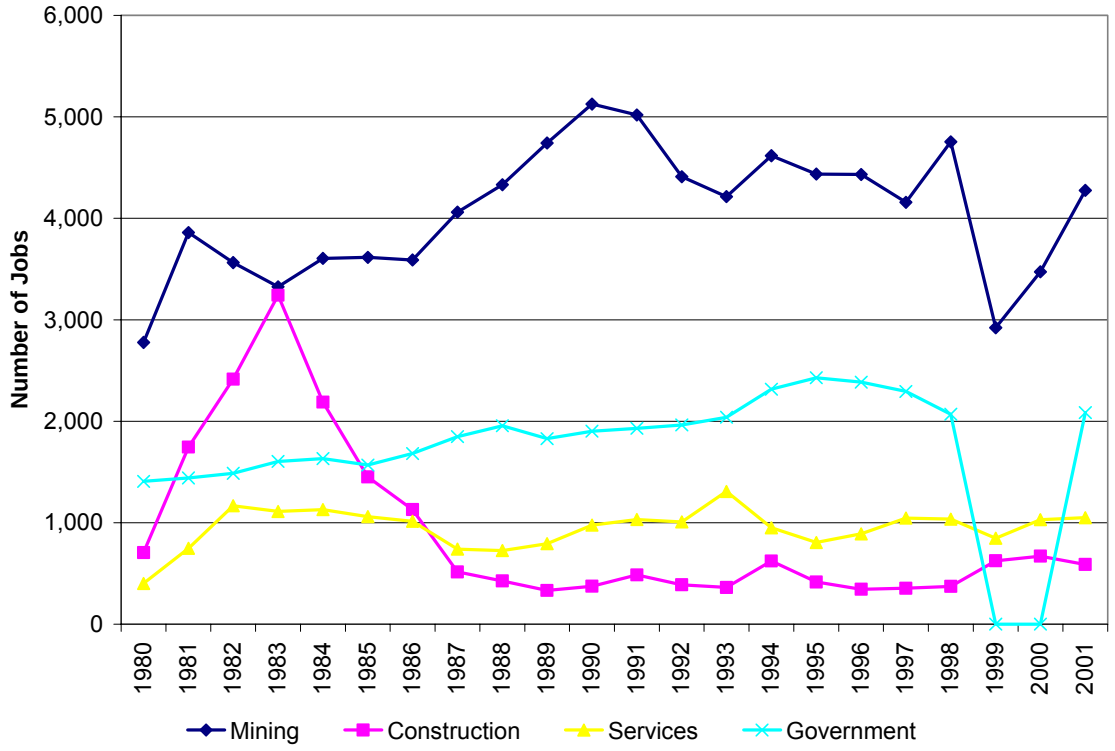
Source: Alaska Department of Labor and Workforce Development

Figure 3-12. Estimated Number of Resident and Non-resident Jobs by Place of Work, North Slope Borough, 1968-1979



Source: Alaska Department of Labor and Workforce Development.

Figure 3-13. Estimated Number of Resident and Non-resident Jobs by Place of Work, North Slope Borough, 1980-2001



Source: Alaska Department of Labor and Workforce Development

3.2 Changes and Trends in Labor Force Composition

This section describes changes in the composition of resident workers on the North Slope. The changes in gender and ethnicity composition of the different employment sectors are shown using information from surveys commissioned by the NSB at different points in time and from the 2000 U.S. Census. Additional information on North Slope employment with respect to gender and ethnicity is provided in Chapter 7.

3.2.1 Gender

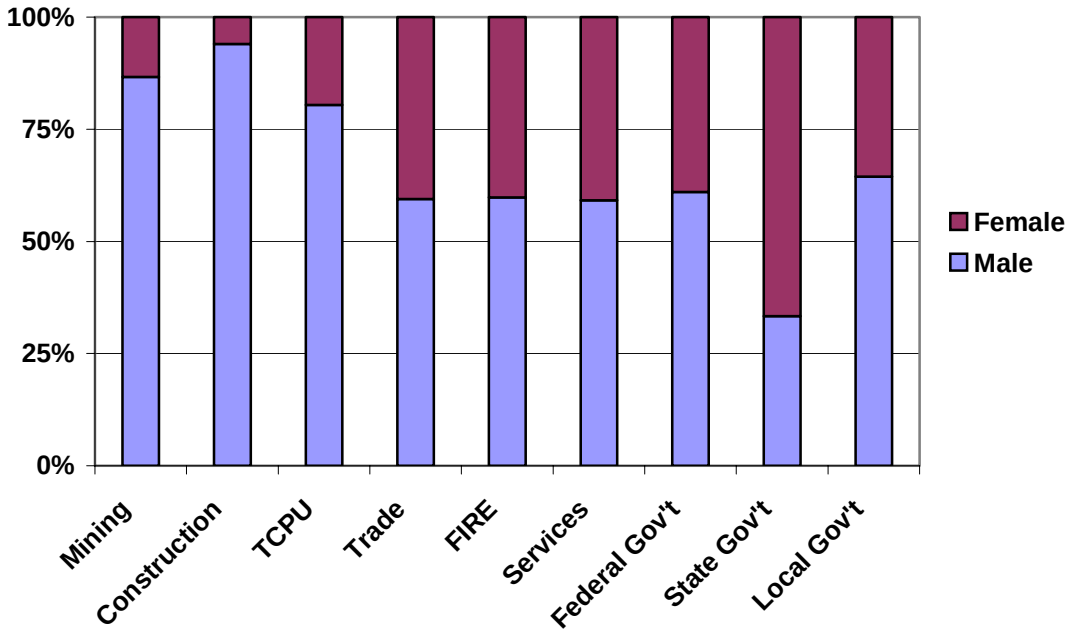
Information on the share of male and female resident workers by industry was obtained from surveys conducted by Alaska Consultants, Inc. (1981), the North Slope Borough, Department of Planning and Community Services (1989), and the 2000 U.S. Census. Comparing total numbers of male and female workers across these different surveys to trace historical trends is not possible; nonetheless, the figures provided below on the share of male and female employees provide a general indication of gender differences across sectors or industries at different periods in time.

The 1980 survey conducted by Alaska Consultants, Inc. indicated that in all sectors except state government, the majority of the employed resident labor force were men (Figure 3-14). Following the trend in the 1970s, the trade, FIRE, services, and local government sectors employed more women compared to the traditionally male-dominated sectors of mining, construction, and TCU.

In the 1988 survey conducted by the NSB, the fisheries, mining, construction, TCU, and the ASRC and its affiliates employed more males than females (Figure 3-15). That year, the female dominated sector was the FIRE sector, with 80 percent of that sector's workers being women. The government sectors employed almost equal shares of male and female workers (North Slope residents).

In general, the 2000 Census survey results show no apparent change in gender composition of North Slope residents employed in the different industries (Figure 3-16).

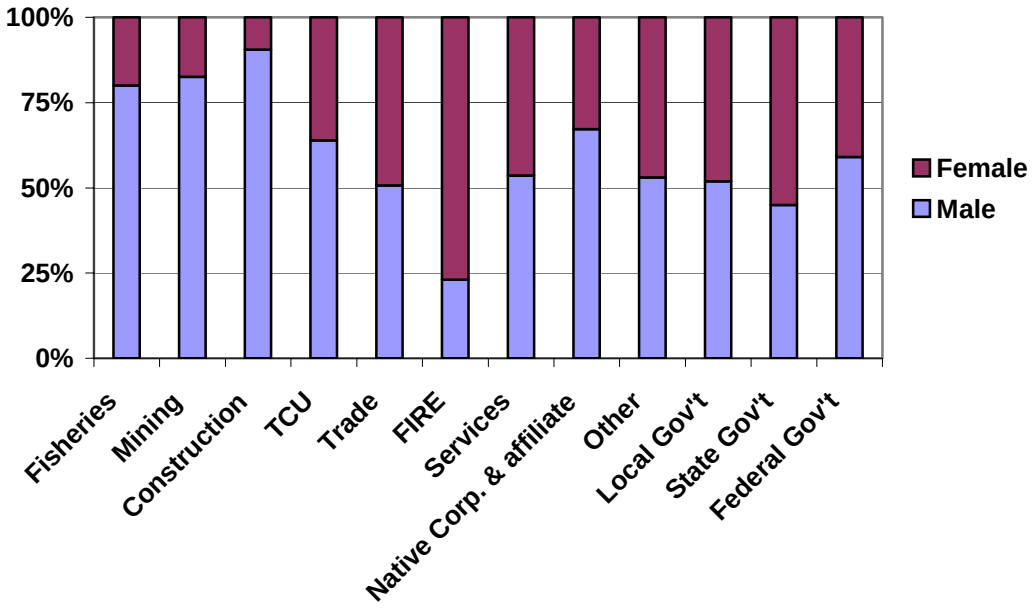
Figure 3-14. Percent of Male and Female Resident Workers by Industry, North Slope Borough, 1980



Notes:
1. Respondents were asked to list their employer or major source of income. Part-time employment and full-time employment were not differentiated. The employment figures exclude respondents who listed various forms of assistance, mainly Social Security as their major source of income.
2. Acronyms: TCPU stands for Transportation, Communication, and Public Utilities; FIRE stands for Finance, Insurance, and Real Estate

Source: Alaska Consultants, Inc., 1981; North Slope Borough Housing Survey, 1980.

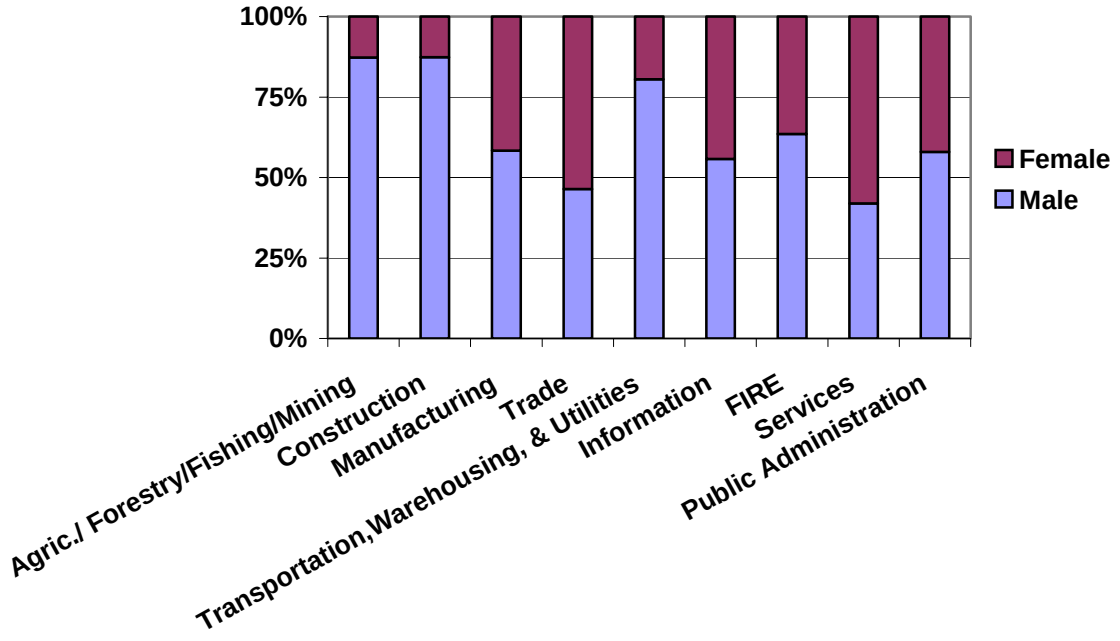
Figure 3-15. Percent of Male and Female Resident Workers by Industry, North Slope Borough, 1988



Note: Acronyms: TCU stands for Transportation, Communication, and Utilities; FIRE stands for Finance, Insurance, and Real Estate

Source: North Slope Borough Department of Planning and Community Services, 1989.

Figure 3-16. Percent of Male and Female Resident Workers by Industry, North Slope Borough, 2000



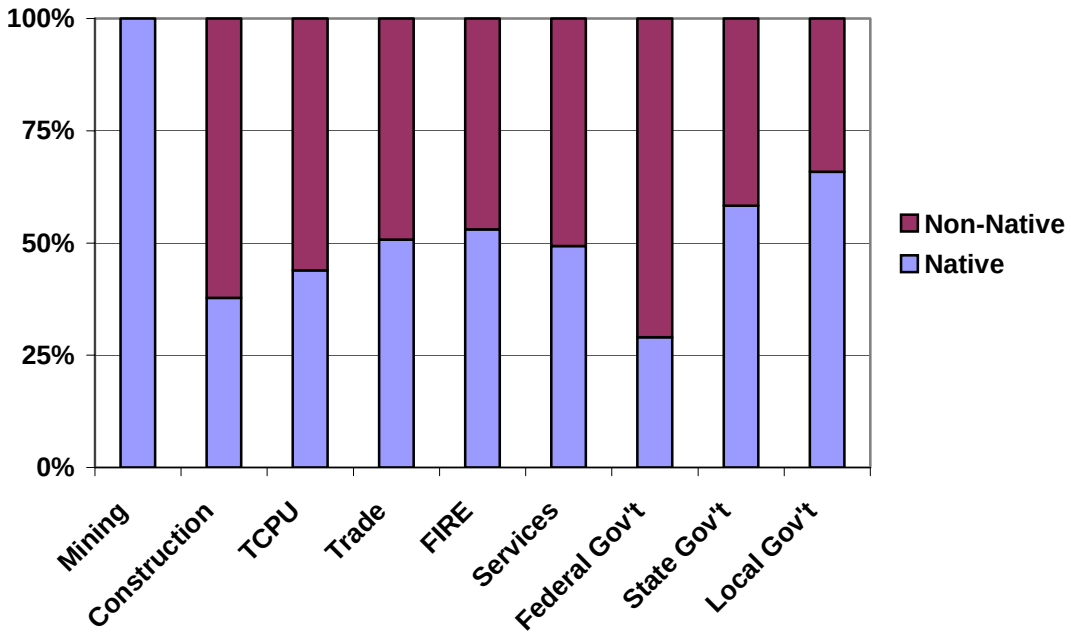
Note: FIRE stands for Finance, Insurance, and Real Estate
Source: U.S. Census Bureau

3.2.2 Ethnicity

This section discusses the differences in the composition of labor by ethnicity across the different industries on the North Slope. The information available for this analysis was obtained from the same surveys described in the previous section. Figure 3-17 chart shows that 100 percent of the North Slope residents who held mining sector jobs in 1980 were Alaska Natives. However, it should be noted that jobs in this sector are predominantly held by non-resident workers. In 1980, non-Native residents held over half of the federal government jobs, construction jobs, and TCU jobs; while the state and local government sectors employed a larger share of Alaska Natives. In 1988, mining, construction, the Alaska Native corporations, and local government had more Alaska Native employees than non-Native employees. The non-Native members of the workforce were more concentrated in the fisheries sector, federal and state government sectors, and the support industries such as TCU, trade, FIRE, and services (Figure 3-18).

Figure 3-19 and Figure 3-20 show the share of Alaska Native and non-Native resident workers in different government sectors and private industries in 1998. The city government and the NSB government had more than 50 percent Alaska Native hires. Among the private sector industries, only the support industries such as transportation, trade, and services had higher non-Native hires.

Figure 3-17. Percent of Alaska Native and Non-Native Resident Workers by Sector, North Slope Borough, 1980

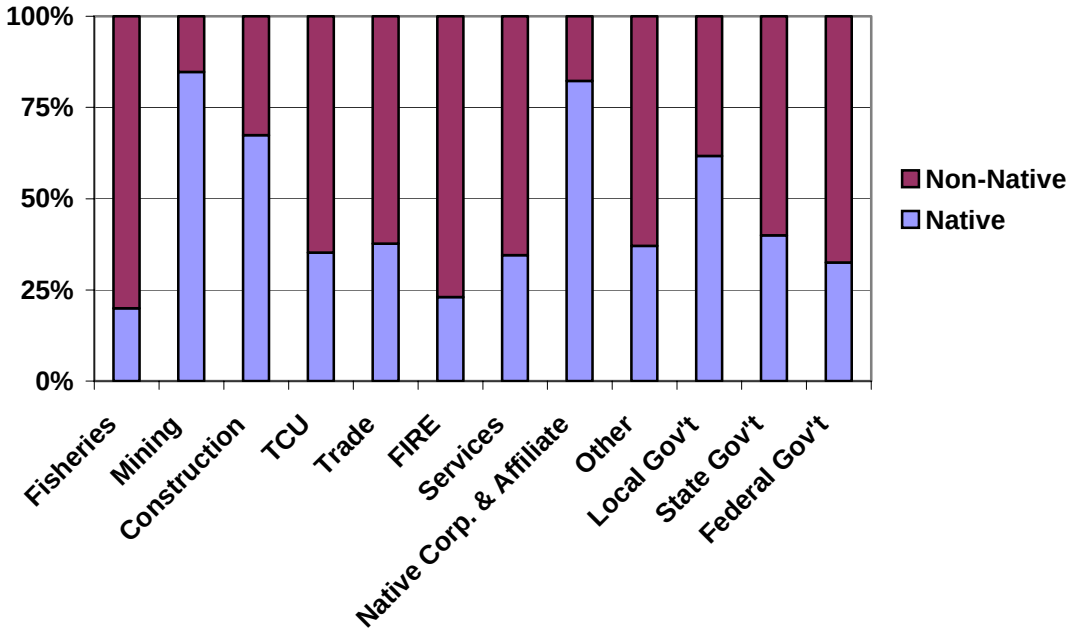


Notes:

1. Respondents were asked to list their employer or major source of income. Part-time employment and full-time employment were not differentiated. The employment figures exclude respondents who listed various forms of assistance, mainly Social Security as their major source of income.
2. Acronyms: TCPU stands for Transportation, Communication, and Public Utilities; FIRE stands for Finance, Insurance, and Real Estate

Source: Alaska Consultants, Inc., 1981; North Slope Borough Housing Survey, 1980.

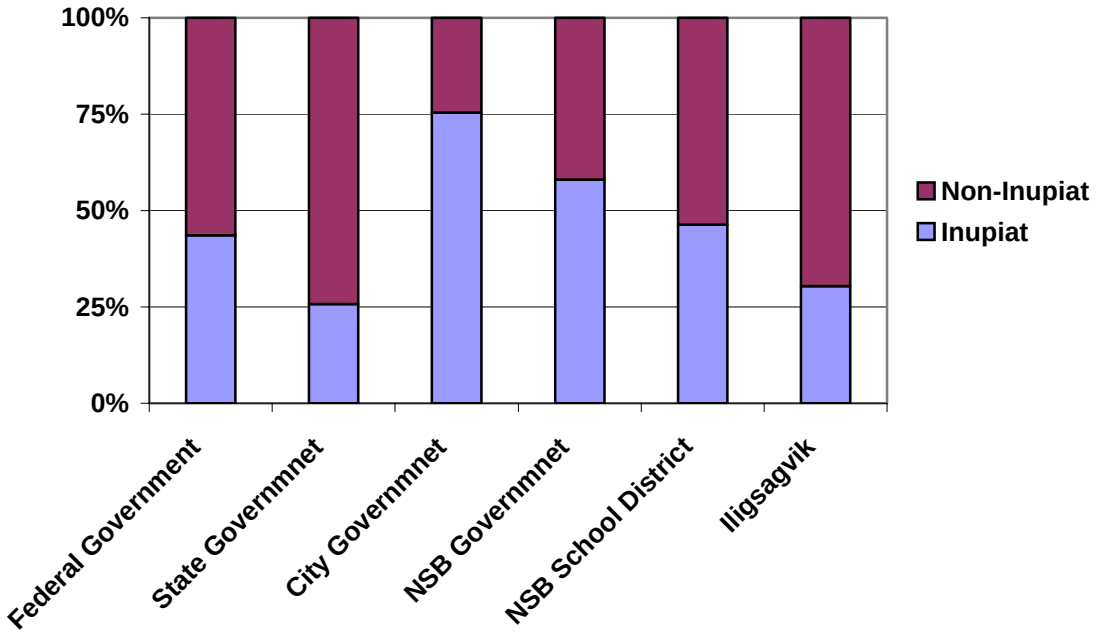
Figure 3-18. Percent of Alaska Native and Non-Native Resident Workers by Sector, North Slope Borough, 1988



Note: Acronyms: TCU stands for Transportation, Communication, and Utilities; FIRE stands for Finance, Insurance, and Real Estate

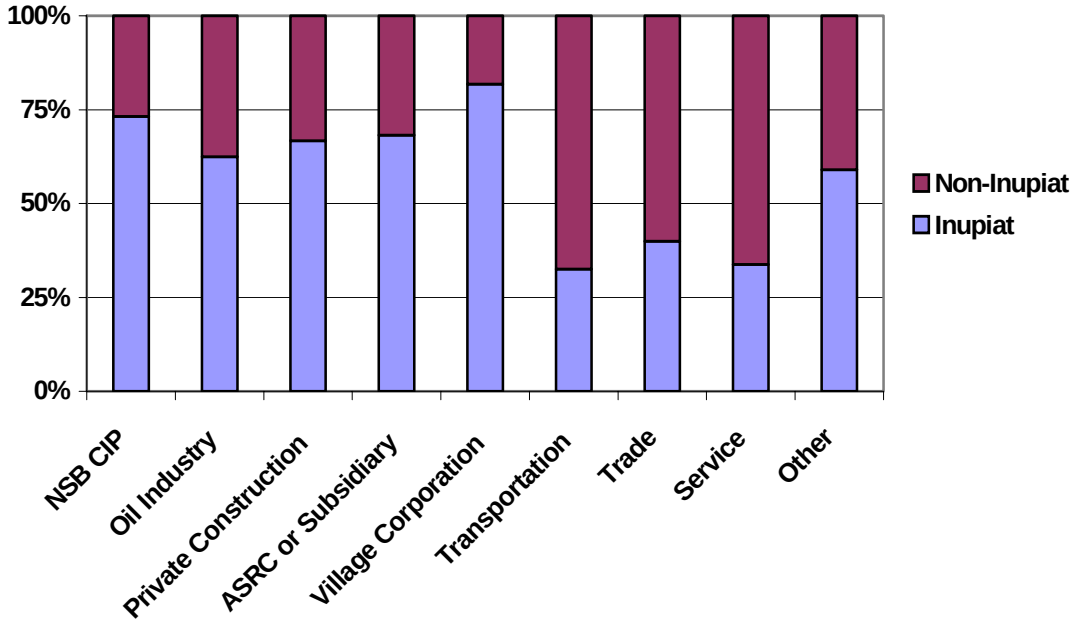
Source: North Slope Borough Department of Planning and Community Services, 1989.

Figure 3-19. Percent of Iñupiat and Non-Iñupiat Resident Workers in the Public Sector, North Slope Borough, 1998



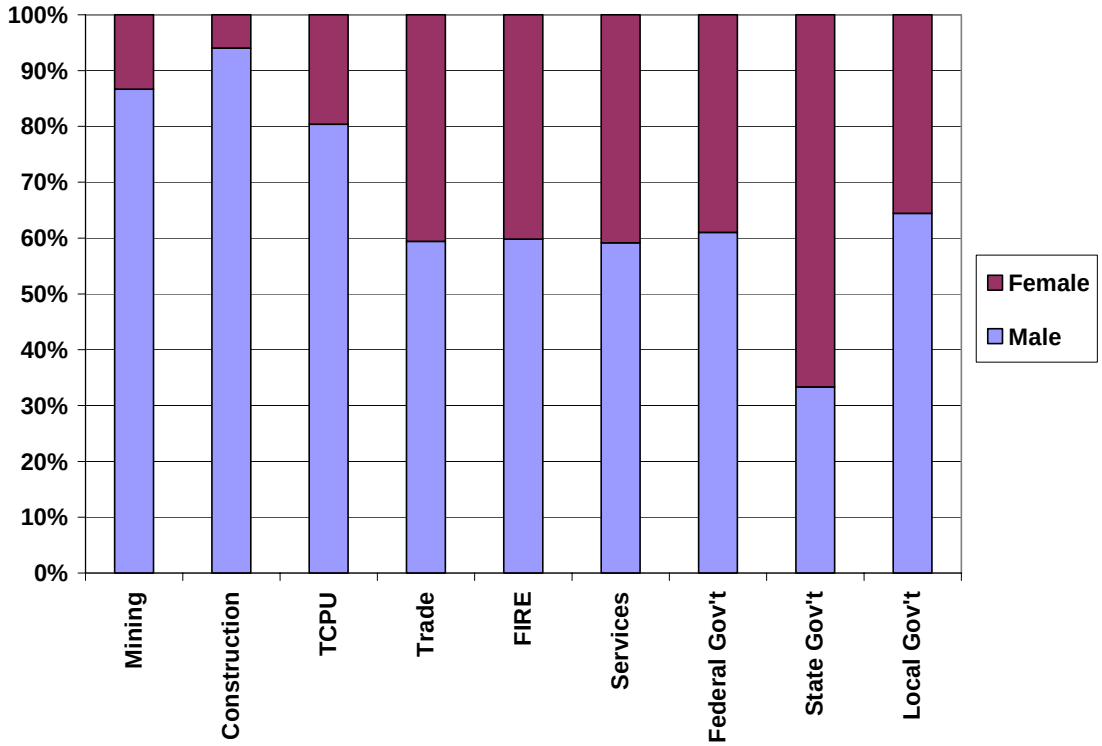
Source: Circumpolar Research Associates, 1999

Figure 3-20. Percent of Iñupiat and Non-Iñupiat Resident Workers in Private Industries, North Slope Borough, 1998



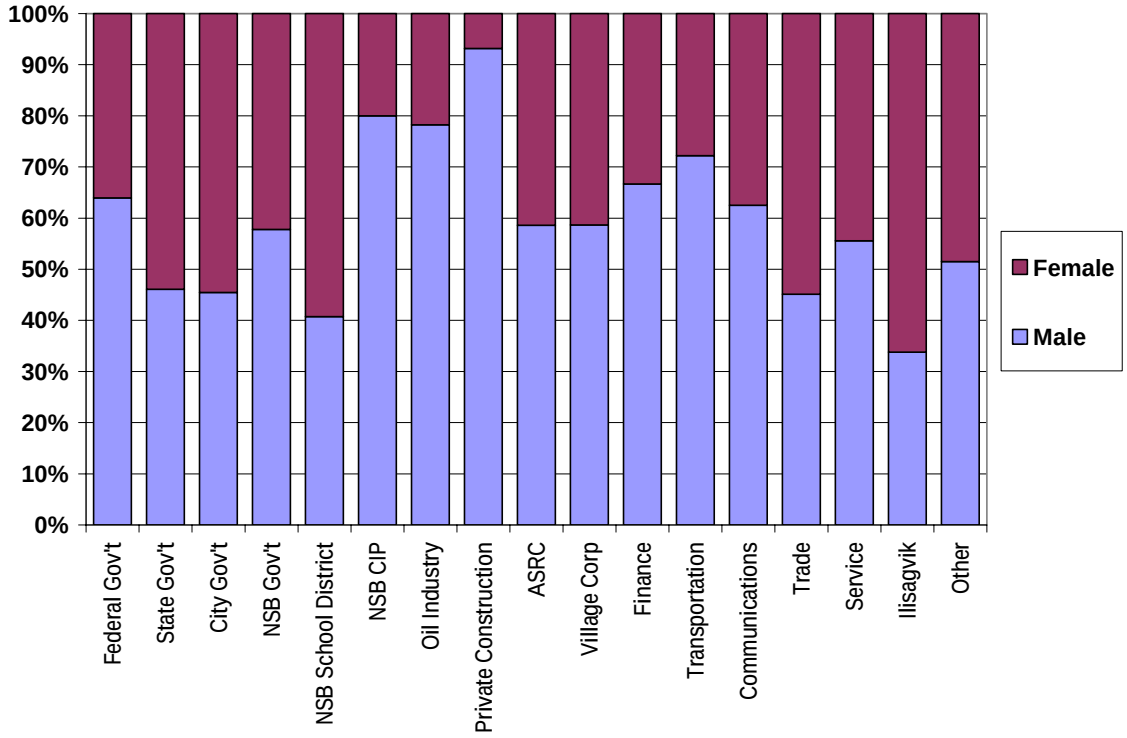
Source: Circumpolar Research Associates, 1999

Figure 3-21. Percent of Resident Employment by Gender and by Sector, North Slope Communities, 1980



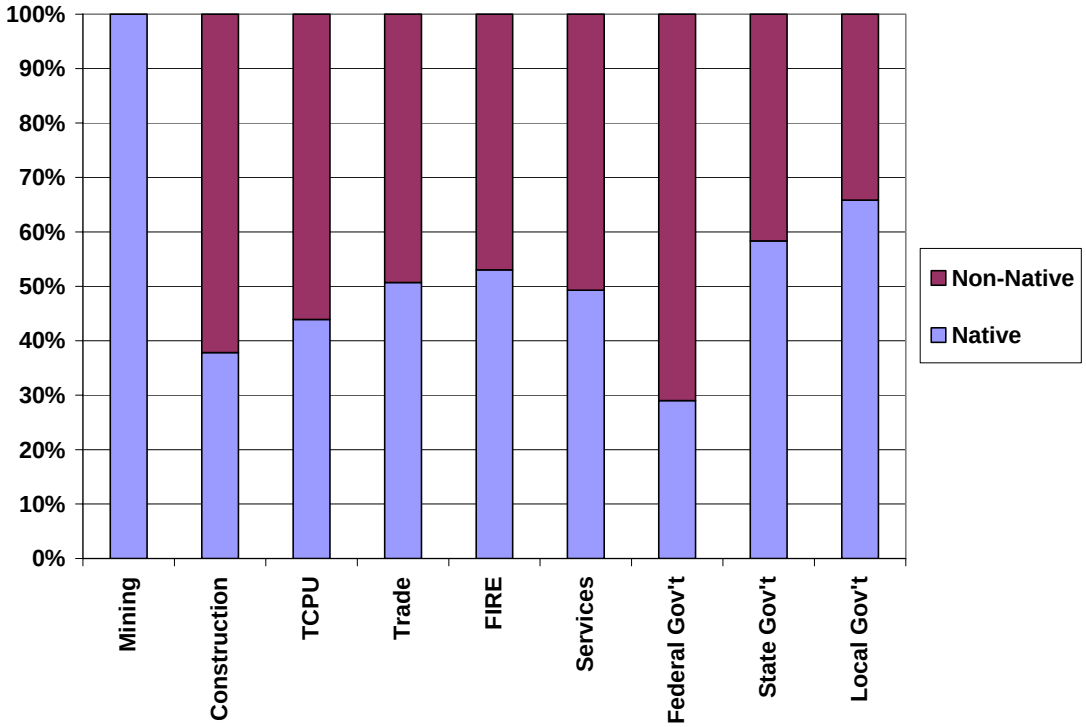
Source: Alaska Consultants, Inc., 1981

Figure 3-22. Percent of Resident Employment by Gender and by Sector, North Slope Communities, 2003



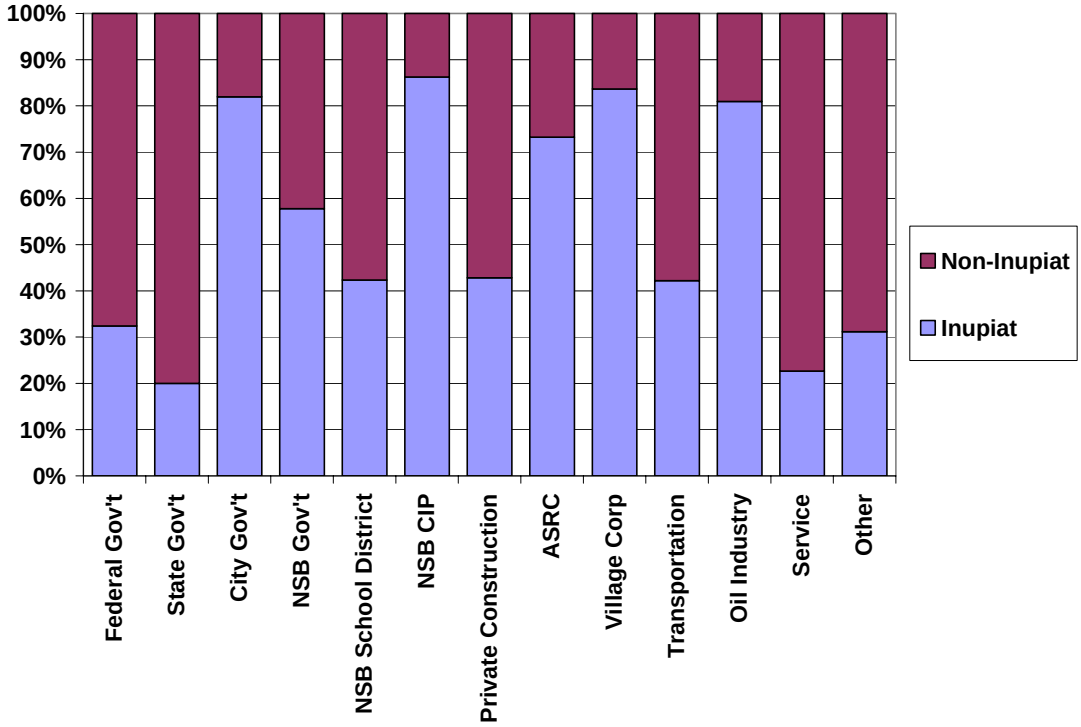
Source: Circumpolar Research Associates, 2004

Figure 3-23. Percent of Resident Employment by Ethnicity and by Sector, North Slope Communities, 1980



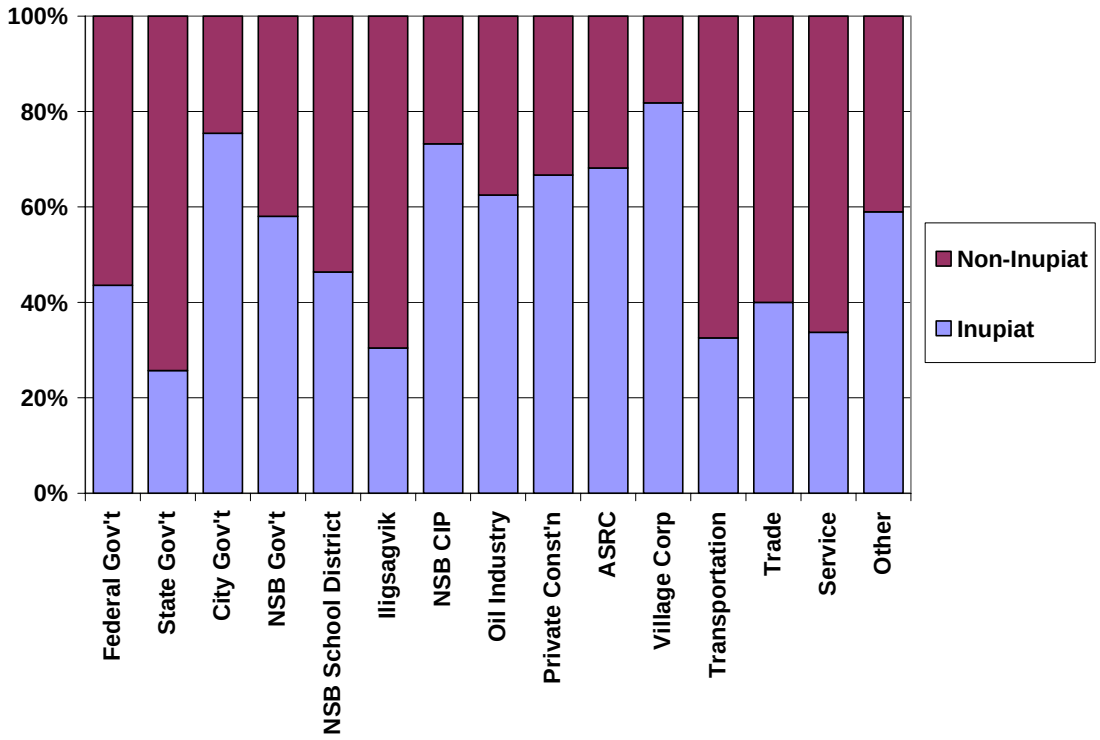
Source: Alaska Consultants, Inc., 1981

Figure 3-24. Percent of Resident Employment by Ethnicity and by Sector, North Slope Communities, 1993



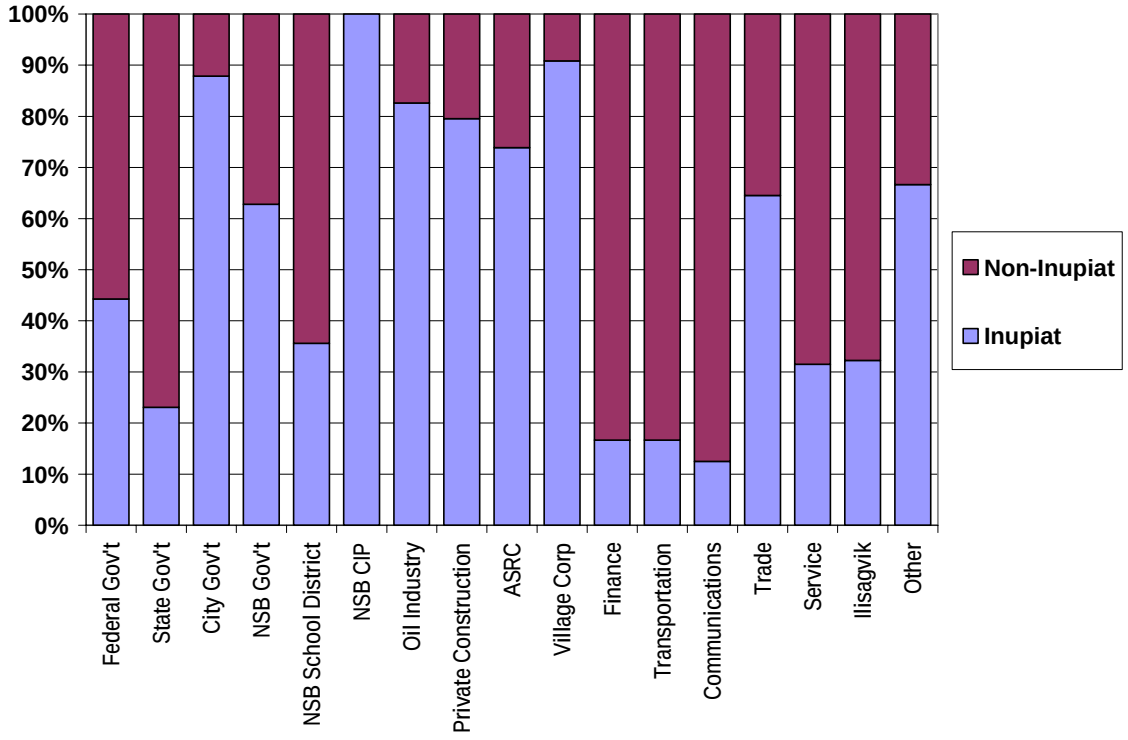
Source: Circumpolar Research Associates, 1995

Figure 3-25. Percent of Resident Employment by Ethnicity and by Sector, North Slope Communities, 1998



Source: Circumpolar Research Associates, 1995

Figure 3-26. Percent of Resident Employment by Ethnicity and by Sector, North Slope Borough, 2003



Source: Circumpolar Research Associates, 2004

3.3 Changes in Structural Composition of the North Slope Economy

In this section the structural composition of the regional economy over time is examined by looking at the size of firms operating in the region, the number of public versus private jobs, and the types of occupations available in the economy.

The following sub-sections present historical data from the County Business Patterns (CBP) and the U.S. Census Bureau. Data for years prior to 1980 are not available.

3.3.1 Size of Firms

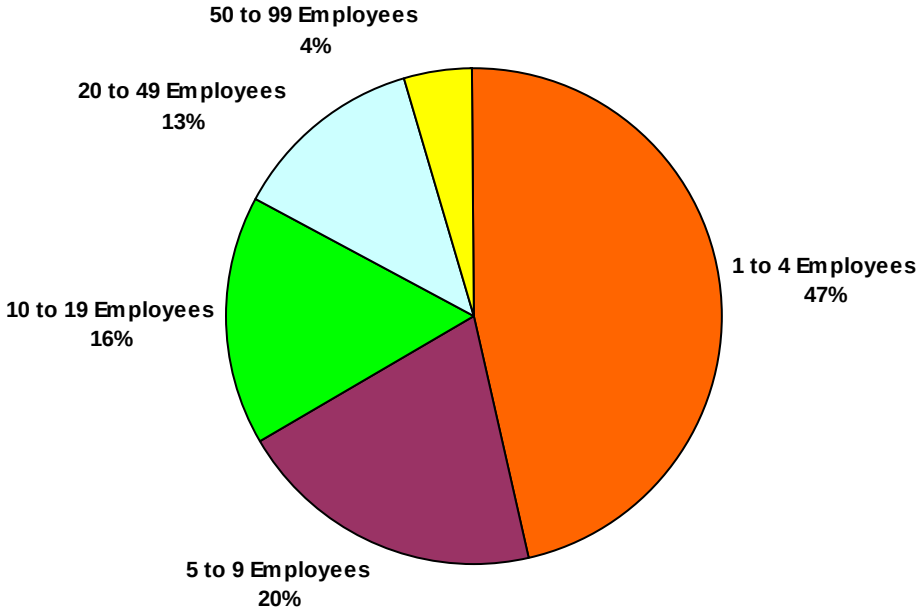
In general, the majority of the firms or establishments[19] on the North Slope are considered small businesses. Approximately 46 percent (average from 1982 to 1997) of the firms operating in the region had four or less employees; and less than 20 percent of the establishments had more than 19 employees (Figure 3-27).

After 1997, the CBP categories for number of employees were changed— the 1 to 4, 5 to 9, and 10 to 19 categories were aggregated into a single 1 to 19 category. Table 3-11 provides historical data

[19] An establishment is a single physical location at which business is conducted or services or industrial operations are performed. It is not necessarily identical with a company or enterprise, which may consist of one or more establishments. When two or more activities are carried on at a single location under a single ownership, all activities generally are grouped together as a single establishment. The entire establishment is classified on the basis of its major activity and all data are included in that classification.

from 1982 to 1997 for the categories with fewer than 19 employees. Table 3-12 shows the aggregated categories for the years 1982 to 2000.

Figure 3-27. Share of Number of Establishments by Firm Size, Average from 1982 to 1997



Source: County Business Patterns.

Table 3-11. Number of Establishments by Range of Employees, All Industries, North Slope Region, 1982-1997

Year	1 to 4 Employees	5 to 9 Employees	10 to 19 Employees
1982	32	14	9
1983	68	12	11
1984	44	15	14
1985	43	16	11
1986	48	9	13
1987	43	13	14
1988	39	11	10
1989	42	16	10
1990	36	15	16
1991	47	18	14
1992	50	28	23
1993	48	24	21
1994	40	34	24
1995	42	36	20
1996	58	30	27
1997	60	32	23

Note: County Business Patterns series excludes data on self-employed individuals, employees of private households, railroad employees, agricultural production employees and most government employees.
Source: County Business Patterns.

Table 3-12. Number of Establishments by Range of Employees for all Industries, North Slope Borough, 1982-2000

Year	0 to 19 Employees	20 to 99 Employees	100 to 499 Employees	Total
1982	55	17	1	73
1983	91	17	1	109
1984	73	13	3	89
1985	70	13	0	83
1986	70	15	0	85
1987	70	11	0	81
1988	60	13	1	74
1989	68	12	0	80
1990	67	14	0	81
1991	79	16	0	95
1992	101	22	0	123
1993	93	25	0	118
1994	98	24	0	122
1995	98	25	1	124
1996	115	19	0	134
1997	115	19	1	135
1998	113	23	1	137
1999	109	25	2	136
2000	101	29	2	132

Notes:
1. County Business Patterns series excludes data on self-employed individuals, employees of private households, railroad employees, agricultural production employees and most government employees.
2. Starting in 1998, data are tabulated by industry as defined in the NAICS. Data for 1997 and earlier years are based on the Standard Industry Classification System.

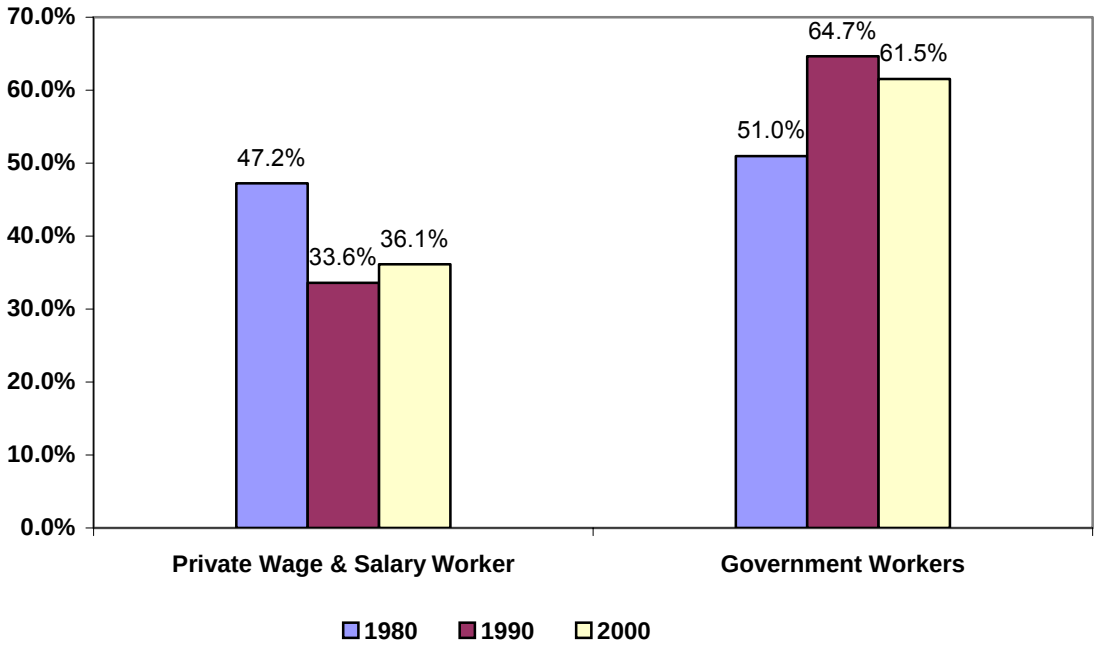
Source: County Business Patterns.

3.3.2 Public Sector and Private Sector Jobs

The U.S. Census data distinguishes between private and public sector jobs for North Slope residents. Figure 3-28 shows changes in the shares of private and public sector jobs held by residents in 1980, 1990 and 2000. As mentioned earlier, government jobs supported most of the resident employment in the region. In 1980, the government sector supported 51 percent of the resident employment; by 1990, this share increased to about 65 percent, and by 2000 about 62 percent of the jobs held by residents were in the government sector. In contrast, the share of private sector jobs decreased, from 47 percent in 1980 to about 36 percent in 2000.

The number of self-employed workers increased by 171 percent from 1980 (24 self-employed workers) to 2000 (65 self-employed workers). While the share of self-employed workers is small (2 percent), the increasing number of self-employed workers (or entrepreneurs) may indicate an important trend towards economic diversification.

Figure 3-28. Share of Employment by Type of Worker, 1980, 1990, 2000



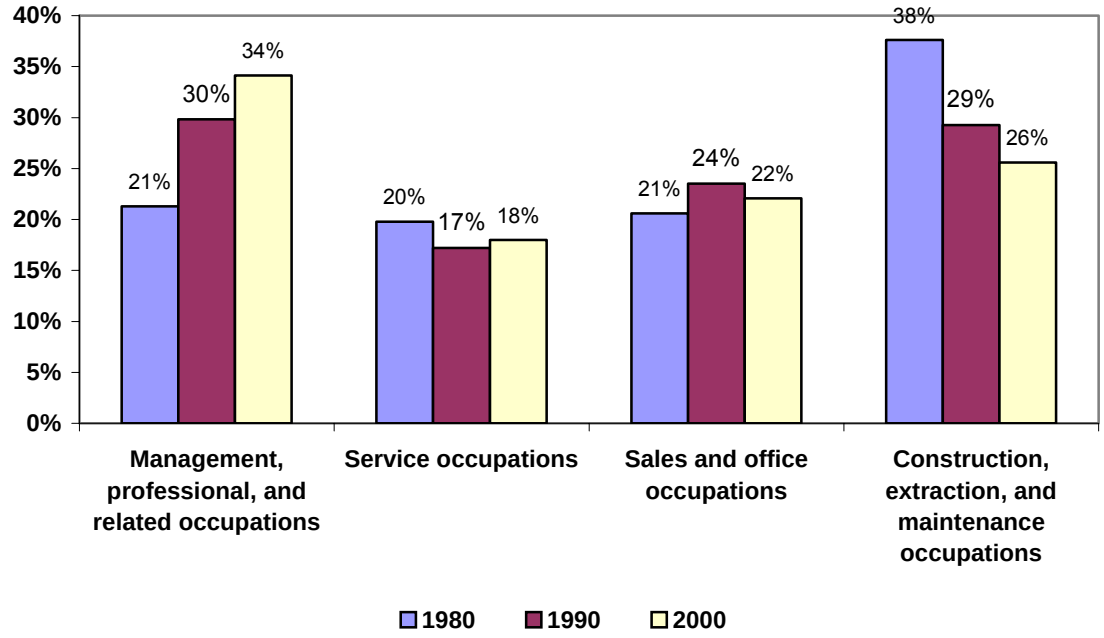
Source: United States Census Bureau.

3.3.3 Types of Occupations

For the years 1980, 1990, and 2000, Census information was used to show North Slope employment by type of occupation. Figure 3-29 compares the share of total jobs of each type of occupation. The chart shows that the share of management and professional occupations to total jobs has increased. In contrast, the share of construction and maintenance type of jobs to total jobs has decreased. A report by ISER (1981) indicated that seventy-five percent of the Iñupiats who had jobs in 1976-1977 worked as construction laborers, heavy equipment operators, carpenters, or in some other blue-collar job associated with construction projects.

Service occupations, and sales and office occupations remained relatively stable in 1980, 1990 and 2000.

Figure 3-29. North Slope Employment by Occupation, 1980, 1990, and 2000



Note: The percentages for each year do not add up to 100 percent; only the four most important types of occupation are shown (omitting other types).
Source: United States Census Bureau.

4 The Role of Local Government

This chapter describes the trends in revenues and expenditures by local governments on the North Slope, including the issues of declining revenues and debt capacity. The focus is on the role of the NSB and city governments. An assessment of the role of tribal governments in the North Slope economy is provided in Chapter 6. Most of the analysis in this chapter is based on audited financial statements and other information obtained from the Alaska Department of Commerce, Community and Economic Development and data presented in various publications of the MMS Alaska OCS Socioeconomic Studies Program. Revenue and expenditure data from different sources do not always match, making it difficult to combine data sets; however, to the extent possible, the analysis provides a time series of data that covers the temporal scope of the study.

4.1 Overview of NSB Government

The NSB government and Alaska Native corporations have played important roles in shaping the North Slope economy. The NSB, however, has been the engine for the regional economy during the past three decades. Through its ability to levy taxes on the oil industry operating within the Borough, the NSB has provided employment and services to all the area communities. The NSB has also been the largest employer of North Slope Iñupiat in the region. Given that one of the primary goals of the NSB has been to create employment opportunities for residents, the NSB itself is viewed as the primary local industry. Over the past three decades, the NSB has employed many residents directly and financed construction projects under its Capital Improvement Program (CIP), which has employed numerous additional Borough residents.

While much of the economic hegemony of the NSB ultimately rests with its ability to tax the oil industry, the centralization of authority in the NSB was also the result of a deliberate transfer of power from the cities to the Borough. At the time the NSB was established, there was agreement in most villages that the Borough would be in a stronger position to procure and administer any available funds and operate all basic services and facilities. (Smythe and Worl, 1985). In 1974, the communities of Wainwright, Nuiqsut, Kaktovik, Point Hope and Anaktuvuk Pass voted to transfer the following responsibilities to the NSB: streets and sidewalks, sewage treatment, water and flood control, hospital and health services, telephone, water, light, power, heat, transportation, libraries, airport and aviation facilities, garbage and solid-waste collection and disposal, housing and urban renewal, and historic site preservation and protection. By 1975, the education system had been turned over to the newly created NSB School District,[20] and in 1976, police power was taken over by the Borough.

4.2 Overview of City Governments

The North Slope includes eight permanent residential communities: Point Hope, Point Lay, Wainwright, Barrow, Atqasuk, Nuiqsut, Kaktovik, and Anaktuvuk Pass. Barrow is a first class city. All other North Slope communities are second class cities with the exception of Point Lay, which has not been incorporated under state law as a municipality.

[20] At the time the NSB was incorporated, both the U.S. Bureau of Indian Affairs and the State of Alaska operated schools in the region (Underwood et al., 1978). The Wainwright, Kaktovik and Barrow schools were run by the BIA and those in Point Hope and Anaktuvuk Pass were part of the state system. The borough took over the Point Hope and Anaktuvuk Pass schools from the State in 1974, while the BIA turned over the Barrow, Wainwright, and Kaktovik schools in 1975.

Prior to the founding of the NSB, the city governments were the only governing agencies that operated in most villages on a daily basis (Luton, 1985). Representatives of state and federal agencies, including such important functionaries as BIA officials and state police officers, would commute to the villages on an intermittent basis.

As discussed above, the majority of the villages on the North Slope transferred nearly all municipal powers to the NSB. While each of the communities is independent, they receive several necessary community services through the NSB. For example, in most villages the NSB Department of Public Works is responsible for the operation and maintenance of community utilities, roads, airports, transit systems, sewage and solid waste disposal, and washeterias. In addition, the NSB's CIP has been a driving force behind the villages' cash economies. When the village corporations were able to involve themselves in construction activities, the CIP also provided the corporations with much of their for-profit business.

Although the North Slope villages contributed to the development of a strong regional government (and weakened village governments), the North Slope Iñupiat continued to strongly identify themselves with community social units (Worl et al. 1981).[21] Worl and McMillan (1981) note that the regional political alliance of the North Slope communities did not alter established methods of governing community affairs. In giving over certain municipal powers to the Borough, the villages lost the direct management and decision-making responsibilities for the delivery of services and programs and for the construction of related facilities. However, city councils have often played a key role in the administration of the NSB's programs and projects by representing community interests and priorities to the appropriate borough department or directly to the NSB Mayor (Smythe and Worl, 1985). For example, the councils have demonstrated that they are capable of exerting pressures on the Borough when the NSB's services do not adequately meet local needs and ensuring that employment in local service positions go to community residents.[22] Moreover, the councils have become the vehicles through which the innumerable state and federal public hearings are held (Worl and McMillan, 1981). These public hearings frequently relate to potential petroleum exploration and development which may affect the communities.[23]

4.3 The Role of the North Slope Borough

This section presents the major revenues and expenditures of the NSB, discusses the trends in revenues and expenditures over the years (1975 to 2003), and briefly describes the per capita perspective of debt levels and assessed values, as well as budgetary challenges with respect to potential future shortfalls in NSB revenues.

4.3.1 Primary Revenues and Expenditures

The primary revenue and expenditure streams for the NSB are property taxes, capital improvement project expenditures, and debt service. These streams are important because the NSB issues general

[21] In 1984, the NSB proposed the abolition of all city governments within the borough, but the proposal was defeated (Luton, 1985).

[22] City councils have also been involved in approving future occupants of housing projects constructed by the NSB (Smythe and Worl, 1985).

[23] At times the villages have responded to perceived threats from oil and gas development in a manner that underscores their independence from the NSB. In the late 1970s, for example, Kaktovik, Nuiqsut and Barrow filed a lawsuit to stop the Beaufort Sea oil and gas lease sale (Worl et al. 1981). Both the NSB and ASRC opposed the initiation of the suit although they supported the same goal.

revenue bonds based on its ability to collect property taxes (with an emphasis on oil and gas properties). The NSB, in turn, provides assistance to the cities in the Borough. While each city gets assistance through a variety of borough departments, most of the assistance takes the form of financial support for capital projects.

Because the revenue the NSB receives from taxes levied on oil and gas properties far exceeds that received from other sources such intergovernmental (state and federal) transfers, charges for services and utilities, or interest earnings, the nature of these property taxes is discussed in greater detail below.

4.3.1.1 Property Taxes

As discussed in Chapter 2, the incorporation of the NSB as a first-class borough in 1972 enabled the NSB government to exercise its taxing authority to receive large revenues from Prudhoe Bay oil and gas properties. However, the rate at which the Borough may tax property to raise revenue for operating purposes is restricted by state law.

The current laws on oil and gas property taxes were developed during the a special session of the state legislature that began in October 1973. [24] Under these statutes, each municipality with oil and gas property within its boundaries is reimbursed an amount equal to the taxes which would have been levied on the oil and gas property, up to a 20-mill limit. Under Section 29.45.080 of the Alaska Statutes, a municipality may levy and collect taxes on oil and gas property by using one of two methods:

1) a municipality may levy a tax 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 in its boundaries; [25] or

2) a municipality may levy a tax on value that, 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.

The NSB first used the second method in calculating its oil and gas property tax levy in 1978 (Harcharek, 2004). In 1985, questions were raised about NSB's use of the method, but in that same year the Alaska Attorney General stated that NSB's interpretation of the tax statutes was "reasonable and defensible" (Harcharek, 2004).

Because the 225 percent method is tied to the population of the NSB, the procedure for determining the population of the Borough—in particular the number of oil workers who may be counted in the Borough's population—has an enormous indirect impact on the ability of the NSB to tax oil and gas property and became a subject of political dispute (Worl and Smythe, 1986). The Alaska Statutes requires that the population estimate be based on the latest statistics of the U.S. Census Bureau or on other reliable population data. According to Bob Harcharek, NSB Senior Planner, "The North Slope Borough, recognizing limitations of the U.S. Census, has conducted its own local census periodically

[24] The limitation on municipal taxing authority as well as a ceiling on property tax rates were imposed as a direct response to the formation of the NSB (Luton, 1985). In 1973, the oil Industry and state administration sued to invalidate the incorporation of the NSB , thereby challenging the NSB's authority to tax oil and gas property. In 1974, the Alaska Supreme Court dismissed the suit, stating that the local NSB government was needed to protect Iñupiat culture and subsistence activities (Harcharek, 2004).

[25] Initially, the formula for calculating the levy was $1,000 per capita. The State Legislature increased the value to $1,500 in 1976.

since 1989 in order to reflect accurately the population of its communities. …Since 1989, the borough has successfully challenged the State of Alaska's population estimates for Tax Cap Determination purposes by utilizing its own census figures (Alaska Native Policy Center, 2004:28)." The NSB considers oil workers as residents for purposes of taxation.

The Alaska Statutes provides that limitations on the amount of property tax that may be collected apply only to taxes for operating expenses. By limiting the amount of operating revenues the "tax cap" would, in effect, have limited the number of jobs created by the NSB (Worl and Smythe, 1986). However, the bonding powers of the Borough enabled it to sidestep the limitation (Worl and Smythe, 1986). The NSB claimed that the statutory limits on local government taxation did not apply to debt service but only to operating revenues. In 1978, the Alaska Supreme Court upheld this interpretation of the law (Harcharek, 2004),[26] and borough officials decided to use general obligation bonds to fund its CIP and create jobs on construction projects. The bonds are authorized by vote of the North Slope Borough Assembly and ratified by a simple majority of voters. The full faith and credit of the Borough is pledged to guarantee payment of the bonds. Over the past three decades the Borough has raised billions of dollars for capital projects by selling bonds and then taxing Prudhoe Bay property to retire the new bonded indebtedness.

The borough mill rate in FY 1978 was set at 7.52 mills. This includes a tax at the rate of 2.12 mills which is the subject of debt service litigation. The FY 1994 mill rate applied by the NSB to assessed property was 18.5 mills. This rate is the sum of a rate of 4.78 mills for operations and 13.72 mills for debt service. Although the mill rate for operations is at the limit allowed by state statutes, the NSB's mill rate is unlimited for repayment of bonded indebtedness. Therefore, the NSB administration is not now facing any legal constraints to raising the mill rate to repay bonds. Because the NSB mill rate for repayment of bonded indebtedness is not limited, short-term revenue constraints do not drive current capital expenditures. The state perceives a limit on the mill rate on oil and gas property of 20 mills. Therefore, by self-limiting at 18.5 mills, the NSB sets a buffer short of 20 mills, which allows for the capability to increase revenues if assessed values fall unexpectedly.

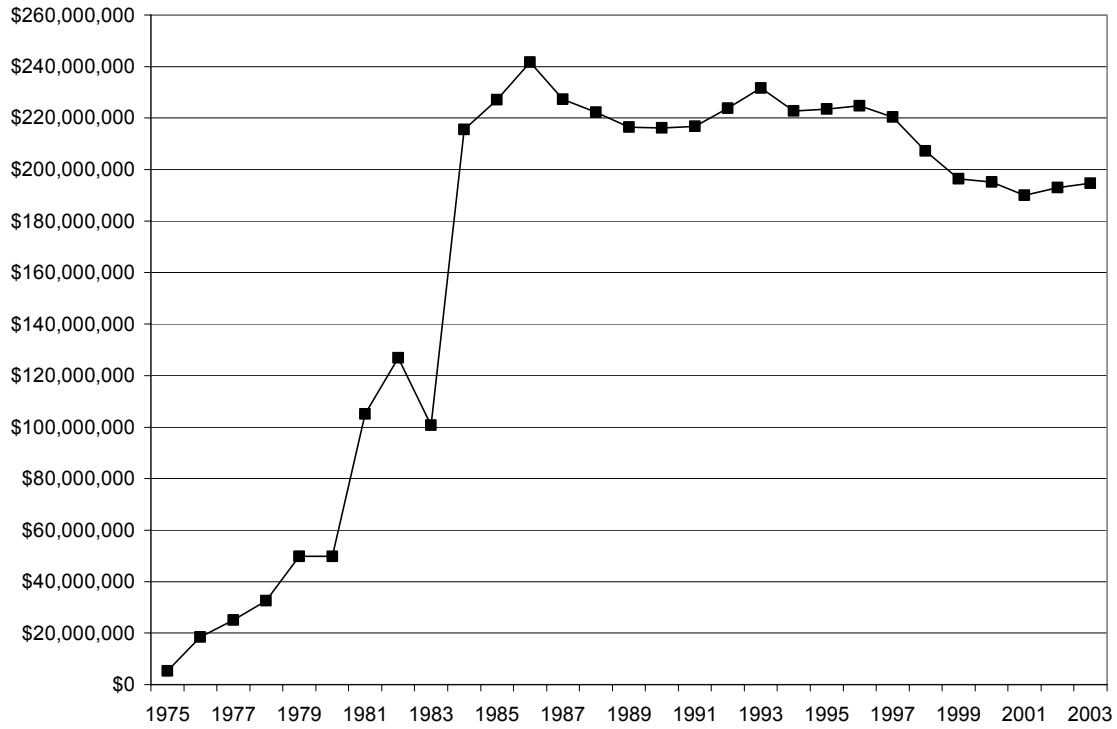
Debt issues could be used to raise money without a specified purpose, and the Borough was able to make large gains through arbitrage. The ability to use arbitrage for funding was the main source of funding, and was directly responsible for growth in the late 80s. The old tax regulations allowed unlimited arbitrage transactions National Arbitrage Policy.

4.3.2 Trends and Issues in NSB Revenues and Expenditures

Figure 4-1 presents NSB revenues from taxes levied on oil and gas properties on the North Slope from 1973 through 2003, as reported by the Assessor's Office. The NSB industrial property tax base at Prudhoe Bay and along the trans-Alaska pipeline was assessed at $5 billion in 1979, increasing to $14 billion by 1985. Oil and gas tax revenues increased rapidly from 1975 through 1986, peaking in 1986 at $240 million. As the value of the oil and gas production and pipeline property depreciates, the tax revenues to the Borough have declined.

[26] Section 29.53.055 (now section 29.45.100) of the Alaska Statutes states that there is no limit on taxes levied or pledged to pay or secure payment of the principal and interest on bonds.

Figure 4-1. Oil and Gas Property Tax Revenues, North Slope Borough, 1975-2003

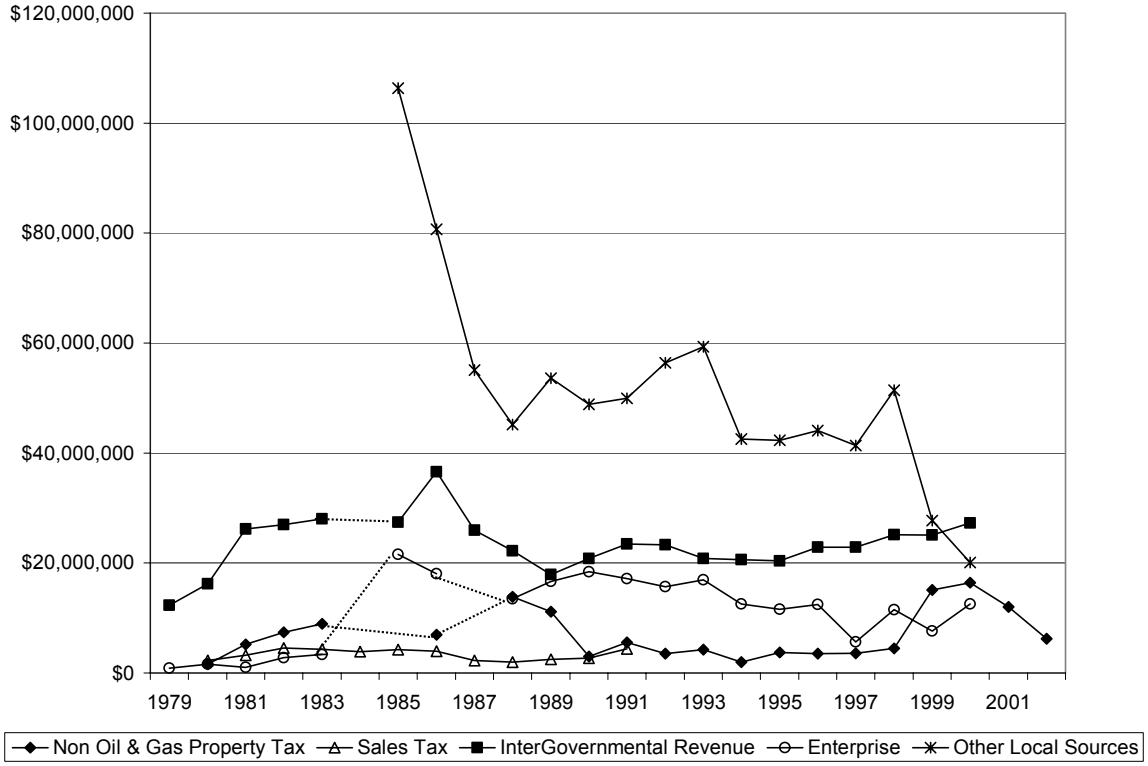


Source: Alaska Department of Commerce, Community and Economic Development, Office of the State Assessor.

Other sources of borough revenues are the state and federal governments, mainly for health and education programs; state revenue sharing funds and grants-in-aid are another important form of intergovernmental revenues. The NSB also collects revenues from fees charged for utilities and other services provided by the Borough. Government enterprises use these fees to offset the costs of providing those services. Between 1980 and 1991, the NSB levied a three percent consumer sales tax which was restricted to the first $1,000 of each retail sale (Kruse at al., 1983).[27] The originating ordinance showed eight exemptions from the tax, including groceries, fuel for home consumption and the sale of basic necessities. Other revenues include taxes on non-oil and gas properties, interest earnings on investments of the Borough, gaming revenues and rental property revenues. All other local revenue sources including those that do not accrue on a regular basis are combined in the "other local sources" category; this may include sales of properties, fines and other fees, interest earnings, building rental, etc. The amount of revenues from this source generally has been on a declining trend since 1985; the exact cause or causes of this declining trend have not been documented as this category has been used as a catch-all category.

[27] The sales tax was repealed in 1991 when a payment in lieu of taxes for economic development was negotiated with the oil industry.

Figure 4-2. Revenues Excluding Oil and Gas Property Tax Revenues, North Slope Borough, 1975-2002

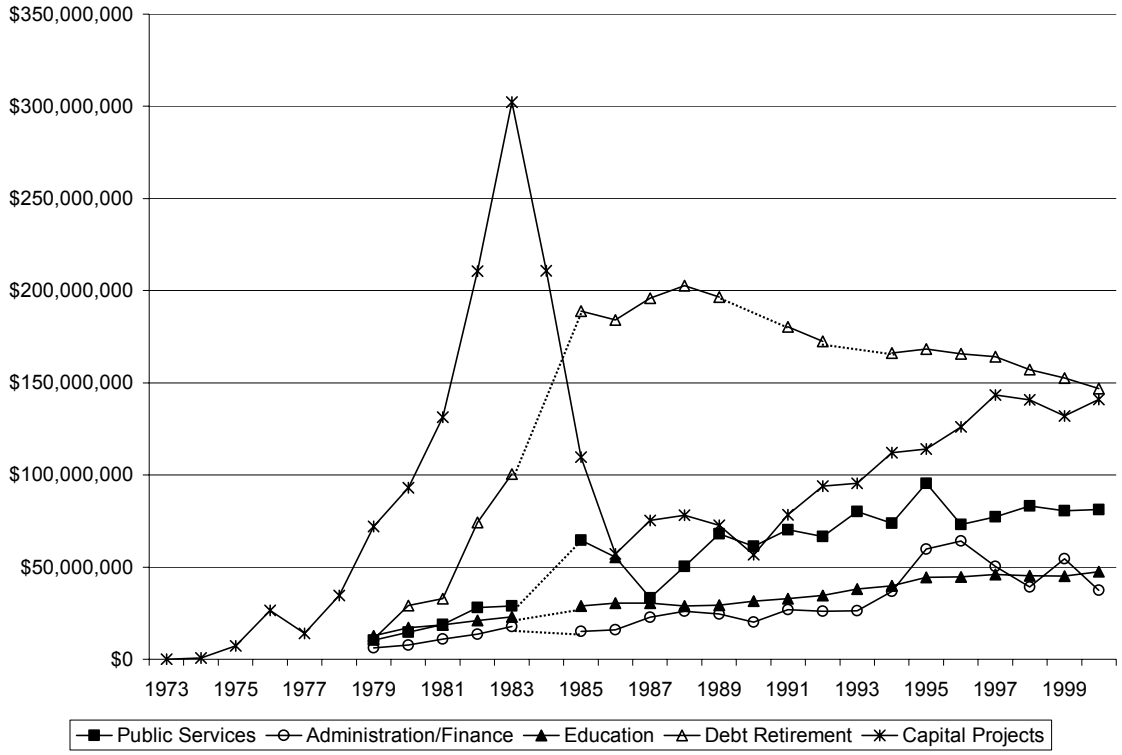


Note: Data for enterprise, intergovernmental and non-oil and gas property tax revenues were unavailable for 1984. Estimates of revenues from other local sources were unavailable for the years 1973 to 1984. The estimates of revenues from non-oil and gas property taxes for 1985 and 1987 were not included because of questions about their validity.

Sources: Alaska Department of Commerce, Community and Economic Development, Office of the State Assessor; Kruse, et al., 1983.

NSB expenditures fall into three general categories: operating expenditures (public services, education and general government), debt service, and capital expenditures (Figure 4-3). As noted above, the NSB has financed virtually all of its capital expenditures with general obligation bonds. The Borough's debt service and operating expenditures were primarily financed with property tax revenues. Public services have consumed the largest share of the operating budget, followed by education and general government expenses.

Figure 4-3. Major Expenditures, North Slope Borough, 1973-2000



Note: Data for all expenditures except capital projects were unavailable for the 1973-1978 period and for 1984. The estimates of debt service payments for 1990 and 1993 were not included because of questions about their validity.

Sources: Alaska Department of Commerce, Community and Economic Development, 2003; Kruse, et al., 1983; Smythe and Worl, 1985.

Expenditures in all three categories rose dramatically over the 1979-1983 period. In the early to mid-1970s, NSB began to take advantage of property tax revenues available to secure debt. In 1978, the Alaska Supreme Court upheld the Borough's interpretation of statutory limits on local government taxation and the CIP program began in full swing. Borough officials used funds borrowed through the municipal bond market for needed facilities in the villages, such as housing, schools, medical clinics, fire stations, roads, sanitation, and water supplies. Borough Mayor Eben Hopson envisioned a CIP program of $500 million and budgeted half that amount during his administration until his death in 1979.[28] There was a corresponding increase in the debt service on the general obligation bonds used to finance the CIP.

The administration of Mayor Jacob Adams, which lasted from June 1980 to October of 1981, continued many of the programs begun under Hopson, with the exception of the CIP (Smythe and Worl, 1985). Adams began a reevaluation of the program with an eye to reduced spending. Construction programs were cut back and there was a noted decrease in local employment. However, the election of Eugene Brower as mayor in late 1981 brought renewed commitment to Hopson's programs, including the CIP (Smythe and Worl, 1985). In 1983, the CIP expenditure

[28] In 1972, Eben Hopson became the first mayor of the NSB, and he was re-elected in 1975 after the NSB became a home-rule borough.

jumped to over $300 million. Mayor Brower attributed his move to accelerate the CIP to the growing political reaction to the NSB's bond indebtedness, which he felt would result in legislation that would limit the Borough's bonding authority (Smythe and Worl, 1985).[29] New projects were developed in each of the North Slope villages providing the hope of extending employment for as long as possible. Millions of dollars of municipal bonds were sold within this period to accelerate the construction of schools, health clinics, fire stations, homes, water and electrical utilities and the utilidor system for Barrow (the utilidor system alone cost approximately $250 million according to Nebesky (Personal communication, September 2002.). By 1983, the NSB's CIP contained 244 projects with authorized expenditures of $809 million (Worl and Smythe, 1986).

By 1984, the Borough's bonded indebtedness had reached $1.2 billion (about equal to all the municipal debt for the rest of the State of Alaska), reflecting the large scale of the CIP (Kruse et al., 1983; Worl and Smythe, 1986). The idea of a per capita bonded indebtedness approaching $100,000 (Section 4.3.3), along with an increasing discontent about the number of CIP contracts going to outside firms rather than local companies, precipitated a political crisis in the Borough (Worl and Smythe, 1986).[30] The amount expended on CIP contracts going to non-local firms increased from $11.6 million 1980 to more than $90 million in 1982 (Worl and Smythe, 1986).

In 1984, George Ahmaogak was elected NSB mayor vowing to introduce a process of fiscal reform and to wind down CIP spending (Hess, 1993). [31] At a 1985 private enterprise conference in Barrow, Ahmaogak stated that the Borough "cannot continue to be the one primary employer of North Slope residents" (Worl and Smythe, 1986). The CIP was dramatically reduced, with capital improvement expenditures dropping below $100 million by the 1986. In addition, coinciding with Mayor Ahmaogak's term, the Borough refinanced its debt service when interest rates fell (Nebesky, personal communication, September 2002). Annual debt payments declined from $235 M to $175 over 2 to 3 years. Debt service expenditures began declining in the mid-1990s. However, capital project expenditures resumed an upward trend. In 1990, these expenditures were around $55 million, and by 1997, they had increased to over $140 million.

Also during the 1990s, property tax revenue from petroleum installations for the NSB decreased from $235 million to $201 million. The declining tax base raised the question of whether the NSB could maintain its budget and CIP. When George Ahmaogak was reelected mayor of the NSB in 1999, he stated that the economy of the region could be "summed up in two words: declining revenues" (Ahmaogak, 2004). The North Slope Borough Mayor's Office (2005) explained the "budget challenge" as follows:

> The Borough derives a major source of its revenue by taxing oil and gas properties on the North Slope. These properties value has depreciated over the past 25 years, thus reducing the available taxable income to the Borough. The lack of new discoveries and oil infrastructure has contributed to the decline in available property taxes. As a result, the Borough's operating budget must have a corresponding decrease, as these funds are not available.

The mayor identified the need to cut the NSB budget by $30 million from 1999 to 2005 (North Slope Borough Mayor's Office, 2005). To further address the fiscal problems, the NSB contracted the consulting firm Information Insights to conduct an organizational study of the Borough (Information

[29] In 1983, State legislators introduced legislation to reduce the borough's bonding authority to $25,000 per capita (Smythe and Worl, 1985). However, no legislation was enacted.

[30] According to Kruse et al. (1985), there was also increased uneasiness among private lenders as well as State legislators about the size of the borough's debt and the costs of operating CIP facilities.

[31] George Ahmaogak was reelected in 1987, 1993 and 1999. Jeslie Kaleak was mayor from 1990 to 1993, and Ben Nageak was mayor from 1996 to 1999.

Insights, 2002). The purpose of the study was to find organizational efficiencies and cost savings through restructuring. Among the study's recommendations was that the NSB consider a "cost reduction bond" (Information Insights, 2002). This recommendation included increasing the cap on debt service from 18.5 to 19 mills for a period to fund projects that would reduce operating expenses. Projects identified by Information Insights that might reduce operating costs included converting certain vehicles to operate on natural gas (to take advantage of Borough-owned gas resources), energy conversion retrofits to buildings, and the purchase of buildings and equipment currently leased from outside organizations. Savings from the cost reduction bond are expected to exceed $1 million annually.

4.3.3 Per Capita Perspective

Table 4-1 shows the assessed value per capita and debt levels per capita from 1972 to 2002. The data available indicate that per capita debt peaked in 1991 at $141,000. In 2003, the per capita debt load was $55,403, 15 times the state average of $3,719 (Alaska Department of Commerce, Community and Economic Development, Office of the State Assessor). The NSB had roughly $1.14 million per capita in assessed property values, as compared to the statewide average of $90,653 per capita.

Table 4-1. Assessed Values and General Obligation Debt, North Slope Borough, 1972-2003

Year	Population[1]	Full Value Determination[2] ($ millions)	Full Value Per Capita ($ millions)	Municipal General Obligation Debt ($ millions)	Per Capita Debt ($)
2003	9,402	10,714.20	1.14	520.90	55,403
2002	9,430	10,833.81	1.15	560.51	59,439
2001	9,355	10,506.96	1.23	573.40	61,294
2000	9,355	10,859.45	1.16	602.55	64,409
1999	9,389	10,931.80	1.16	725.72	77,295
1998	9,389	11,481.68	.12	777.56	82,805
1997	9,189	11,749.01	1.28	853.80	92,916
1996	-	-	-	-	-
1995	9,196	12,291.17	1.34	1,030.72	112,083
1994	-	-	-	-	-
1993	-	-	-	-	-
1992	-	-	-	-	-
1991	-	-	-	-	-
1990	7,813	11,997.39	1.54	911.36	116,646
1989	7,813	11,961.77	1.53	865.36	110,759
1988	11,375	12,291.97	1.08	968.95	85,182
1987	10,904	12,575.60	1.15	1,262.57	115,790
1986	11,956	13,570.79	1.14	1,427.47	119,394
1985	12,342	12,876.79	1.04	1,155.68	93,637
1984	12,359	12,354.88	1.00	1,203.44	97,373
1983	7,721	10,059.36	1.30	755.70	97,876
1982	7,552	8,268.63	1.10	587.40	77,781
1981	7,098	6,704.74	1.04	454.20	63,990
1980	9,234	5,818.23	0.63	257.00	27,832
1979	8,055	5,105.51	0.63	215.48	26,751
1978	7,971	4,716.15	0.59	81.00	10,161
1977	9,139	3,569.53	0.39	83.60	9,148
1976	12,614	1,794.23	0.12	26.00	2,061
1975	8,634	560.97	0.06	5.00	579
1974	4,498	256.12	0.06	0	0
1973	3,384	202.67	0.06	0	0
1972	3,322	250.00	0.08	0	0

[1] The population estimate used by the Alaska Department of Commerce, Community and Economic Development to calculate full value per capita and per capita debt includes oil and gas industry workers in and near Prudhoe Bay.

[2] Full Value Determination is the sum total of the full and true value established for every piece of real and personal property within a municipality's boundary regardless of any optional exemption which may have been enacted by local ordinance. AS 29.45.110 specifies that the full and true value is the "estimated price that the property would bring in an open market and under the then prevailing market conditions in a sale between a willing seller and a willing buyer both conversant with the property and with the prevailing general price levels."

- Data were unavailable for this report

Source: Alaska Department of Commerce, Community and Economic Development, Office of the State Assessor.

4.3.4 Possible Future Shortfall in Revenues

Due to large-scale oil development on the North Slope and the small regional population, it is no surprise that per capita tax revenue for NSB residents is higher than in any other municipality in the state. Given that the NSB has access to this wealth primarily through borrowing, it should also not be a surprise that per capita debt service for NSB residents is higher than in other parts of the state. The important questions, therefore, do not relate to the magnitude of revenues or debt but rather to the rate of borrowing relative to the rate of growth in existing wealth.

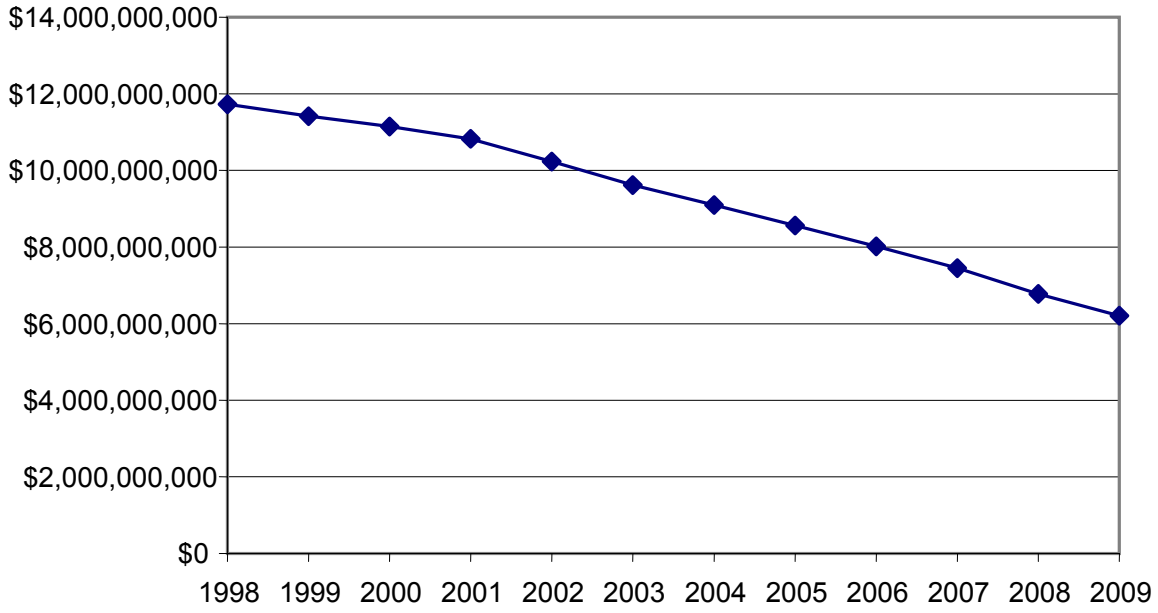
A critical issue related to future revenues and bonding capacity is anticipated changes in the assessed value of property within the Borough.[32] As the assessed values are expected to decline due to capital depreciation of oil and gas facilities, tax revenues and bonding capacity are also expected to decline. As newer, more efficient types of oil and gas development are adapted and as older methods are phased out, the tax base for the NSB could decline even more, leading to less support for the existing infrastructure and decreasing the Borough's ability to issue and sell bonds to generate funds for future capital improvements (National Research Council, 2003).

Figure 4-4 shows the projected assessed value of property in the jurisdiction of the Borough through FY 2009 (as presented in the NSB FY 1998 budget). Figure 4-5 combines the historical property tax data (Figure 4-1) and projected property tax revenues to show the long downward trend in tax revenues. Future assessed values could in fact be higher than current projections, although such an increase is unlikely in the near future.[33] The construction of a natural gas pipeline to the Lower 48 would result in the creation of new processing and transportation infrastructure and thereby substantially enhance assessed values. Additional future revenue is contingent on the development of National Petroleum Reserve lands and oil production in the Arctic National Wildlife Refuge. If such development does occur, it would generate more revenues for the NSB and could become a significant source of income for the Borough. In short, the rate of decline in assessed values might be more moderate than currently expected, but there will almost certainly be a decline in tax revenues and bonding capacity in the near term. It is important to note that NSB investment income generated from surpluses in earlier decades has also declined since 2001 because of national stock market performance and low interest rates (ADOLWD, Alaska Economic Trends, January 2005).

[32] Prior to the elimination of the programs in 2004, the full value determination also played a significant role in determining local allocations for the Safe Communities Program and State Revenue Sharing Program.

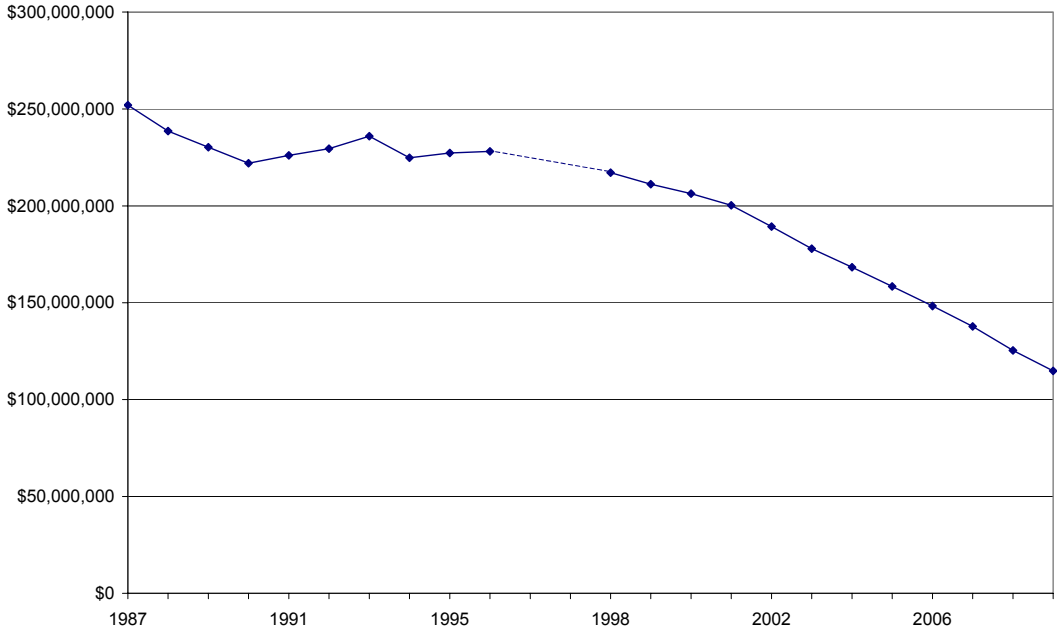
[33] According to the North Slope Borough Mayor's Office (2005), the revenues from any major oil and gas project are unlikely to significantly improve the NSB's revenue situation until at least 2010. That is the earliest estimate for completion of a gas pipeline to the Lower 48 or any major developments in ANWR or NPR-A.

Figure 4-4. Projected Assessed Values, North Slope Borough, 1998-2009



Source: North Slope Borough FY 1998 Budget Document.

Figure 4-5. Actual and Projected Property Tax Revenues, North Slope Borough, 1987-2009



Source: North Slope Borough FY 1998 Budget Document and Northern Economics, Inc. 2003.

There is also the question of what happens if the state places additional limits on the Borough's use of its taxing authority. An answer to this question would be speculative at best, but it is worth asking; as noted above there have been attempts over the years to further limit debt levels and/or mill rates in the state. Kruse et al. (1985: 76-7) succinctly described the motive behind these attempts:

> The reasons for state-imposed limitations on North Slope Borough revenues are to be found in the direct tradeoff between revenues received by the North Slope Borough and revenues received by the State of Alaska and by other municipalities throughout the state…Limitations on borough revenues may be understood as attempts by residents of other areas of the state to limit the share of the total North Slope property "tax pie" which is taken by the North Slope Borough in order to obtain more for themselves.

Most recently, Senate Bill 186, which passed the State Senate in 2000 but not the House, would have capped per capita debt at one-fourth the current level in the NSB. Had this bill become law, the NSB would have had ten years to reduce its per capita debt from more than $60,000 to $15,000.

4.4 Trends and Issues in Community Fiscal Resources

This section of the report presents the revenues and expenditures for individual cities on the North Slope. Eight distinct permanent residential communities exist in the region. Barrow is the largest community and is the economic, transportation, and administrative center of the region. As noted earlier, it is also the only one of the eight communities that is a first class municipality[34].

As discussed above, most of the cities on the North Slope transferred nearly all municipal powers to the NSB, including operation of basic services and facilities. Moreover, the NSB has provided directly or indirectly the majority of full time employment in the villages.

The economic power of the cities on the North Slope is restricted by their limited tax base (Luton, 1985). Although some cities in the Borough have levied a sales tax, the amount of revenue obtained from this tax has been relatively small.[35] However, as first and second class cities, North Slope communities were entitled to obtain benefits from the Safe Communities Program and State Revenue Sharing Program, both of which were administered by the Alaska Department of Commerce, Community and Economic Development.

The Safe Communities Program replaced the Municipal Assistance Program in 1997, which replaced the Gross Business Receipts Tax Program in 1979. Safe Communities payments varied depending upon how much money the State Legislature provides for the program. Funds are distributed based on population. The program provides financial assistance to municipalities to help fund public services such as police and fire protection, emergency medical services, and sanitation services.

The State Revenue Sharing Program provided financial assistance to municipalities to help fund a similar array of services, including education, water and sewer, police, road maintenance, health care and fire protection. In 1980, the State Revenue Sharing Program was revised from the "categorical aid program" implemented in 1969 into a program which included two accounts from which payments were distributed: the Tax Equalization Account and the Municipal Services Account. The Tax

[34] First-class cities have six-member councils and a separately elected mayor. Taxing authority is generally broader than for second-class cities, as are responsibilities. Second-class cities, generally communities of less than 400 population, are governed by a seven-member council, one of whom serves as mayor. Taxing authority is limited.

[35] In accordance with state law, these local sales taxes are collected by the borough and remitted back to the individual city governments.

Equalization Account rewarded municipalities for generating revenue by distributing money on the basis of a formula that includes locally generated revenues, property values and population, and provided for a minimum entitlement for municipalities of $25,000, plus a geographic cost of living adjustment. The Municipal Services Account provided money to municipalities for public and ice road maintenance, health facilities, and hospitals.

With respect to major capital improvements, North Slope communities have relied on projects financed and administered by the NSB (through its CIP) or outside funding agencies. One common non-local source of capital improvement funds was the Municipal Capital Matching Grants Program (this program was established in 1982; it was initially administered by the Alaska Department of Administration but later transferred to the Alaska Department of Commerce, Community and Economic Development). This grant program helped communities with the finances to build the infrastructure needed to support community and business development. The cities have also received grants for capital improvement projects from other organizations and agencies such as the U.S. Department of Housing and Urban Development, Federal Aviation Authority, Alaska Department of Environmental Conservation, and the Alaska Department of Transportation. Finally, some cities have funded large capital improvement projects with Legislative Grants, which are awarded by the State Legislature, with final approval by the Governor. Examples include the new municipal office building and community center constructed in Barrow in the mid-1980s.

Additional sources of revenue for North Slope communities include gaming (bingo and pulltab operations provided by the cities) and charges for utilities and other services. In some North Slope communities, state-regulated gambling is a significant source of revenue. In Barrow, for example, bingo and pulltab operations annually provide hundreds of thousands of dollars to non-profit organizations in the community (Hopfinger, 2003).

When Alaska's oil revenues dropped as a result of a decline in the world oil price in the mid-1980s and a decrease in oil production on the North Slope in the 1990s, cut-backs in state government services and programs inevitably followed. These cutbacks impaired the overall function of city governments statewide. Most recently, funding for the Municipal Capital Matching Grants Program, Safe Communities Program and State Revenue Sharing Program was eliminated from the FY 2004 state budget. Along with many other Alaska communities, the communities on the North Slope have found it difficult to deal with the withdrawal of these programs. [36]

However, a major source of funding for North Slope communities has recently reappeared—the NPR-A Impact Mitigation Program. The U.S. Department of the Interior refunds a portion of all revenues from "sales, rentals, bonuses, and royalties" on oil and gas leases in the National Petroleum Reserve-Alaska to the state.[37] Through the NPR-A Impact Mitigation Program, these funds are made available as grants to mitigate adverse impacts due to oil and gas developments. Federal law requires the state to give priority to the municipalities most affected by these developments. Thus, the NSB and North Slope communities are in a priority position to receive a portion of the revenues. The monies may be used for: 1) planning, 2) construction, maintenance, and operation of essential public

[36] To help weather the loss of the programs, special "one time" federal funds were provided under the "Fiscal Relief Program." Small communities received a minimum payment of $40,000 in FY 2004. A total of about $753,000 was awarded to the NSB and North Slope communities.

[37] The State of Alaska began receiving payments in 1983, and the funds were deposited in the National Petroleum Reserve Alaska Special Revenue Fund. In 1987, the NPR-A Impact Mitigation Program was established. Until the Program became inactive in 1996, projects totaling $9,780,890 were awarded to North Slope municipalities. In 1999 and 2002, new oil and gas lease sales were held in the NPR-A. The NPR-A Impact Mitigation Program was reactivated, and as of 2003, 72 projects totaling $56,381,412 have been awarded to North Slope municipalities.

facilities, and 3) other necessary provision of public services. Additional information on the distribution of funds under the NPR-A Impact Mitigation Program is provided in Chapter 6.

The majority of city expenditures have fallen into three major categories: operating expenses, public services and capital projects. Operating expenses include general government expenditures for the salaries of city employees and city council members, along with other administrative and financial expenses. Public services expenditures generally include expenses on utilities, health clinic/hospital services, parks and recreation services, and miscellaneous public services. Historical data on city expenditures however do not provide detailed accounting of utility expenditures by City.

The sections below provide brief economic profiles of each the city governments on the North Slope. The profiles follow a standard format to facilitate the comparison of revenue and expenditure data across cities. The time period covered by the profiles is 1985 through 2000, except for the Barrow profile which begins in 1973. No annual revenue and expenditure data were available for Point Lay because it is not incorporated under state law as a municipality. Because capital improvement grants are typically not directly paid to or administered by the city governments, revenues for capital projects are not included in the city fiscal data presented below[38]; however, a list of the capital project grants received by each North Slope community is provided in Appendix A[39].

4.4.1 Barrow

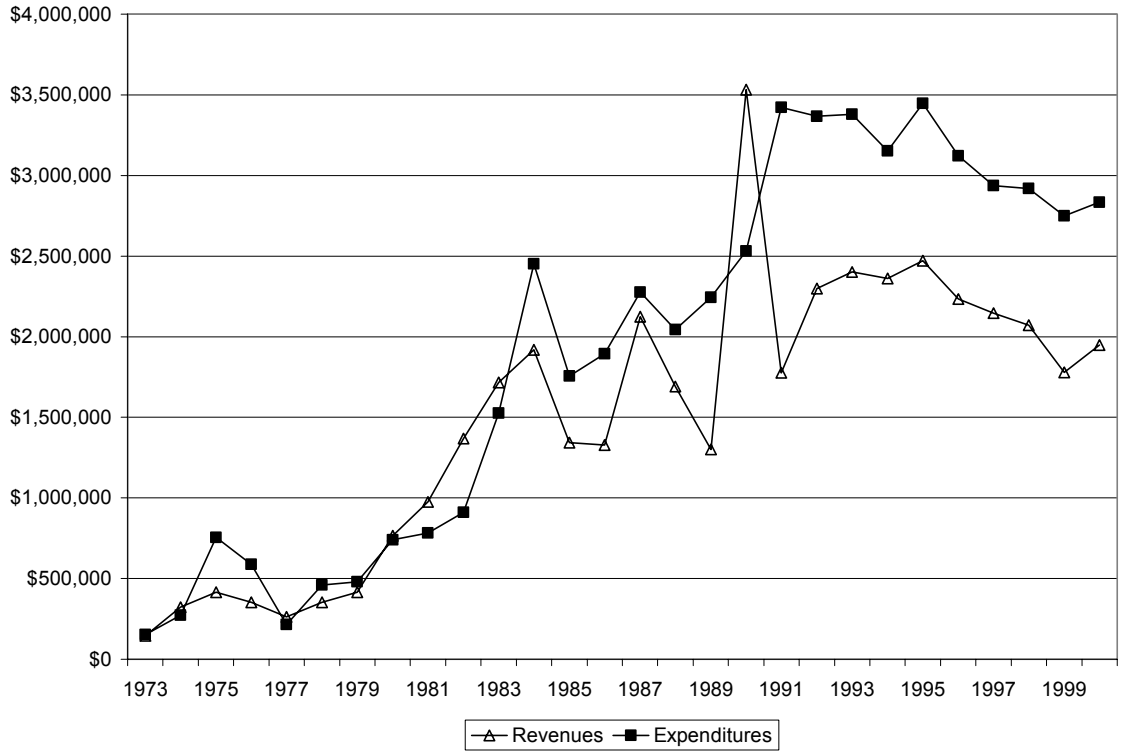
Barrow was incorporated in 1958 as a fourth class city under the territorial administration (Alaska Department of Commerce, Community and Economic Development, 2005a). After statehood, Barrow became a third class city and then a first class municipality in 1974 (Smythe and Worl 1985). By the late 1970s, the Borough was viewed by some North Slope residents as an agency run by (and sometimes for) Barrow residents (Smythe and Worl, 1985). On the other hand, Barrow, more than any other North Slope village, has a history of speaking up and questioning the Borough's powers. The issue of transfer of powers was a major factor in changing the city to a first class municipality; by becoming first class, the city council was able to acquire more direct control over the transfer of powers to the Borough (Smythe and Worl, 1985:40). The member-owned Barrow Utilities & Electric Cooperative operates the water and sewage treatment plants, generates and distributes electric power, and distributes piped natural gas for home heating (Alaska Department of Commerce, Community and Economic Development, 2005a). The NSB provides all other utilities and is also responsible for refuse collection services and road construction in the city.

Figure 4-6 presents Barrow's annual total revenues and expenditures from 1973 through 2000.

[38] Majority of the funds for capital projects are administered by the North Slope Borough.

[39] The list provided in Appendix A does not distinguish

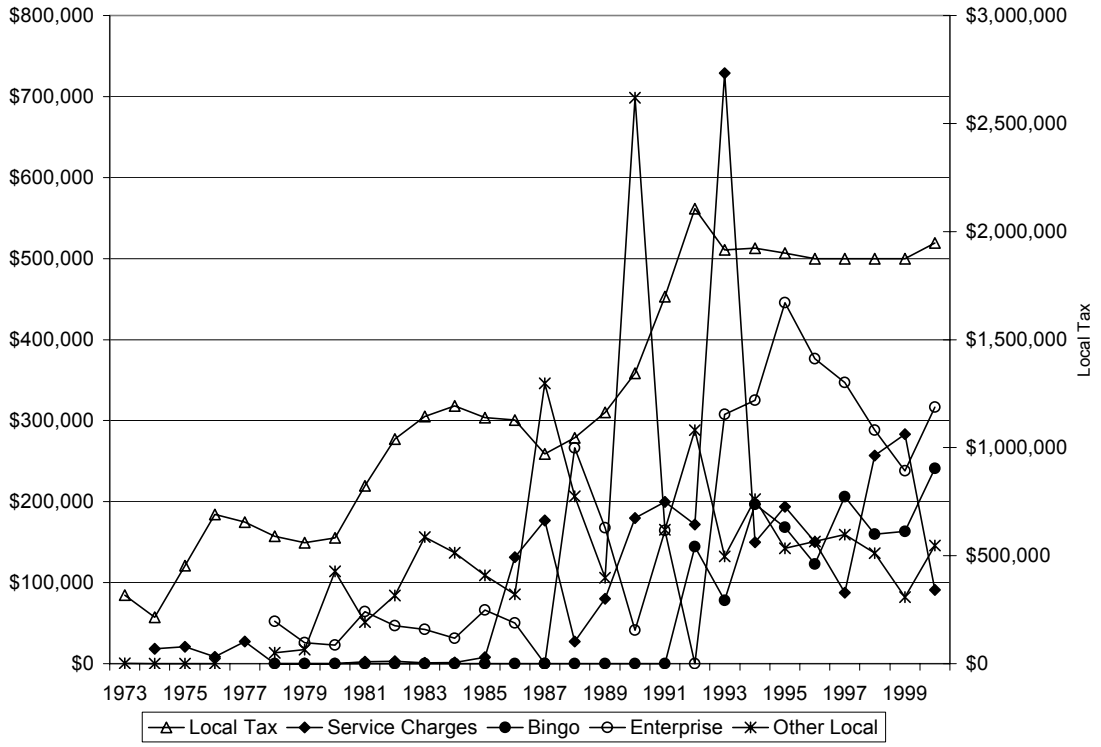
Figure 4-6. Revenues and Expenditures, City of Barrow, 1973-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-7 illustrates trends in Barrow's locally generated revenues by source; Table 4-2 presents the same information in a table format to provide actual dollar amounts by source per year. The largest source of local revenue has typically been the local sales tax levied by the city.

Figure 4-7. Local Revenues, City of Barrow, 1973-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

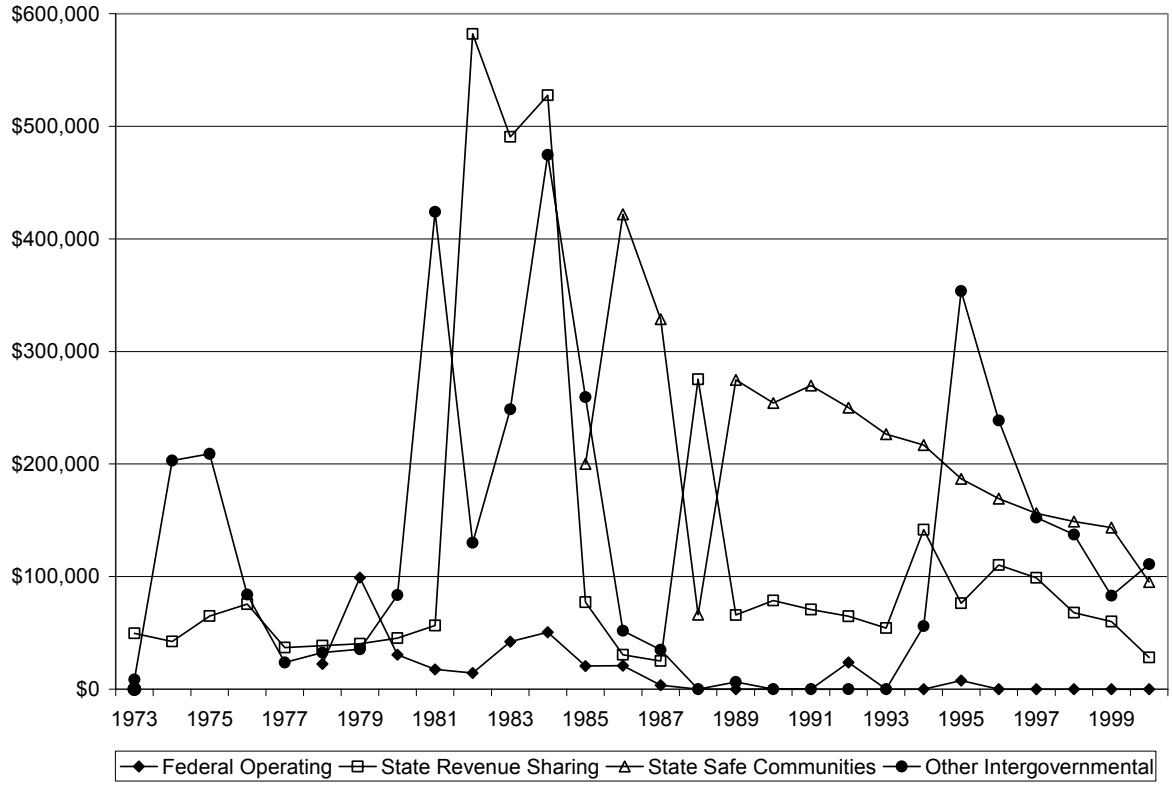
Table 4-2. Local Revenues, City of Barrow, 1973-2000

Year	Local Tax	Service Charges	Bingo	Enterprise	Other Local
1973	$84,590				$1,899
1974	$57,211	$18,182			$909
1975	$120,841	$20,900			$475
1976	$183,958	$8,397			$250
1977	$174,776	$27,288			
1978	$157,374	$0	$0	$52,083	$50,261
1979	$149,170	$0	$0	$25,987	$65,144
1980	$155,082	$0	$0	$23,008	$427,352
1981	$219,623	$2,250	$0	$63,991	$191,471
1982	$277,438	$3,166	$0	$46,673	$315,024
1983	$305,016	$1,175	$0	$42,313	$585,451
1984	$318,267	$1,563	$0	$31,467	$514,116
1985	$303,779	$7,741	$0	$66,045	$408,836
1986	$300,451	$131,434	$0	$50,075	$320,384
1987	$258,925	$176,561	$0	$0	$1,296,840
1988	$279,025	$27,543	$0	$266,443	$775,229
1989	$309,954	$80,216	$0	$167,616	$396,887
1990	$358,557	$179,723	$0	$41,544	$2,618,614
1991	$452,973	$199,719	$0	$164,279	$618,887
1992	$561,678	$171,646	$144,268	$0	$1,081,761
1993	$510,654	$729,041	$78,033	$307,814	$495,929
1994	$512,551	$149,760	$196,601	$325,037	$762,343
1995	$506,682	$193,422	$168,171	$445,411	$533,261
1996	$500,000	$150,412	$123,172	$376,171	$566,330
1997	$500,000	$87,570	$205,978	$347,040	$598,090
1998	$500,000	$256,954	$159,799	$288,040	$511,100
1999	$500,000	$283,142	$163,420	$238,183	$307,541
2000	$519,326	$90,927	$240,807	$316,724	$546,732

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-8 presents outside revenues by source for Barrow. It illustrates the trends in these revenue sources through the years; to trace actual dollar amounts per year, the same information is presented in Table 4-3. Revenues from both the Safe Communities Program and State Revenue Sharing Program showed a downward trend in the 1990s.

Figure 4-8. Non-Local Revenues, City of Barrow, 1973-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

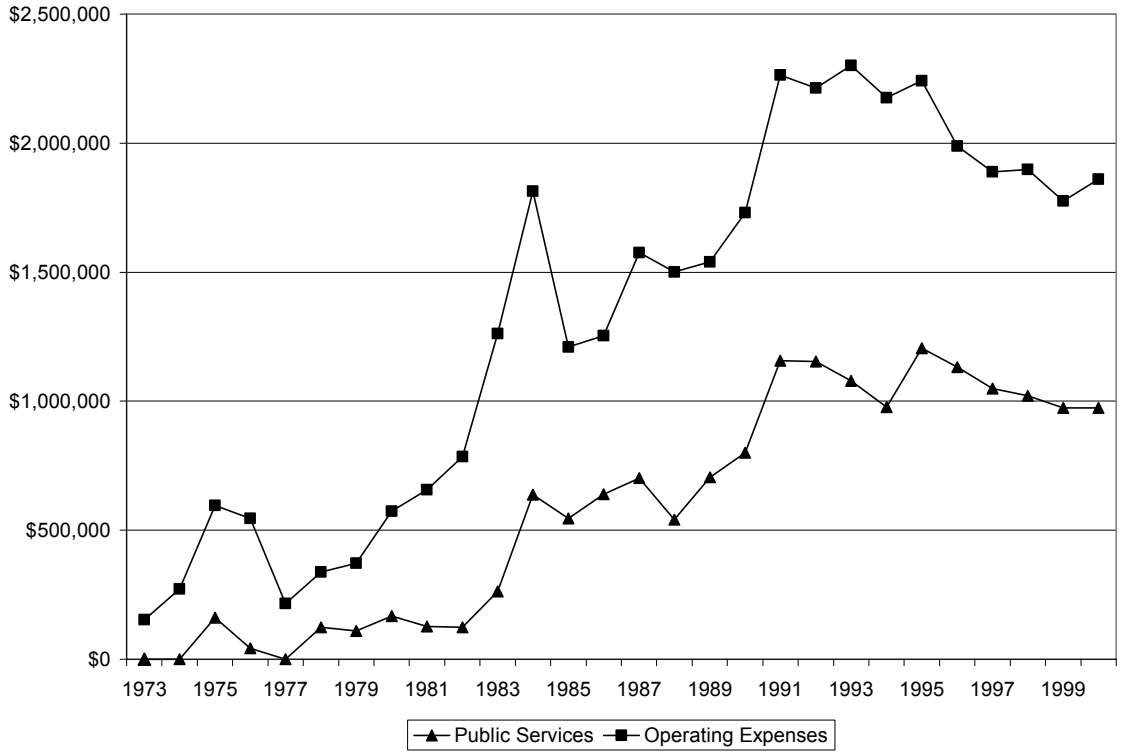
Table 4-3. Non-Local Revenues, City of Barrow, 1973-2000

Year	Federal Operating	State Revenue Sharing	State Safe Communities	Other Intergovernmental
1973		$49,628		$8,559
1974		$42,415		$203,030
1975		$64,864		$208,939
1976		$75,598		$84,064
1977		$36,927		$23,756
1978	$22,460	$38,553		$32,446
1979	$99,166	$40,268		$35,378
1980	$30,688	$45,392		$83,545
1981	$17,534	$56,563		$424,047
1982	$14,455	$582,132		$130,139
1983	$42,196	$490,676		$248,608
1984	$50,571	$527,509		$474,519
1985	$20,476	$77,187	$200,000	$259,382
1986	$20,906	$30,625	$421,715	$51,861
1987	$3,621	$25,003	$328,617	$34,823
1988	$0	$275,311	$66,265	$0
1989	$0	$65,824	$274,774	$6,422
1990	$0	$78,732	$254,262	$0
1991	$0	$70,743	$269,600	$0
1992	$23,612	$64,816	$250,081	$0
1993	$0	$54,400	$226,611	$0
1994	$0	$141,599	$216,815	$55,900
1995	$7,662	$76,332	$186,781	$353,681
1996	$0	$110,229	$169,183	$238,776
1997	$0	$98,829	$156,179	$152,458
1998	$0	$68,023	$148,845	$137,344
1999	$0	$60,055	$143,589	$82,959
2000	$0	$28,215	$95,217	$111,053

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-9 presents Barrow's expenditures on government operations and public services from 1973 to 2000, excluding expenditures on capital projects. The majority of Barrow's public service expenditures are on parks and recreation.

Figure 4-9. Expenditures, City of Barrow, 1973-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-4 provides information on average revenues by source for 1985 through 2000. "Other local" (27 percent) and local taxes (16 percent) were the two largest sources of revenue for Barrow.

Table 4-4. Average Annual Revenues from 1985 to 2000 by Source, City of Barrow

Source	Average Revenue ($)	Percent of Total
Local Tax Revenue	429,660	16.29
License/Permits	28,690	1.09
Service Charges	182,238	6.91
Bingo Revenue	92,516	3.51
Enterprise Revenue	212,526	8.06
Other Local Revenue	711,233	26.96
Federal Operations Revenue	4,767	0.18
State Revenue Sharing	82,870	3.14
State Safe Communities	213,033	8.08
Other State Revenue	31,951	1.21
Other Intergovernmental Revenue	60,840	2.31
Total All Revenues	2,637,922	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-5 provides information on average expenditures by category for 1985 through 2000. Administration and finance expenses accounted for 46 percent of all city government expenditures during that time period.

Table 4-5. Average Annual Expenditures from 1985 to 2000 by Category, City of Barrow

Category	Average Expenditure ($)	Percent of Total
Council Expenditures	66,082	3.4
Administration/Finance	909,184	46.4
Planning/Zoning	715	0.0
Mass Transit	324	0.0
Other Public Works	161,914	8.3
Library/Museum	237	0.0
Parks & Recreation	631,592	32.2
Misc. Public Services	183,086	9.3
Education Expenses	8,087	0.4
Total Expenses	1,961,221	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

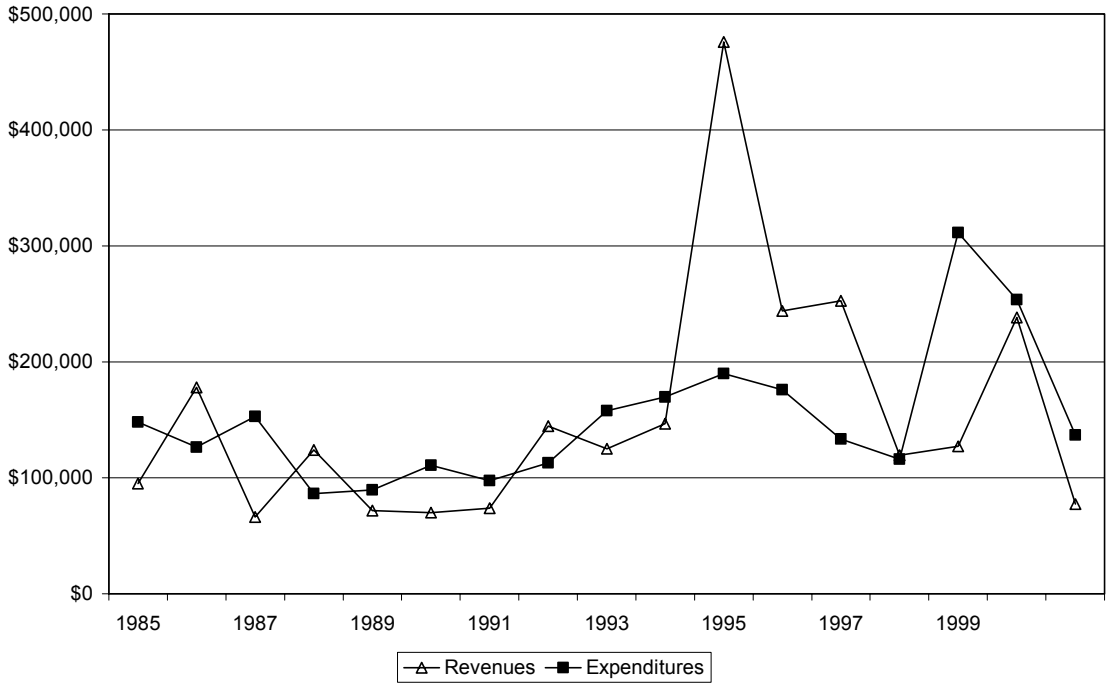
Barrow has also benefited from various capital improvement projects funded through grants provided and administered by various funding agencies. Because Barrow is the administrative center for the Borough, some grant funding for Barrow is used for Borough-wide projects. Since 1987, Alaska Department of Commerce, Community and Economic Development has contributed $145 million for Barrow and NSB regular and capital matching projects. Projects have included a children/youth facility, mine site development, power plant design, Barrow Cultural Center, softball field and playground equipment, search and rescue equipment, playground and indoor/outdoor recreation, oil and gas exploration in the Arctic National Wildlife Refuge, and public facilities operation and maintenance. Since 1992, the U.S. Department of Transportation (DOT) has provided several grants for airport expansion and improvements totaling approximately $2.2 million. DHSS has provided $105,000 for an alcohol treatment center and inpatient hospital facilities upgrades. For further details on Barrow capital improvement projects see Appendix A.

4.4.2 Anaktuvuk Pass

Anaktuvuk Pass was incorporated as a second-class city in 1957. The NSB provides all public utilities for the City (Alaska Department of Commerce, Community and Economic Development, 2005a).

Figure 4-10 presents total revenues and expenditures for Anaktuvuk Pass from 1985 through 2000. Total revenues spiked in the mid-1990s due, in part, to a substantial increase in gaming revenues following the introduction of bingo and pulltabs. Local expenditures have been relatively stable in comparison to revenues, except for an abrupt rise from 1998 to 1999 due to increased city operation and general government expenditures.

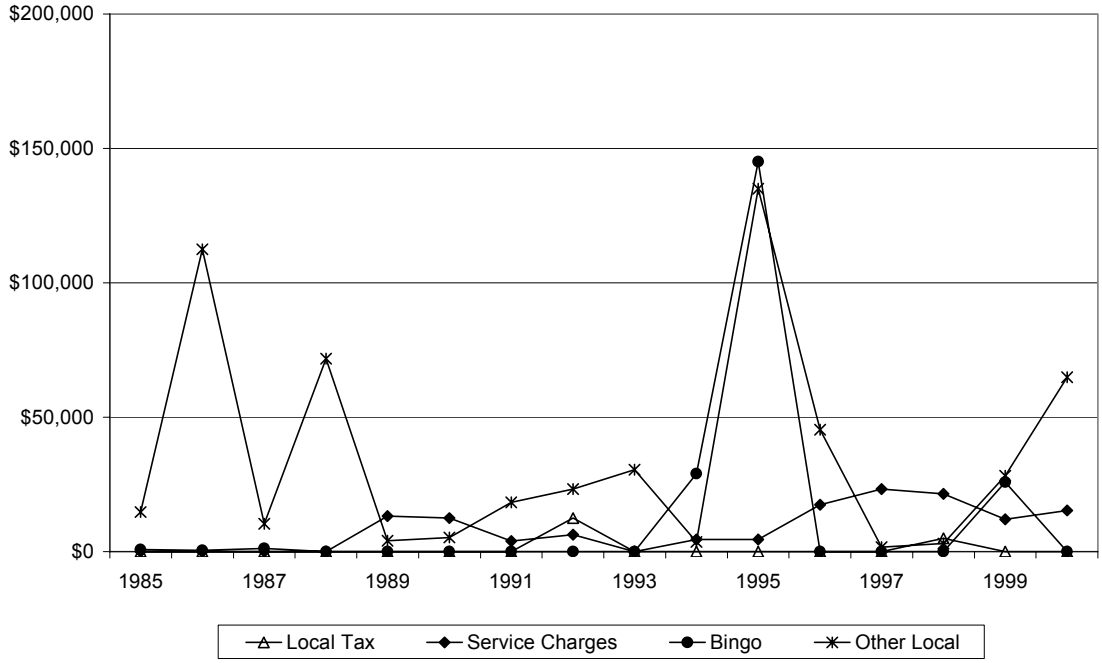
Figure 4-10. Annual Revenues and Expenditures, City of Anaktuvuk Pass, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-11 presents locally generated revenues for Anaktuvuk Pass by source. The two largest sources of local revenue have been bingo operations and "other local." "Other local" revenues include pulltab revenues.

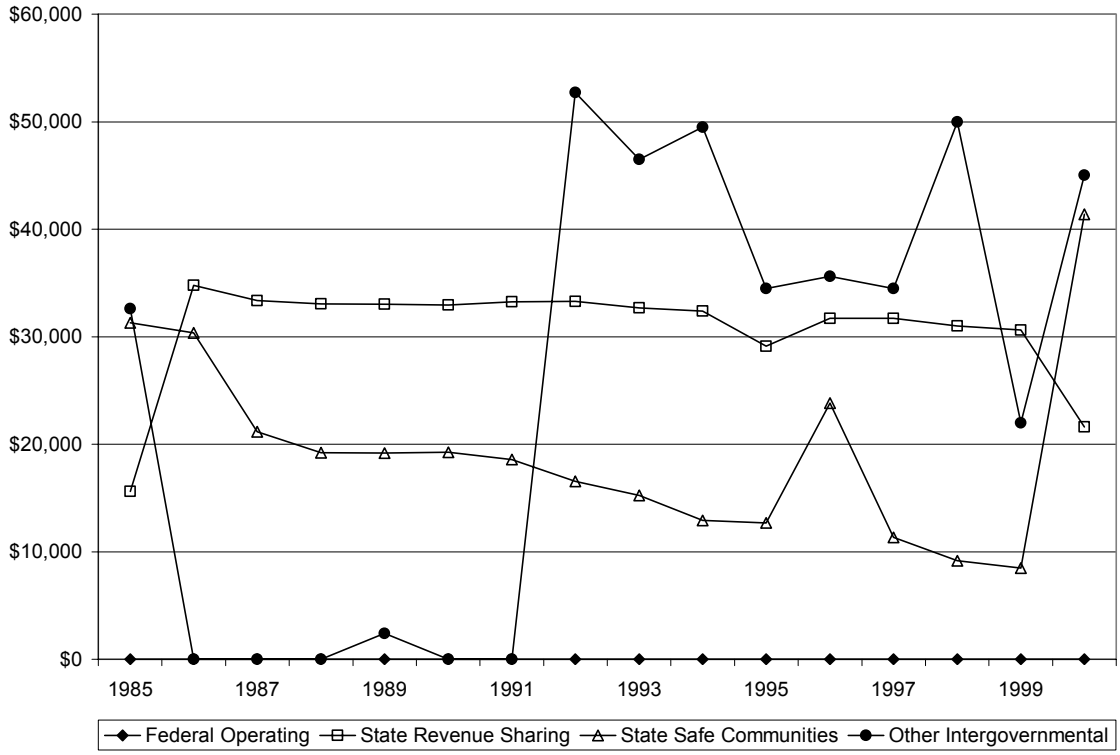
Figure 4-11. Annual Local Revenues by Source, City of Anaktuvuk Pass, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

The State Revenue Sharing Program was a fairly consistent source of outside revenues for Anaktuvuk Pass during the 1985-2000 period (Figure 4-12).

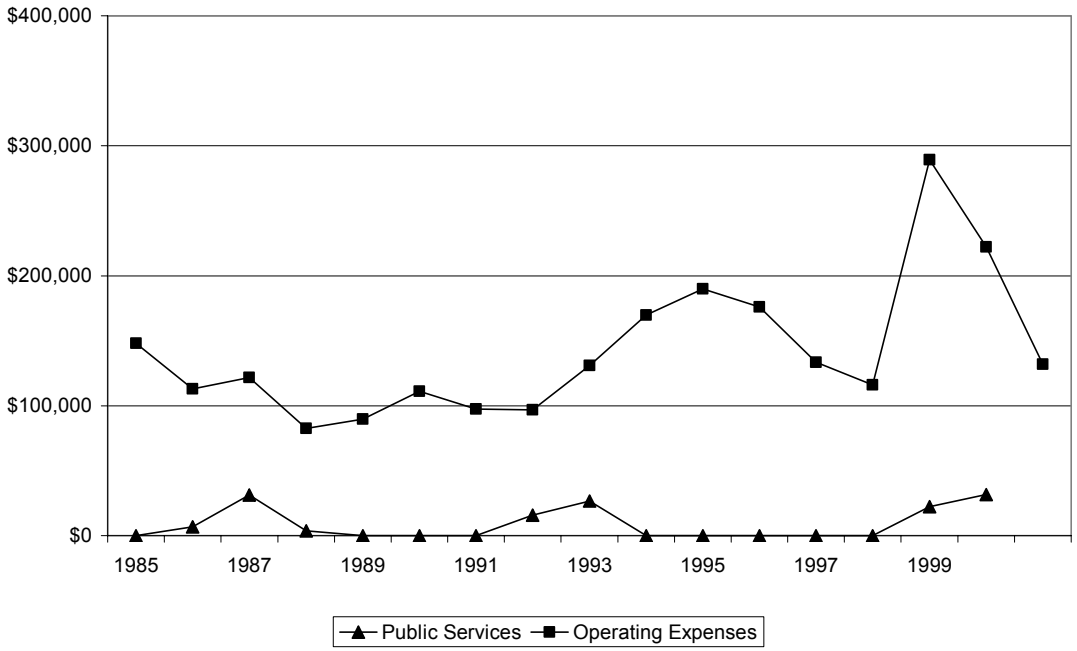
Figure 4-12. Annual Non-Local Revenues by Source, City of Anaktuvuk Pass, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development , 2003.

Local expenditures by source are presented in Figure 4-13. The largest expenditures of Anaktuvuk Pass have been for general government operations..

Figure 4-13. Annual Local Expenditures by Category, City of Anaktuvuk Pass, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-6 provides information on average revenues by source for 1985 through 2000. "Other local" was the primary source of revenues, followed by the State Revenue Sharing Program.

Table 4-6. Average Annual Revenues from 1985 to 2000 by Source, City of Anaktuvuk Pass

Source	Average Revenue ($)	Percent of Total
Local Tax Revenue	1,167	0.8
Service Charges	8,963	6.3
Bingo Revenue	13,478	9.5
Other Local Revenue	38,156	26.8
State Revenue Sharing	32,673	23.0
State Safe Communities	20,708	14.6
Other State Revenue	11,244	7.9
Other Intergovernmental Revenue	15,784	11.1
Total Revenue	142,172	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-7 provides information on average expenditures by category for 1985 through 2000. Administration and finance expenses accounted for 70 percent of all city government expenditures during that time period.

Table 4-7. Average Annual Expenditures from 1985 to 2000 by Category, City of Anaktuvuk Pass

Category	Average Expenditure ($)	Percentage of Total
Council Expenditures	29,803	19.5
Administration/Finance	107,113	70.2
Other General Government	6,391	4.2
Electric Utility	624	0.4
Phone Utility	477	0.3
Water/Sewer	236	0.2
Parks & Recreation	3,557	2.3
Misc. Public Services	4,318	2.8
Average Total Expense	152,519	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

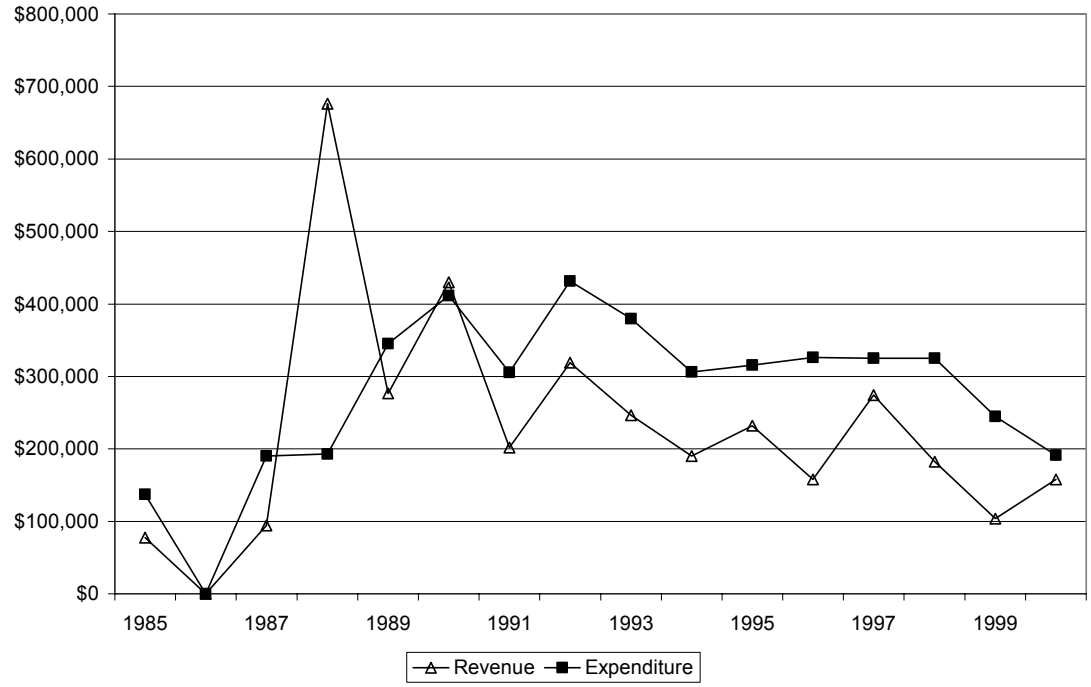
Anaktuvuk Pass has also benefited from various capital improvement projects funded through grants provided and administered by various funding agencies. Since 1991, the DCCED has contributed an average of $116,492 annually for capital projects. This figure includes $381,264 in 1992 for a road and airport safety project, as well as several capital matching grants of $25,000 for such things as bed and breakfast construction, community hall upgrades and a multi-purpose building. The DCCED also provided a $300,000 landfill construction grant in 1987, a water and sewer system construction grant of $750,000 in 1995, and another water and sewer system grant of $1 million to continue construction in 1998. In 1996, a $17 million capital project to provide piped water and sewer and household plumbing was funded by the Municipal Grants and Loans Division of the Alaska Department of Environmental Conservation. Since 1993, HUD has provided Anaktuvuk Pass $690,203 in Indian Housing Block Grants and $654,319 for housing modernization projects. For further details on Anaktuvuk Pass capital improvement projects see Appendix A.

4.4.3 Atqasuk

The City of Atqasuk was established in 1977, primarily by former residents of Barrow. The city was incorporated in 1982. The Atqasuk Corporation provides water, sewer and refuse services in the village (Alaska Department of Commerce, Community and Economic Development, 2005a).

Figure 4-14 presents Atqasuk's total revenues and expenditures from 1985 through 2000.

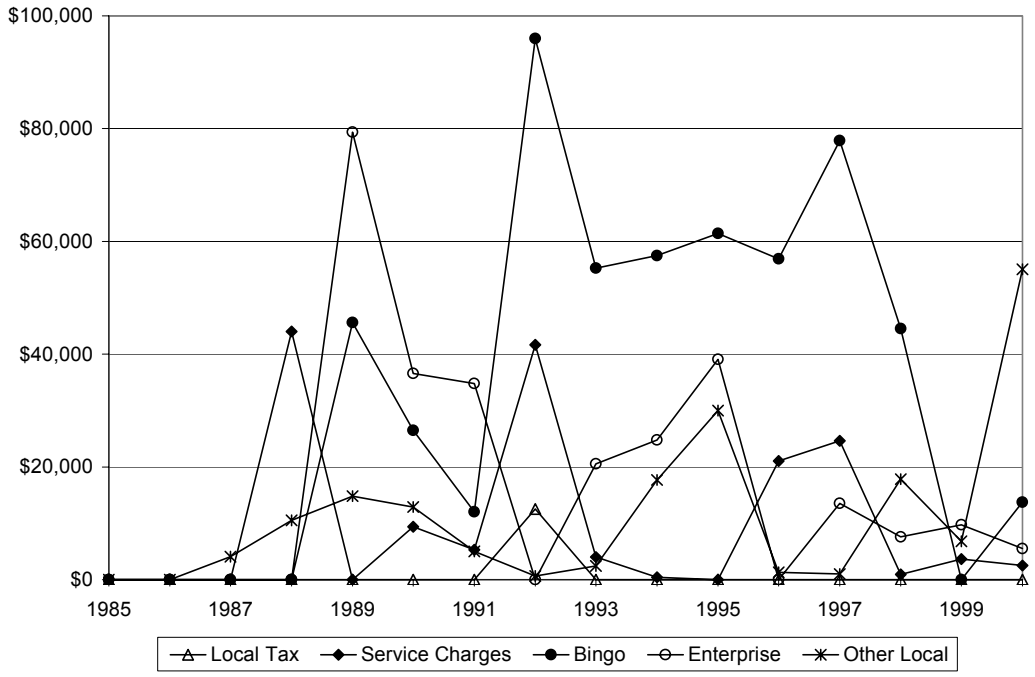
Figure 4-14. Annual Revenues and Expenditures, City of Atqasuk, 1985-2000



Note: Both revenues and expenditures were reported to be zero in 1986. This is likely attributable to data collection error.
Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-15 presents Atqasuk's local revenues by source. The largest sources of local revenue have been bingo operations and enterprises. Enterprise revenue includes gaming revenue from pulltabs.

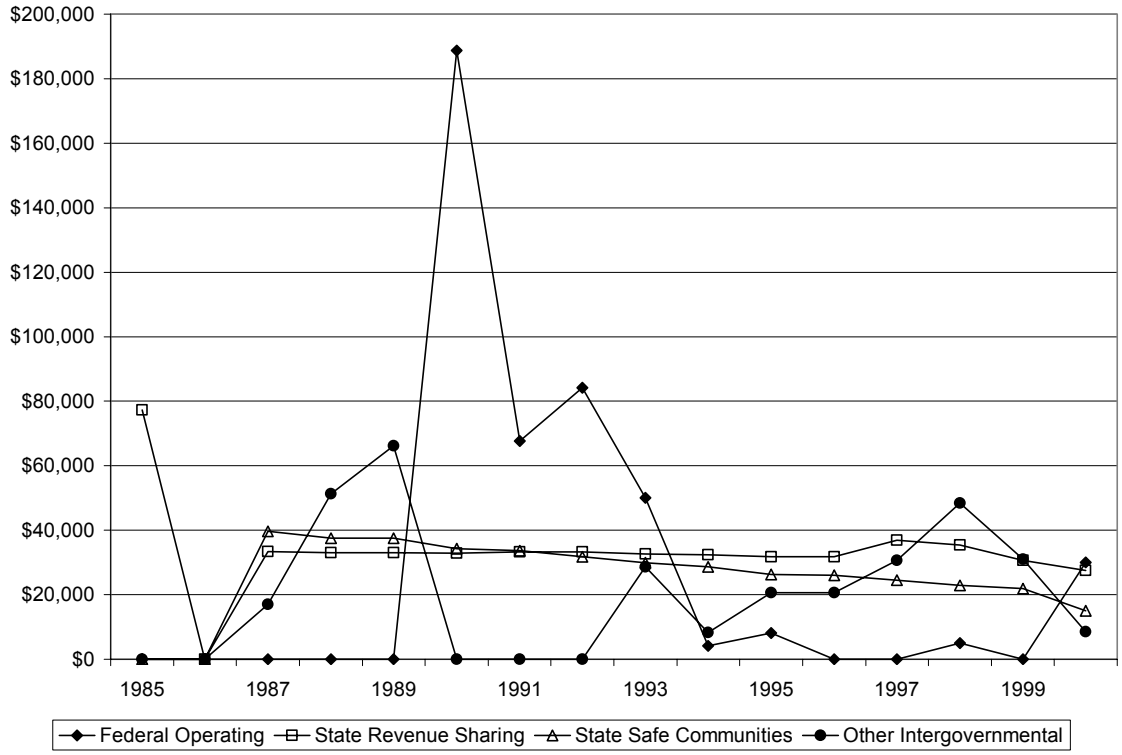
Figure 4-15. Annual Local Revenues by Source, City of Atqasuk, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

The Safe Communities Program and State Revenue Sharing Program were a fairly consistent source of outside revenues for Atqasuk during the 1985-2000 period (Figure 4-12).

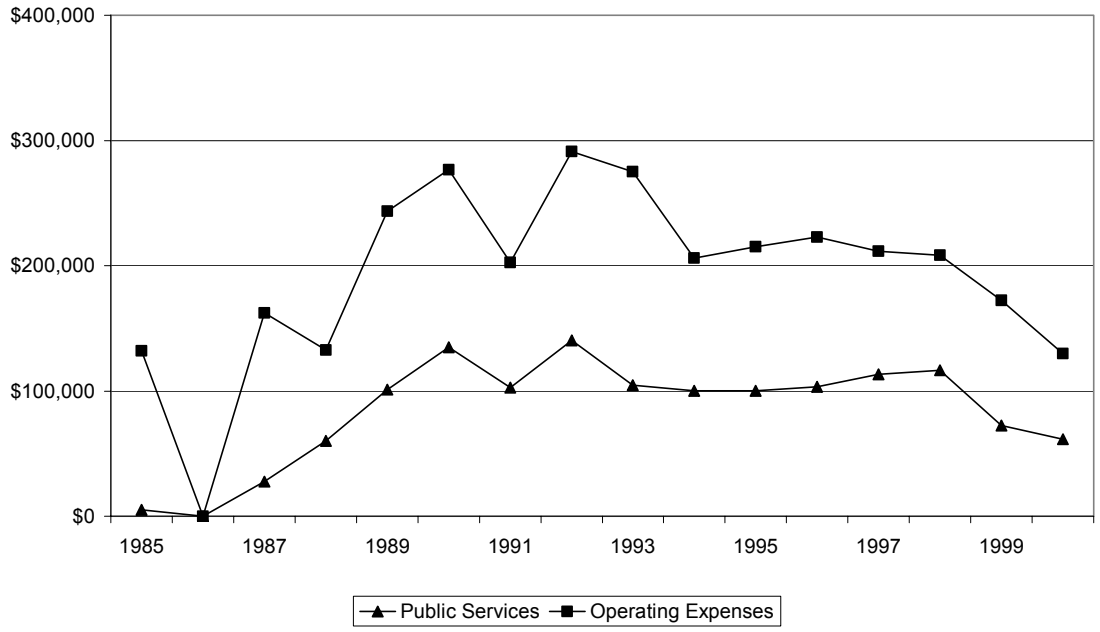
Figure 4-16. Annual Non-Local Revenues by Source, City of Atqasuk, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-17 presents Atqasuk's annual expenditures from 1985 to 2000 by category. The largest expenditures of Atqasuk have typically been for general government operations.

Figure 4-17. Annual Expenditures by Category, City of Atqasuk, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-8 provides information on average revenues by source for 1985 through 2000. Bingo operations and the State Revenue Sharing Program were the primary sources of revenues.

Table 4-8. Average Annual Revenues from 1985 to 2000 by Source, City of Atqasuk

Source	Average Revenue ($)	Percent of Total
Local Tax Revenue	833	0.4
Service Charges	10,506	5.5
Bingo Revenue	36,489	19.0
Enterprise Revenue	18,096	9.4
Other Local Revenue	11,998	6.2
Federal Operations Revenue	29,192	15.2
State Revenue Sharing	35,675	18.6
State Safe Communities	27,314	14.2
Other State Revenue	10,208	5.3
Other Intergovernmental Revenue	11,872	6.2
Total Revenue	192,183	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-9 provides information on average expenditures by category for 1985 through 2000. Administration and finance expenses accounted for 73 percent of all city government expenditures during that time period.

Table 4-9. Average Annual Expenditures from 1985 to 2000 Category, City of Atqasuk

Category	Average Expenditure ($)	Percent of Total
Council Expenditures	7,100	5.7
Administration/Finance	91,673	73.3
Other General Government	17,075	13.7
Electric Utility	624	0.5
Phone Utility	477	0.4
Water/Sewer	236	0.2
Parks & Recreation	3,557	2.8
Misc. Public Services	4,318	3.5
Total Expenses	125,060	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

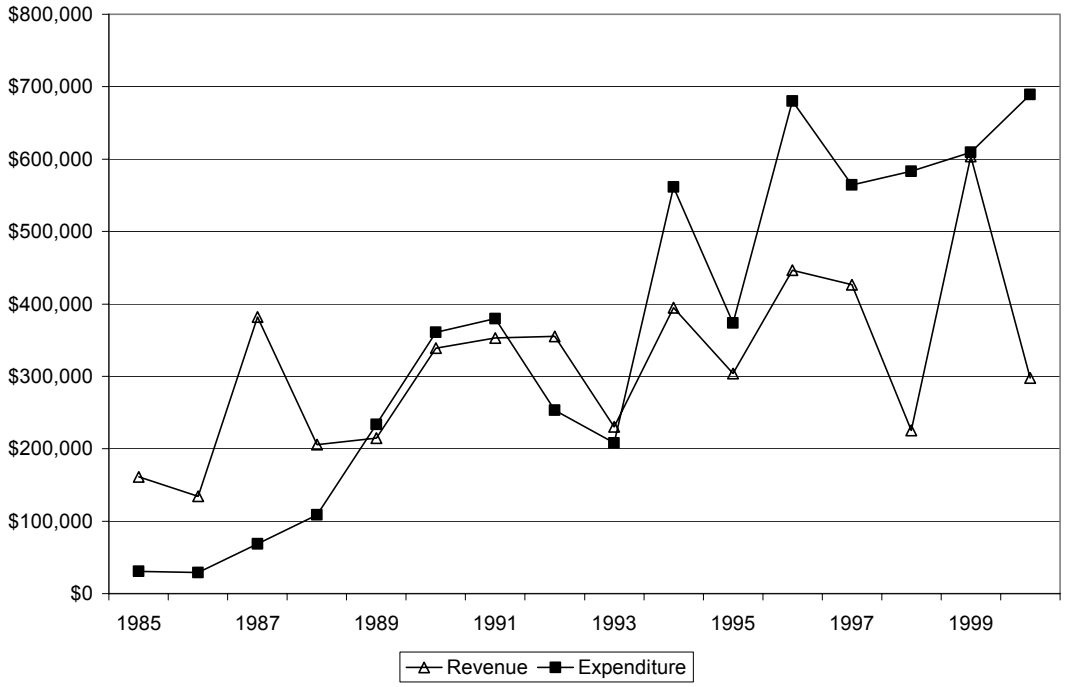
Atqasuk has also benefited from various capital improvement projects funded through grants provided and administered by various funding agencies. From 1990 through 2000, DCCED provided an average of $91,816 annually. Projects and expenditures have included $60,000 for a new trash collection truck, $90,000 for community center maintenance and operation, and $181,953 capital matching funds for community projects and improvements. HUD provided an average of $69,000 per year during the 1993-2002 period on projects such as housing modernization and Indian Housing Block Grants. For further details on Atqasuk capital improvement projects see Appendix A.

4.4.4 Kaktovik

Kaktovik was incorporated in 1971. The NSB provides all public utilities for the City (Alaska Department of Commerce, Community and Economic Development, 2005a).

Figure 4-18 presents the City of Kaktovik's total revenues and expenditures from 1985 through 2000.

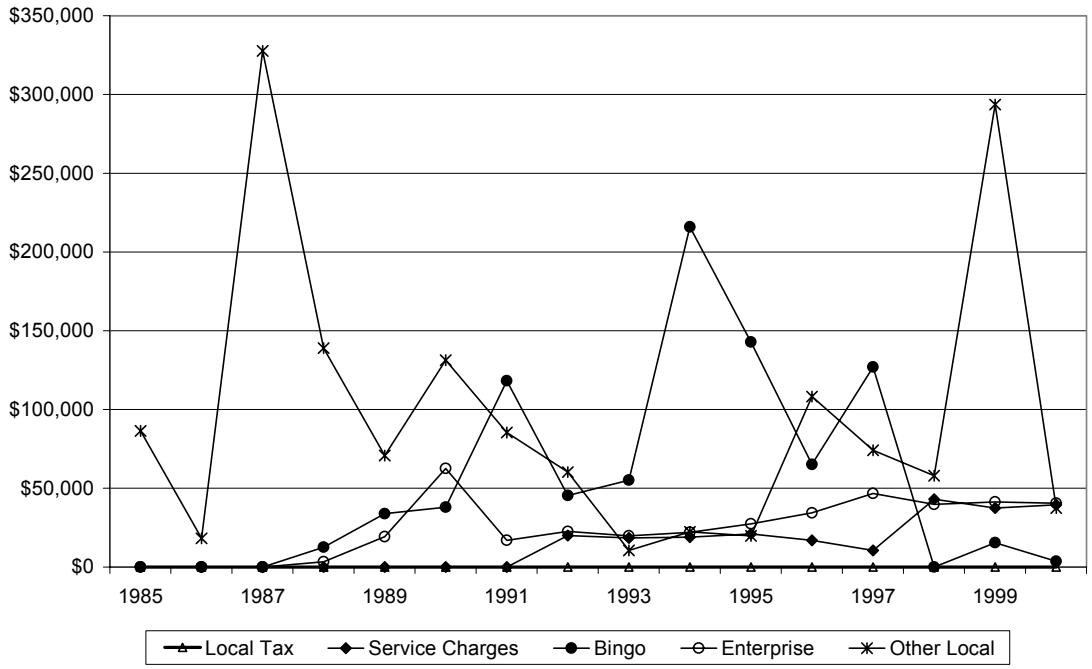
Figure 4-18. Annual Revenues and Expenditures, City of Kaktovik, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-19 presents locally generated revenues for Kaktovik by source. The two largest sources of local revenue have been bingo operations and "other local." "Other local" revenues include revenue from interest earnings, sale of assets, capital equipment and donations.

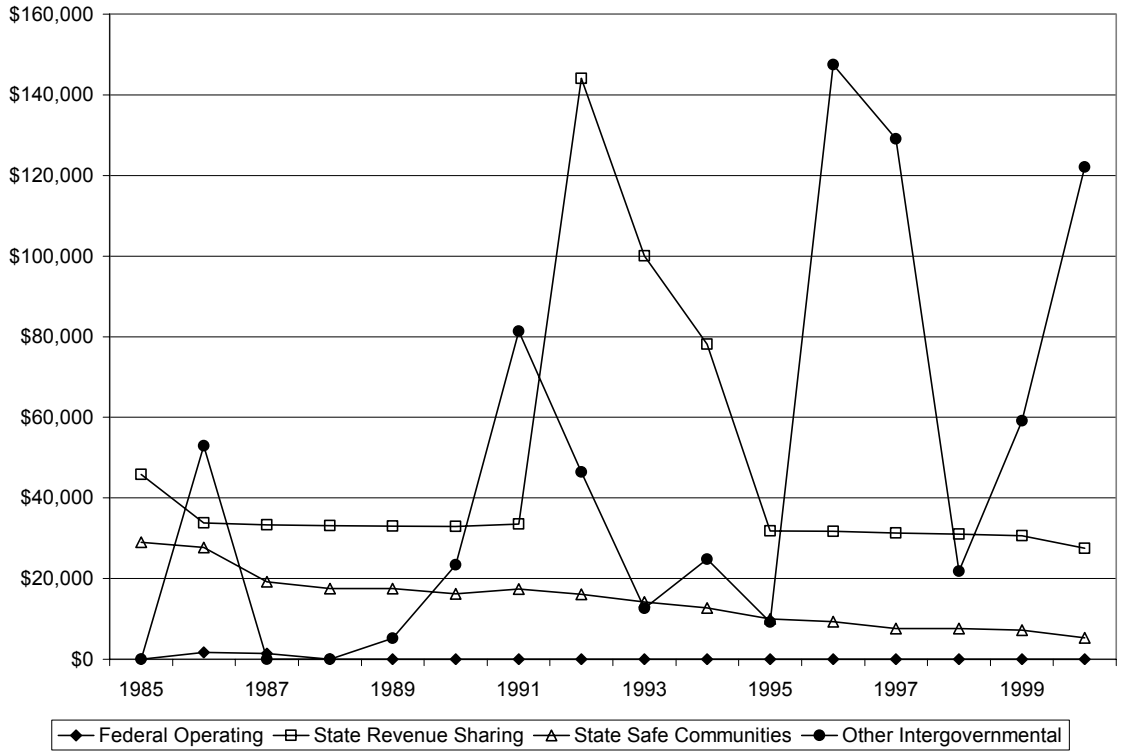
Figure 4-19. Annual Local Revenues by Source, City of Kaktovik, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

The State Revenue Sharing Program was a fairly consistent source of outside revenues for Kaktovik during the 1985-2000 period (Figure 4-20).

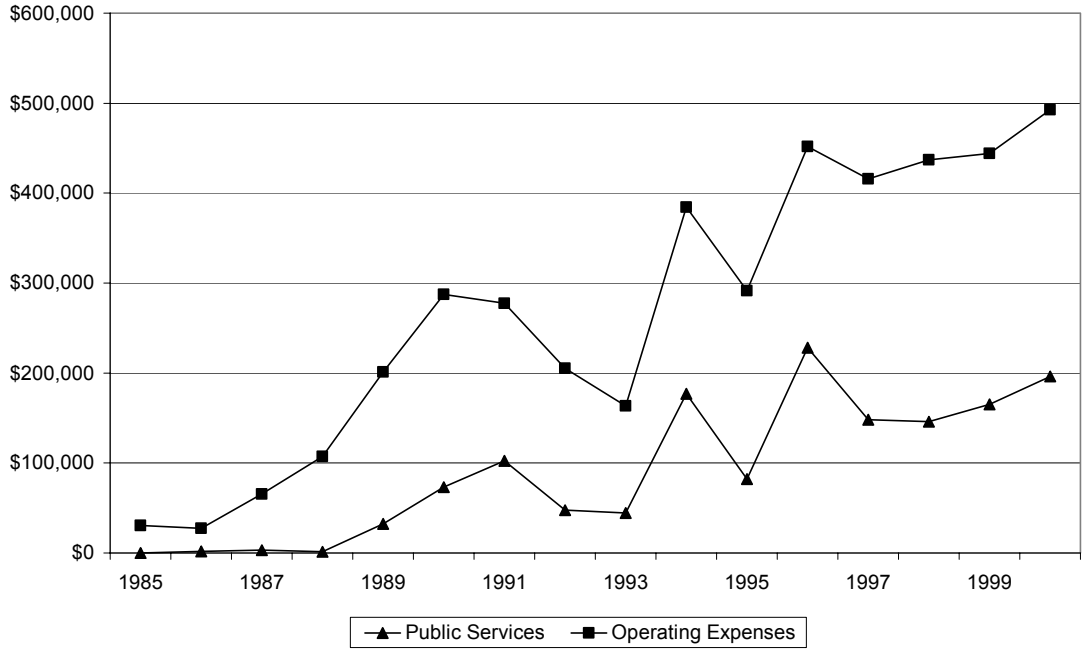
Figure 4-20. Annual Non-Local Revenues by Source, City of Kaktovik, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-21 presents Kaktovik's expenditures from 1985 to 2000. The largest expenditures of the city have typically been for general government operations.

Figure 4-21. Annual Expenditures by Category, City of Kaktovik, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-10 provides information on average revenues by source for 1985 through 2000. "Other local" was the primary source of revenues.

Table 4-10. Average Annual Revenues from 1985 to 2000 by Source, City of Kaktovik

Source of Revenue	Average Revenue ($)	Percent of Total
Service Charges	15,062	4.7
Bingo Revenue	58,176	18.3
Enterprise Revenue	26,431	8.3
Other Local Revenue	102,830	32.4
Federal Operations Revenue	208	0.1
State Revenue Sharing	50,124	15.8
State Safe Communities	15,639	4.9
Other State Revenue	11,086	3.5
Other Intergovernmental Revenue	37,955	12.0
Total Revenues	317,511	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-11 provides information on average expenditures by category for 1985 through 2000. Administration and finance expenses accounted for 46 percent of all city government expenditures during that time period.

Table 4-11. Average Annual Expenditures from 1985 to 2000 by Category, City of Kaktovik

Category	Average Expenditure ($)	Percent of Total
Council Expenditures	47,550	16.7
Administration/Finance	132,683	46.5
Planning/Zoning	1,695	0.6
Other General Government	7,003	2.5
Other Public Works	15,320	5.4
Library/Museum	37	0.0
Parks & Recreation	50,707	17.8
Misc. Public Services	30,563	10.7
Total Expenditures	285,557	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

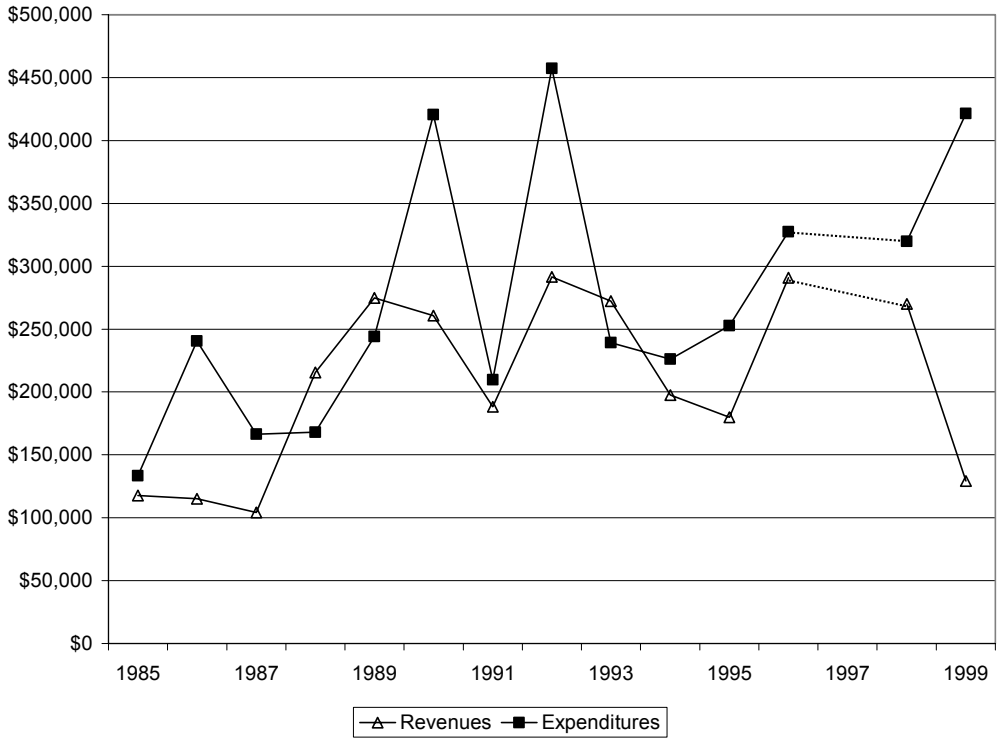
Kaktovik has also benefited from various capital improvement projects funded through grants provided and administered by various funding agencies. From 1992 to 2003, DCCED provided Kaktovik approximately $580,000 in grants or an average of $48,333 annually for a variety of projects such as safety facility upgrades, visitor center, and capital matching projects. Capital matching projects include utility vehicle purchase, community facility upgrades, summer campground for children, community building upgrades, boat dock construction, and playground construction. HUD has also provided several grants to the City of Kaktovik. From 1993-2002, HUD provided over $1 million in assistance for housing modernization projects and Indian Housing Block Grants. Other notable contributions to Kaktovik include a $500,000 grant from DEC in 1988 for a sewage disposal system, and a $450,000 grant from BIA in 2001 for community road upgrades. For further details on Kaktovik capital improvement projects see Appendix A.

4.4.5 Nuiqsut

The old village of Nuiqsut (Itqilippaa) was abandoned in the late 1940s because of the absence of a local school (Alaska Department of Commerce, Community and Economic Development, 2005a). The village was resettled in 1973 by 27 families that moved to Nuiqsut from Barrow. A school, housing and other facilities were constructed by federal agencies in 1973 and 1974. Nuiqsut was incorporated as a second class city in 1975. The NSB provides all public utilities in Nuiqsut (Alaska Department of Commerce, Community and Economic Development, 2005a).

Figure 4-22 presents the City of Nuiqsut's total revenues and expenditures from 1985 through 2000.

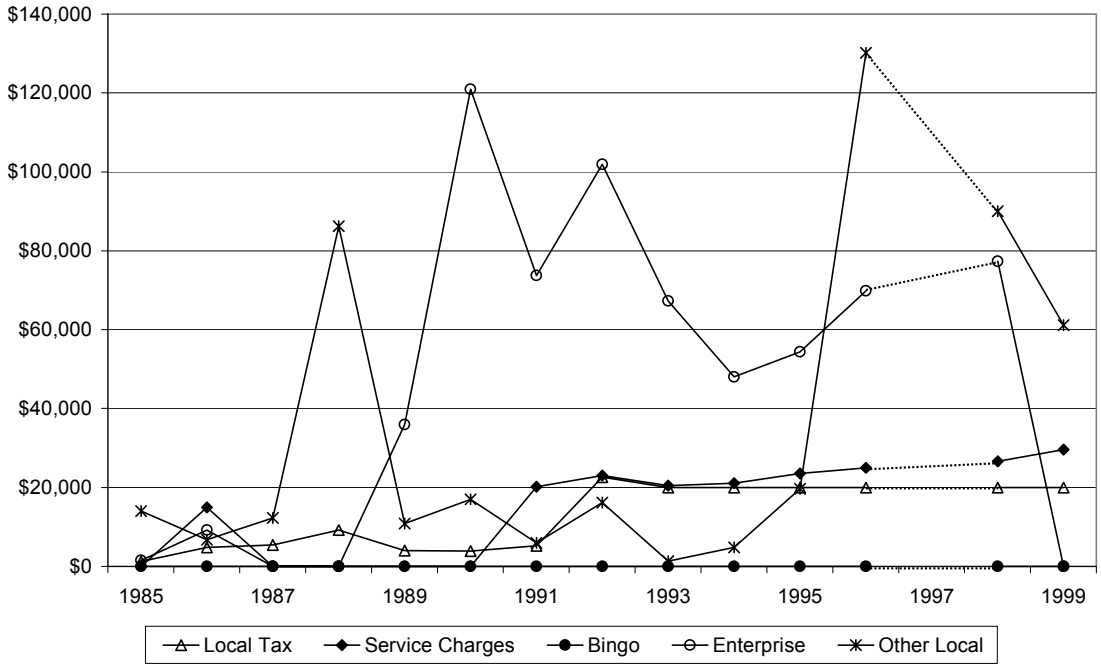
Figure 4-22. Annual Revenues and Expenditures, City of Nuiqsut, 1985-1998



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-23 presents locally generated revenues by source for Nuiqsut for the period 1985 to 1999. The two largest sources of local revenue have been enterprises and "other local." "Other local" revenue sources include office rentals, community hall rental, local business licenses, service charges (cable hook-up), and land sales. Enterprise revenue includes gaming revenue from pulltabs.

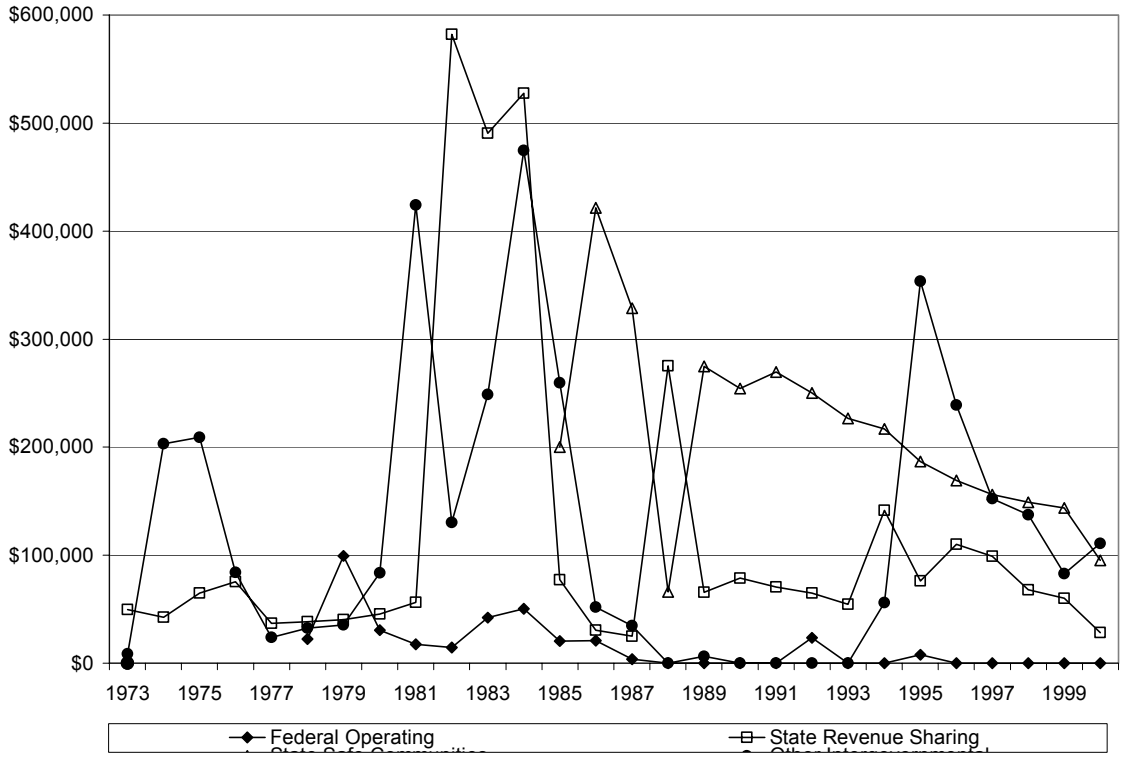
Figure 4-23. Annual Local Revenues by Source, City of Nuiqsut, 1985 to 1999



Note: Data for local revenues were unavailable for 1997.
Source: Alaska Department of Commerce, Community and Economic Development, 2003.

The State Revenue Sharing Program was a fairly consistent source of outside revenues for Nuiqust during the 1985-1998 period (Figure 4-24).

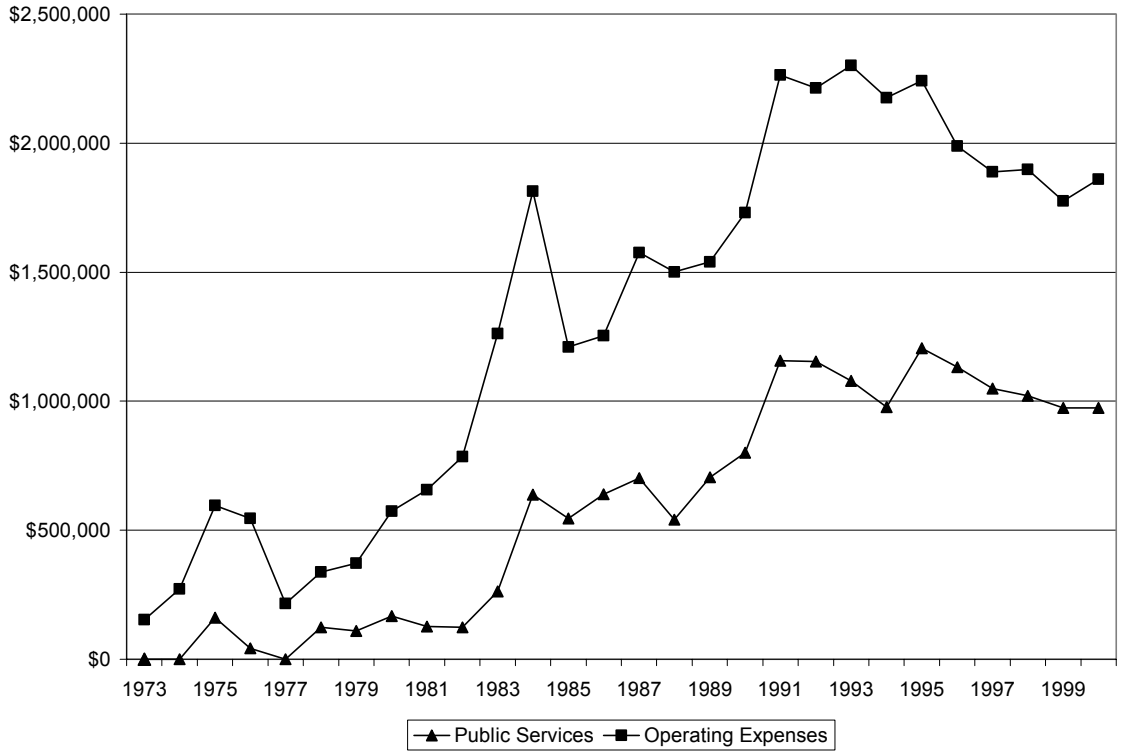
Figure 4-24. Annual Non-Local Revenues by Source, City of Nuiqsut, 1985 to 1999.



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Local expenditures by source are presented in Figure 4-25. The largest expenditures of Nuiqsut have typically been for general government operations.

Figure 4-25. Expenditures by Category, City of Nuiqsut, 1985-1998



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-12 provides information on average revenues by source for 1985 through 2000. Enterprises were the primary source of revenues.

Table 4-12. Average Annual Revenues from 1985 to 2000 by Source, City of Nuiqsut

Source	Average Revenue	Percent of Total
Local Tax Revenue	12,603	6.1
License/Permits	83	0.0
Service Charges	14,614	7.0
Enterprise Revenue	47,148	22.7
Other Local Revenue	34,033	16.4
Federal Operations Revenue	17,225	8.3
State Revenue Sharing	30,125	14.5
State Safe Communities	22,933	11.0
Other State Revenue	28,221	13.6
Other Intergovernmental Revenue	750	0.4
Total Revenues	207,735	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-13 provides information on average expenditures by category for 1985 through 2000. Administration and finance expenses accounted for 61 percent of all city government expenditures during that time period.

Table 4-13. Average Annual Expenditures from 1985 to 1998 by Category, City of Nuiqsut

Source	Average Expenditure	Percent of Total
Council Expenditures	$18,068	8.4
Administration/Finance	$131,058	60.8
Other General Government	$8,635	4.0
Fire	$188	0.1
Other Public Safety	$0	0.0
Icy Roads	$1,488	0.7
Harbor Dock	$3,319	1.5
Other Public Works	$4,357	2.0
Parks & Recreation	$46,698	21.7
Misc. Public Services	$1,797	0.8
Total Expenses	$215,606	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

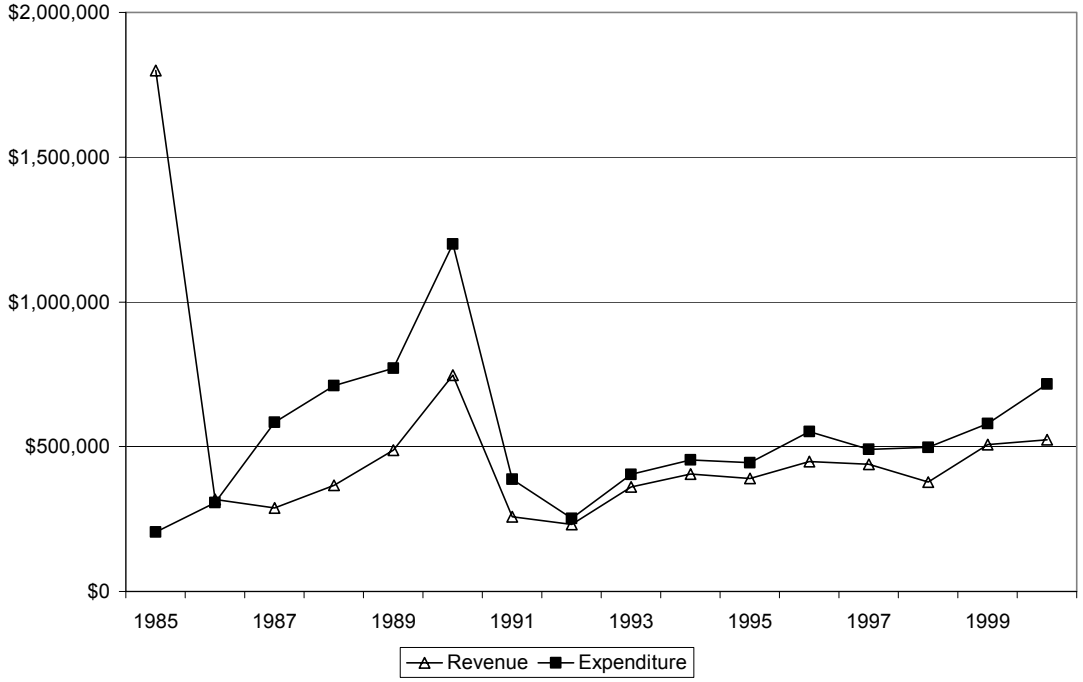
Nuiqsut has also benefited from various capital improvement projects funded through grants provided and administered by various funding agencies. Since 1993, DCCED has contributed a total of $11.8 million or an average of about $1 million annually. Projects administered by DCCED included several city operations and maintenance funding grants, day care, natural gas distribution, natural gas conversion, graveyard fencing, city hall expansion, and capital matching projects. Capital matching projects include ball field and park development, youth center renovation, and various community projects and improvements. HUD has also provided several grants to Nuiqsut. From 1993 to 2002, HUD provided a total of $1,282,728 for various housing modernization projects and Indian Housing Block Grants. Other significant contributors to Nuiqsut's capital projects include a 1987 grant from DEC for $250,000 for a sewage disposal lagoon. The FAA contributed approximately $2.06 million for the construction of a runway safety area for the airport and $1 million in 2002 for an airport apron expansion. For further details on Nuiqsut capital improvement projects see Appendix A.

4.4.6 Point Hope

Point Hope was incorporated in 1966. The NSB provides all public utilities in Point Hope (Alaska Department of Commerce, Community and Economic Development, 2005a).

Figure 4-26 presents the City of Point Hope's total revenues and expenditures from 1985 through 2000.

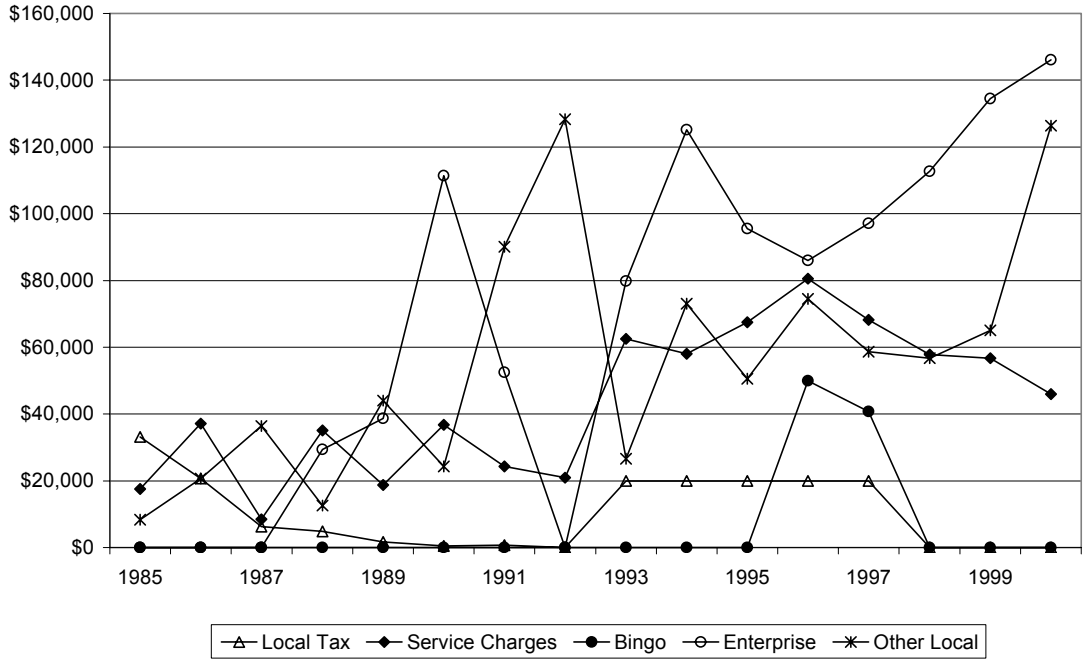
Figure 4-26. Annual Revenues and Expenditures, City of Point Hope, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-27 presents Point Hope local revenues by source. Enterprises and "other local" have been two major sources of local revenues, although neither has been a consistent source of revenue.

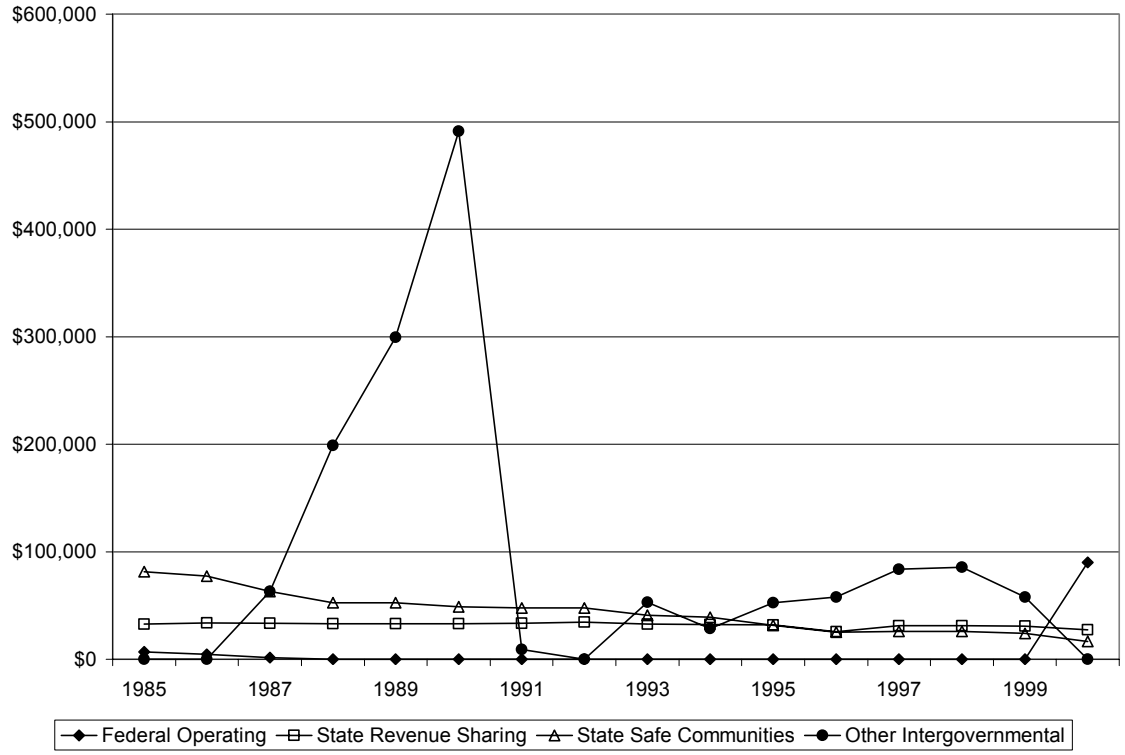
Figure 4-27. Annual Local Revenues by Source, City of Point Hope, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

The Safe Communities Program and State Revenue Sharing Program were a fairly consistent source of outside revenues for Point Hope in the 1985-2000 period (Figure 4-28).

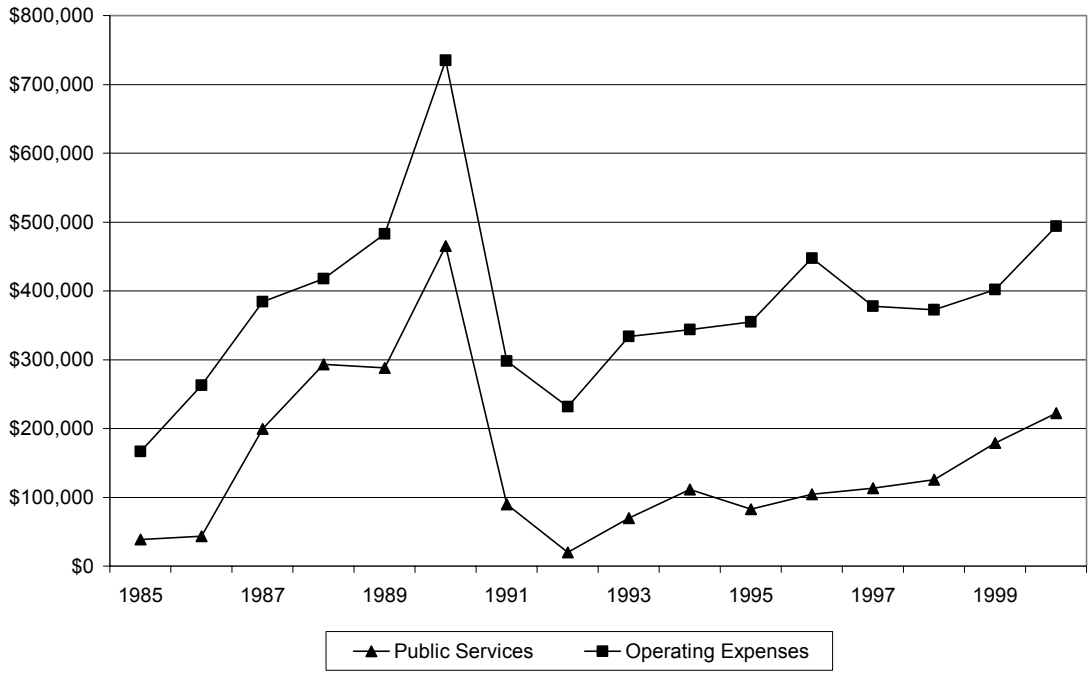
Figure 4-28. Annual Non-local Revenues, City of Point Hope, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Local expenditures by source are presented in Figure 4-29. The largest expenditures of Point Hope have typically been for general government operations.

Figure 4-29. Annual Expenditures by Category, City of Point Hope, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-14 provides information on average revenues by source for 1985 through 2000. Enterprises were the largest source of revenues.

Table 4-14. Average Annual Revenues from 1985 to 2000 by Source, City of Point Hope

Source	Average Revenue	Percent of Total
Local Tax Revenue	$8,981	2.4
License/Permits	$224	0.1
Service Charges	$45,249	11.9
Bingo Revenue	$6,051	1.6
Enterprise Revenue	$73,917	19.5
Other Local Revenue	$59,189	15.6
Federal Operations Revenue	$6,829	1.8
State Revenue Sharing	$33,976	8.9
State Safe Communities	$46,642	12.3
Other State Revenue	$40,112	10.6
Other Intergovernmental Revenue	$58,594	15.4
Total All Revenues	$379,762	

Source: Alaska Department of Commerce, Community and Economic Development, 2003

Table 4-15 provides information on average expenditures by category for 1985 through 2000. Administration and finance expenses accounted for 39 percent of all city government expenditures during that time period.

Table 4-15. Average Annual Expenditures from 1985 to 2000 by Category, City of Point Hope

Category	Average Expenditure	Percent of Total
Council Expenditures	$70,332	17.3
Administration/Finance	$157,992	38.9
Other General Government	$14,514	3.6
Other Public Safety	$414	0.1
Harbor Dock	$418	0.1
Other Public Works	$5,077	1.2
Health Clinic/Hospital	$7,613	1.9
Parks & Recreation	$69,918	17.2
Misc. Public Services	$79,795	19.6
Education Expenses	$453	0.1
Total Expenses	$406,525	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Point Hope has also benefited from various capital improvement projects funded through grants provided and administered by various funding agencies. Since 1993, DCCED has contributed $435,623 or $39,602 per year in grants for capital projects to Point Hope. Projects have included a senior center expansion, a mini-grant for a Native American arts and crafts start-up, and various capital matching grants. The capital matching grants have been for projects such as city office upgrade and equipment, city garage building construction, day-care mini van, and community facilities renovation and equipment. HUD has also provided several grants. From 1993 to 2003, HUD total expenditures on projects amounted to about $3 million or $265,786 per year. Projects administered by HUD include various housing modernization projects and Indian Housing Block Grants (DCCED, 2003). Other significant contributions include DOT grants totaling $402,476 on various projects to improve the Point Hope airport, and an FAA contribution of $932,156 for the construction of the airport snow removal equipment building. For further details on Point Hope capital improvement projects see Appendix A.

4.4.7 Point Lay

In Point Lay, the only unincorporated community on the North Slope, the IRA tribal council acts as the city government (Chapter 6 provides a detailed description of tribal governments). Because Point Lay is not incorporated under state law as a municipality it is not required to report its annual revenues and expenditures to the Alaska Department of Commerce, Community and Economic Development. Consequently, revenue and expenditure information is unavailable for this analysis.

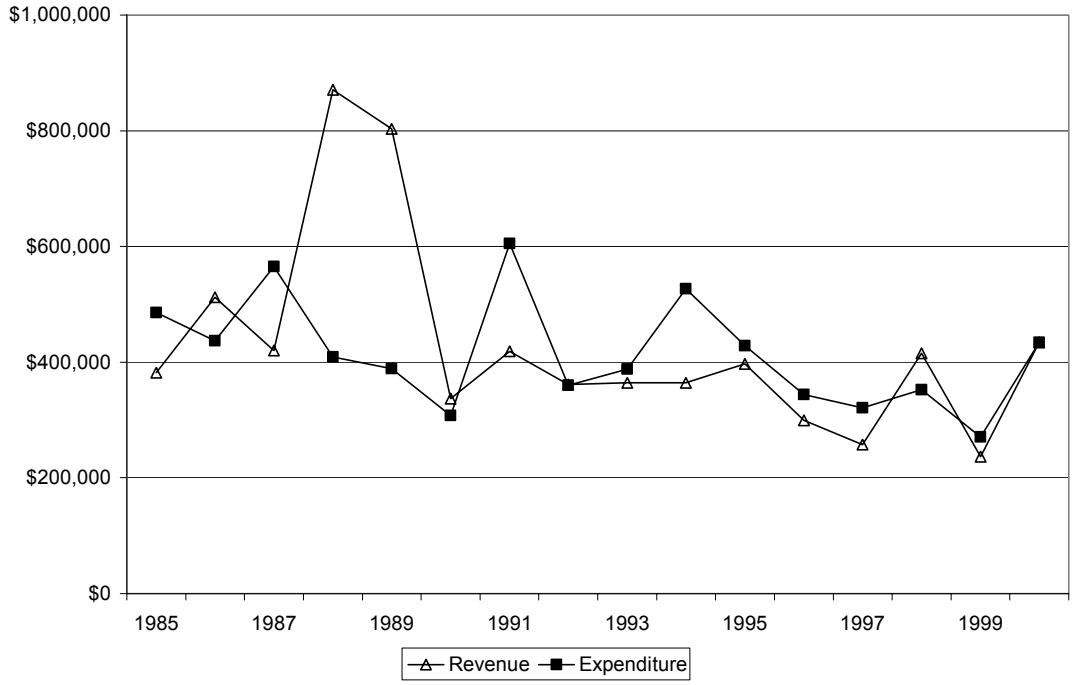
Point Lay has benefited from various capital improvement projects funded through grants provided and administered by various funding agencies. For example, since 1998, HUD has provided an average of $111,254 per year for Indian Housing Block Grants. The FAA contributed $108,280 in 1997 to assist with the development of the Airport Master Plan. In 1994, DCCED provided $100,000 in assistance for community facilities renovations. For further details on Point Lay capital improvement projects see Appendix A.

4.4.8 Wainwright

Wainwright was incorporated in 1962. The NSB provides all public utilities in Wainwright (Alaska Department of Commerce, Community and Economic Development, 2005a).

Figure 4-30 presents the City of Wainwright's total revenues and expenditures from 1985 through 2000.

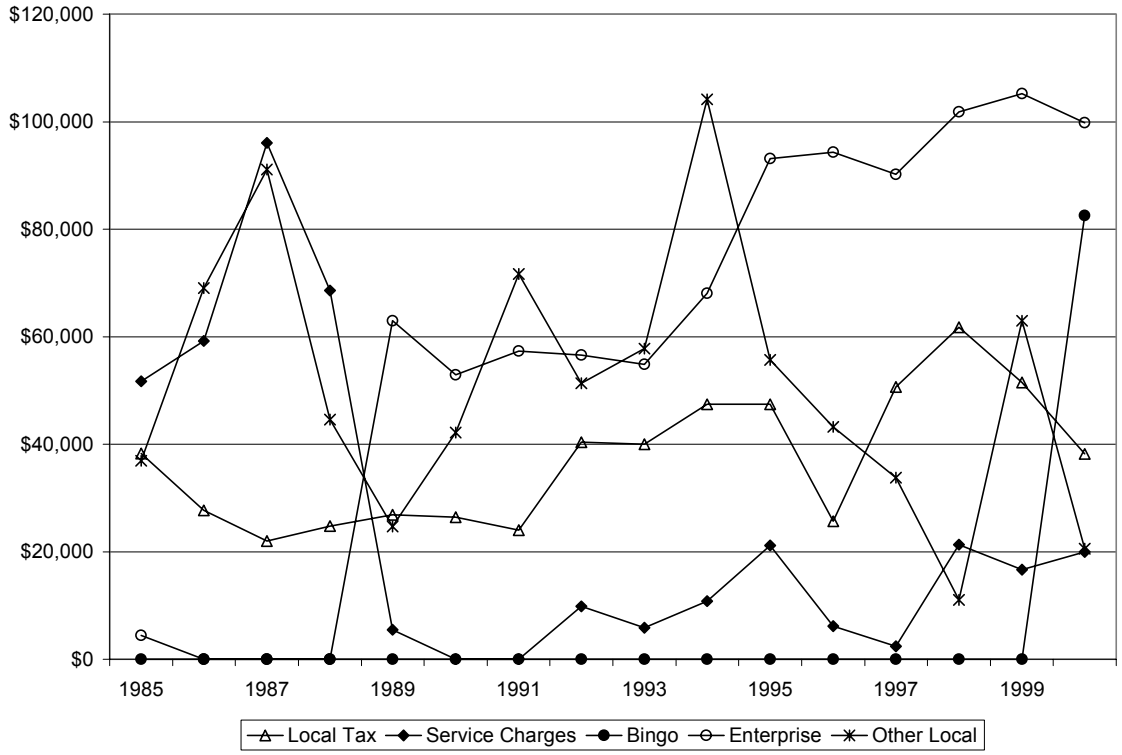
Figure 4-30. Annual Revenues and Expenditures, City of Wainwright, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-31 presents locally generated revenues by source for Wainwright for the period 1985 to 1999.

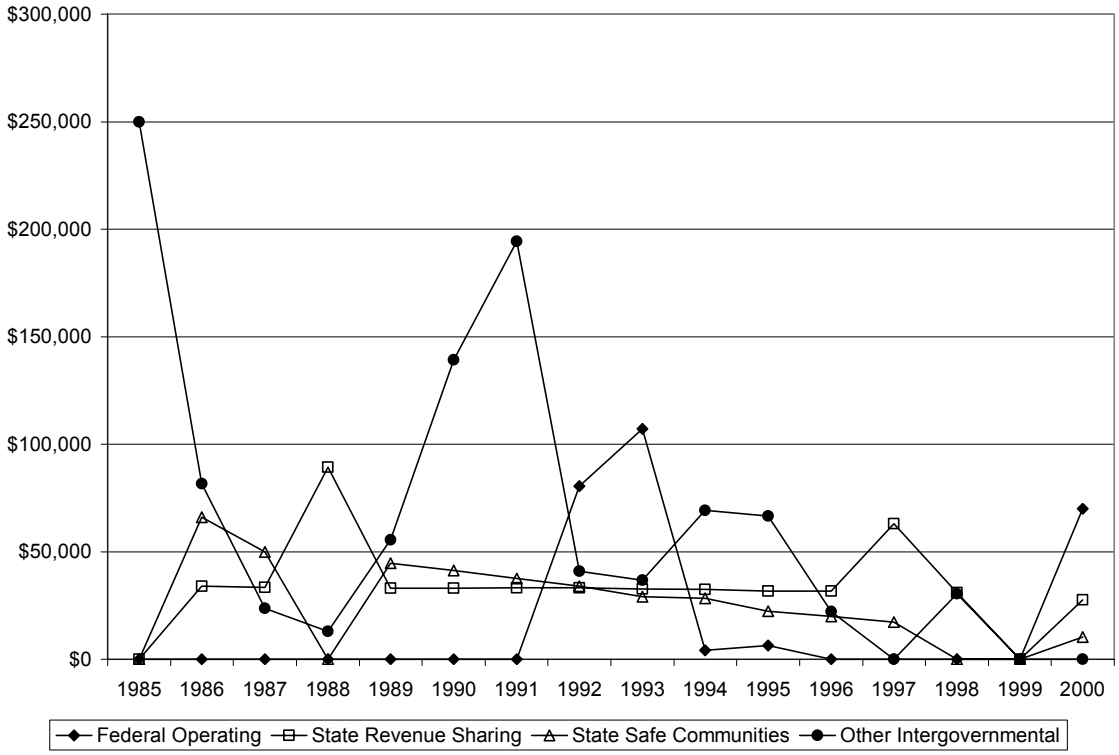
Figure 4-31. Annual Local Revenues by Source, City of Wainwright, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Figure 4-32 presents Wainwright's outside revenues by source. The State Revenue Sharing Program was a relatively consistent source of outside revenues for the city during the 1985-2000 period.

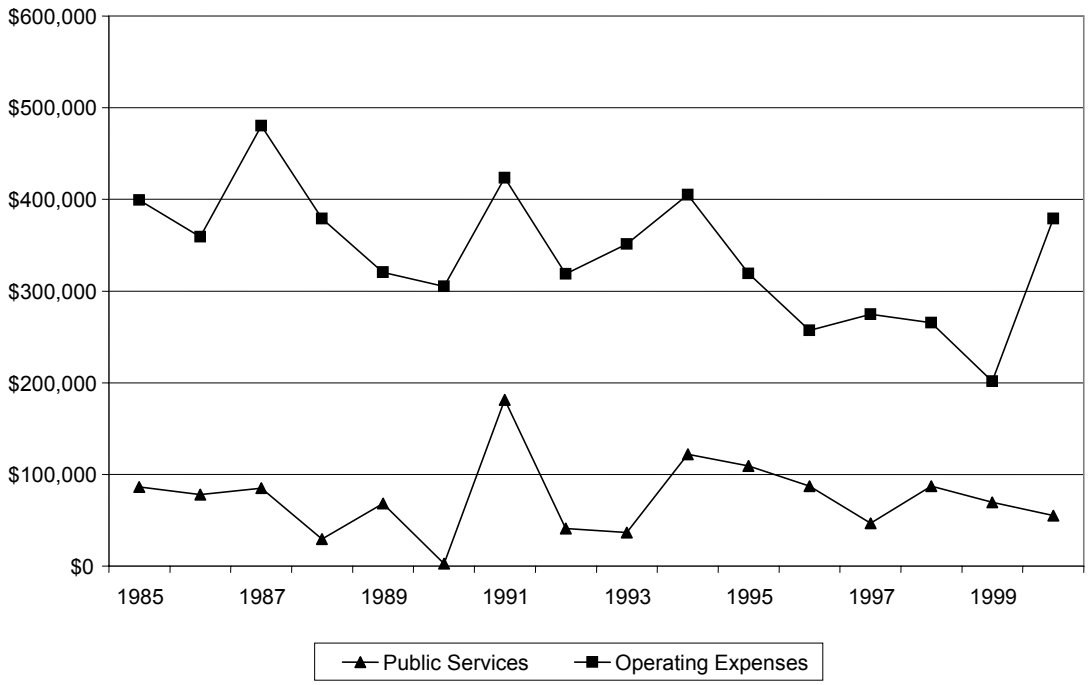
Figure 4-32. Annual Non-Local Revenues by Source, City of Wainwright, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Local expenditures by source are presented in Figure 4-33. The largest expenditures of Wainwright have typically been for general government operations.

Figure 4-33. Annual Expenditures by Category, City of Wainwright, 1985-2000



Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-16 provides information on average revenues by source for 1985 through 2000. Enterprises were the largest source of revenues.

Table 4-16. Average Annual Revenues from 1985 to 2000 by Source, City of Wainwright

Source	Average Revenue	Percent of Total
Local Tax Revenue	$10,155	2.9
License/Permits	$226	0.1
Service Charges	$46,220	13.4
Bingo Revenue	$6,051	1.7
Enterprise Revenue	$74,214	21.5
Other Local Revenue	$60,276	17.4
Federal Operations Revenue	$17,872	5.2
State Revenue Sharing	$35,938	10.4
State Safe Communities	$26,699	7.7
Other State Revenue	$55,952	16.2
Other Intergovernmental Revenue	$12,270	3.5
Total All Revenues	$345,872	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Table 4-17 provides information on average expenditures by category for 1985 through 2000. Parks and recreation and miscellaneous public services accounted for most city government expenditures during that time period.

Table 4-17. Average Annual Expenditures from 1985 to 2000 by Category, City of Wainwright

Category	Average Expenditure	Percent of Total
Council Expenditures	$33,781	2.3
Administration/Finance	$226,887	15.5
Other General Government	$17,861	1.2
Ambulance	$1,856	0.1
Other Public Safety	$3,180	0.2
Other Public Works	$59,451	4.0
Library/Museum	$93,071	6.3
Parks & Recreation	$564,630	38.5
Misc. Public Services	$467,409	31.8
Total Expenses	$1,468,126	

Source: Alaska Department of Commerce, Community and Economic Development, 2003.

Wainwright has also benefited from various capital improvement projects funded through grants provided and administered by various funding agencies. DCCED has provided a total of $1,094,833 or an average of $78,202 per year since 1989 for grants and capital sharing projects that include self-service laundry relocation, garbage truck purchase, search and rescue equipment, community center renovations, city hall renovations, local government operations, and boat dock design. HUD has provided $2,405,769 in grants for Wainwright since 1993. These grants include funding for housing modernization projects and Indian Housing Block Grants. Other contributions include a USDA grant of $1,375,000 for self-service laundry improvements and $440,000 for water and sewer construction. DEC contributed $880,000 for community piped water and sewage services. For further details on Wainwright capital improvement projects see Appendix A.

5 The Role of For-Profit Alaska Native Corporations

This chapter describes the role of for-profit Alaska Native corporations in the economy of the North Slope. The chapter begins with a description of ANCSA—the Act that authorized the formation of Alaska Native regional and village corporations and was the source of the assets that initially funded the corporations. The discussion of ANCSA is followed by a brief history and analysis of ASRC, including its corporate structure, revenues, dividends, employment, educational contributions, and other contributions. The chapter concludes with information on the for-profit Alaska Native village corporations on the North Slope.

5.1 Alaska Native Claims Settlement Act

ANCSA was a landmark piece of legislation that introduced the corporate model into a predominantly subsistence society. The purpose of ANCSA was to legislate the terms by which Alaska Natives could acquire title to their lands. With passage of ANCSA, Alaska Natives received fee simple title to 44 million acres of land and $965.2 million in cash for extinguishment of all aboriginal title or claims of title to lands. ANCSA significantly changed the relationship of Alaska Natives to their land because ties to traditional Indian Reorganization Act "tribal" governments were bypassed. ANCSA was intended to resolve land claims and to be a development tool encouraging economic sovereignty in the form of land and money to Alaska Native business corporations.

The monetary settlement of $962.5 million was to be distributed over an eleven-year period. The federal government provided $462.5 million while the remaining $500 million of the settlement came from a two percent royalty on production and two percent on bonuses and rentals for lands in Alaska conveyed to the state under the Statehood Act and from the remaining federal lands in Alaska excluding the Naval Petroleum Reserve No. 4 (later renamed the National Petroleum Reserve-Alaska). These funds provided the initial source of capital for the regional and village corporations.

ANCSA (43 U.S.C. § 1606) designated 12 Native regions in the state based, where possible, on common heritage and interests. These regions were to approximate the areas covered by the operations of existing Native associations including the Arctic Slope Native Association. Each area was to be managed by a regional corporation. The 12 regional corporations were formed as businesses for profit. A 13th corporation was formed later to provide for Alaska Natives living out of the state. By ANCSA terms, Alaska Natives were obliged to set up corporations to serve as the vehicles for the ownership and management of their land and the money, which became corporate assets.

The 12 regional corporations were allowed to take title to the subsurface rights of village corporation lands and surface and subsurface rights to an additional 16 million acres to be selected by regional Alaska Native corporations (Institute of Social and Economic Research, 1984). The 13th corporation received a cash settlement but no land. ASRC is the regional for-profit corporation for the North Slope. The boundary of ASRC is for all practical purposes coterminous with the boundary of the NSB (Dupere and Associates, 1973). ASRC was designated to receive about 4.6 million acres and $22.5 million from which each of the region's village corporations were to receive a portion.

In order to be eligible to select land or receive benefits, Alaska Native villages had to incorporate in a manner similar to the regional corporations. ANCSA called for qualifying inhabitants of 234 Native villages in Alaska to be organized as for-profit or non-profit village corporations to take title to the surface rights of 22 million acres. While ANCSA gave villages the option of incorporating as a profit-making or a non-profit-making corporation, they were advised that, under Alaska law, that there could be no distribution of dividends to members of a non-profit corporation. All of the villages in

Alaska chose to establish profit-making corporations, as encouraged by the parameters of ANCSA. A village corporation represented a Native community for ANCSA purposes and was defined as a place where 25 or more Alaska Natives lived at the time of the 1970 census. Today, there are eight certified ANCSA village corporations in the NSB (Table 5-1). ASRC had to fight for eligibility for three of them: Atqasuk, Nuiqsut, and Point Lay (ASRC, 2001). The village corporations administer their lands and manage their portion of the ANCSA monetary settlement. All village corporations on the North Slope chose for-profit status.

Table 5-1. Villages and Village Corporations on the North Slope

Village	Village Corporation
Anaktuvuk Pass	Nunamiut Corporation
Atqasuk	Atqasuk Corporation
Barrow	Ukpeagvik Iñupiat Corporation
Kaktovik	Kaktovik Iñupiat Corporation
Nuiqsut	Kuukpik Corporation
Point Hope	Tikigaq Corporation (formerly Tigara)
Point Lay	Cully Corporation
Wainwright	Olgoonik Corporation

While ANCSA designated the amount of land entitlement in terms of acreage, the burden of translating that entitlement into meaningful economic assets was borne by the newly formed regional and village corporations. The overriding question for ASRC and the village corporations was whether land choices would meet the needs of both current and future generations. The land selection process had to balance traditional subsistence values, cultural, and historical significance with the need to identify lands with the most potential for resource extraction including oil, gas, coal, and other minerals.

Land selection was a lengthy, expensive, and litigious process. Land selection for ASRC was limited by pre-existing state and federal land withdrawals including land in the National Petroleum Reserve–Alaska (NPR–A) and the Prudhoe Bay oil fields. Under ANCSA P.L. 92-203, Section 12(a) and 12(b), the village corporations in Atqasuk, Barrow, Nuiqsut, and Wainwright were allowed to select surface rights to land in the NPR-A (U.S. Bureau of Land Management, 1996).

The provisions of ANCSA did not allow ASRC to select any subsurface lands within the NPR-A. Instead, ASRC was allowed to select the subsurface estate in equal acreage to their entitlement from lands outside the withdrawal. However, the Alaska National Interest Lands Conservation Act of 1980 (ANILCA), (P.L. 96-487) provided specific legislative authority allowing the exchange of NPR-A lands contingent upon legislative direction to open the NPR-A to commercial development. This section of ANILCA could not be implemented until passage of the Appropriations Act of 1981 (P.L. 96-514), which authorized the Secretary of the Interior to lease lands within the NPR-A for oil and gas exploration and development.

Therefore, ASRC was allowed to select the subsurface estate of village-selected lands if the lands within 75 miles of the villages were made available for commercial development. ASRC selected lands under the villages of Nuiqsut and Wainwright. ASRC will receive all the subsurface estate of all lands conveyed to Nuiqsut when its entitlement is complete (U.S. Bureau of Land Management, 1998). ASRC will receive the subsurface estate to 122,176 acres in Wainwright (U.S. Bureau of Land Management, 1998).

ASRC lands also include the subsurface estate to 92,160 acres of land within the Arctic National Wildlife Refuge coastal plain. The ASRC-owned ANWR subsurface estate lies under and adjacent to Kaktovik. Kaktovik Iñupiat Corporation holds the surface title to these same lands.

ASRC has received all but about 250,000 acres of its entitlement under ANCSA. ASRC is particularly interested in participating in land exchanges with the federal government for lands in the NPR-A (ASRC, 2003a). Many of its shareholders have Native allotments and cabin sites in the area. The Bureau of Land Management of the U.S. Department of Interior manages the NPR-A for the federal government. The NPR-A covers a significant portion of the North Slope region (Figure 6-6). Native entities own property located around the villages of Atqasuk, Barrow, Nuiqsut, and Wainwright (U.S. Bureau of Land Management, 1996).

ASRC lands also hold significant amounts of high quality bituminous coal. It is estimated that approximately two billion tons of coal are located in the Western Arctic. ASRC has targeted one coal deposit located about six miles from tidewater on the Chukchi Sea for development. Approximately 68 million tons of measured coal reserves have been identified there for underground mining and another approximately 23 million tons of coal have been identified as suitable for surface mining.

5.2 Alaska Native Corporations Legal Structure

ANCSA and its amendments created a legal structure for Alaska Native corporations with some unique attributes. Regional and village Native corporations are vehicles used to channel Native assets and capital toward productive investments on behalf of their shareholders. Each regional corporation is incorporated under state law as a state-chartered, for-profit enterprise. As such they are required by law to make a good faith effort at earning a financial return for their Native shareholders by investing in Native and non-Native enterprises or through the exploitation of regionally-held natural resources. Vic Fischer, Institute of Social and Economic Research, University of Alaska Anchorage, pointed out:

> …an ANCSA corporation has a much more difficult path in life in the business world than a private corporation that is purely profit-motivated. Unlike most private companies, Native corporations put an emphasis on hiring their shareholders, providing for the educational needs of shareholders and their children, and they are involved in political and social issues (Thompson, 2000).

In some ways the Alaska Native corporations are called upon to fulfill what can be competing objectives—attend to the bottom line of the corporation but at the same provide jobs and training for shareholders. ASRC publications articulate the importance of incorporating traditional Iñupiat values, such as protecting the land, environment, and culture, into its operations. However, corporation shareholders also expect to receive dividends.

The legal structure determined by ANCSA ties the regional corporations together. For example, according to ANCSA, Section 7 (i), 70 percent of all revenues earned by each regional corporation from timber resources and the subsurface estate patented have to be divided on an annual basis among all 12 corporations.[40] In the case of the Alpine oil field, which began production in 2000, the

[40] (43 U.S.C. § 1606) 7(i) Certain natural resource revenues; distribution among twelve Regional Corporations; computation of amount; subsection inapplicable to thirteenth Regional Corporation (1)(A) Except as provided by subparagraph (B), 70 percent of all revenues received by each Regional Corporation from the timber resources and subsurface estate patented to it pursuant to this chapter shall be divided annually by the Regional Corporation among all twelve Regional Corporations organized pursuant to this section according to the number of Natives enrolled in each region pursuant to section 1604 of this title. The provisions of this subsection shall not apply to the thirteenth Regional Corporation if organized pursuant to subsection (c) hereof.

amount of revenue distributed to the regional corporations is significant. For example, in 2001 ASRC's royalty-sharing payments to other Alaska Native corporations amounted to $20 million (Bradner, 2001).

Non-shared revenue can also be generated through various types of business development activities, including wholly owned enterprises, partnerships, or joint ventures, purchases of buildings and other real estate, and returns on passive investments in stocks and other financial instruments.

Initially, each Alaska Native enrolled in a corporation received 100 shares of the corporation's stock.[41] Unlike most corporations, the "stock may not be sold, pledged, assigned, or otherwise alienated except in certain circumstances by gift, court decree or death" (ASRC, 2001). Stock and land received by the corporations were originally protected for 20 years after ANCSA's passage in 1971. Congress assumed that the corporations would be viable, profitable entities after 20 years of operation.

However, Alaska Natives were concerned that once stock ownership restrictions were lifted, the majority of stock in Native corporations could fall into non-Native hands. While ANCSA has been amended many times, amendments to deal with what was called the "1991 problem" were passed by Congress in 1987 and signed into law by President Reagan on February 3, 1988. These amendments have had implications for ASRC and the village corporations on the North Slope, including:

- Allowing corporate shareholders to determine if and when to lift restrictions on the sale of their ANCSA stock;
- Allowing shareholders to issue new stock to Native children born after 1971, elders, and those Natives who missed the original enrollment;
- Protecting undeveloped Native land from loss due to debt, bankruptcy, judgment, or squatter's rights because they automatically are protected in a land bank; and
- Exempting all undeveloped Native land from taxation.

Because of this legislation, ASRC's alienation restrictions remain in place. Furthermore, the stock carries voting rights only if the stock holder is an eligible Alaska Native or a descendant of a Native.

The issue of Alaska Natives born after 1971 creates a dilemma for Native corporations because of the conflict between the desire to share with the younger generations against the desire to pay higher dividends to current stockholders. ASRC is one of three regional Native corporations that have added individuals born after 1971 to their rolls. This change in enrollment policy in 1989 has had a significant effect on the economy of the North Slope, by increasing the number of shareholders in ASRC from around 3,800 in 1972 to almost 9,000. Dividends, employment, and education and training benefits have been extended to a much larger group than originally enrolled in ASRC. ASRC has been able to increase profits so that dividends paid on an individual basis to shareholders have not declined drastically. However, if the rolls had not been extended, shareholders may have received higher individual dividend payments.

Initially under ANCSA, all Native corporation lands were protected from taxation for 20 years from the time of conveyance. The new amendments extended the protection against taxation of undeveloped corporate land indefinitely. In addition, with some exceptions, the new amendments prevent takeovers on undeveloped (not mortgaged) lands because of corporate debts or bankruptcy.

Legislation introduced in the U.S. Congress in 1986 also distinguished Alaska Native regional corporations from other corporations. Net operating losses (NOLs) are a loss of taxable income as

[41] "Native" was defined as a citizen of the United States with one-fourth degree or more Indian, Aleut or Eskimo ancestry, born on or before December 18, 1971, including Natives who had been adopted by one or more non-Native parents.

recognized by the Internal Revenue Service. Before 1986, all corporations that lost money on business ventures were allowed to sell their NOLs to other corporations looking for tax write-offs. The practice was stopped in 1986 because so much money was being lost to the federal treasury.

However, a technical amendment in the 1986 Tax Reform Act (P.L. 99-514) allowed Alaska Native corporations to continue to sell NOLs to profitable corporations, which in turn used the losses to reduce their taxes through write-offs. NOL sales essentially recapitalized several of the Alaska Native Regional corporations and put them in a good position to benefit from the economic boom that began in the 1990s (Colt, 2001). ASRC was one of the regional corporations that took advantage of this opportunity and by 2001, it had netted $91 million (Stricker, 2001).

The next sections describe some additional linkages between Alaska Native corporations and the North Slope oil industry, some of the competitive advantages of Alaska Native corporations, and the business structure and operations of ASRC including revenues, dividends, and employment.

5.3 Linkages between Alaska Native Corporations and the North Slope Oil Industry

ASRC has leased lands to major oil companies over the years, and several exploratory wells have been drilled on these lands. However, until the Alpine oil field in the Colville River Delta was developed, no oil development occurred on ASRC lands. According to ASRC (2003), approximately 50 percent of the Alpine oil field is on land leased from ASRC. The Kuukpik Corporation holds title to the surface estate. ASRC played a prominent role in the development of the Alpine oil field. Much of the engineering was completed by a joint venture between ASRC and Parsons Engineering. Modules used in the field were constructed by a subsidiary of Natchiq, Alaska Petroleum Contractors. The pipeline connecting Alpine to the Kuparuk River infrastructure was constructed by another subsidiary, Houston Contracting Company. Nuiqsut Construction, a joint venture between SKW Eskimos, Inc., an ARSC subsidiary, and the Kuukpik Corporation carried out civil construction for the development of the Alpine field.

An agreement between ASRC and Anadarko Petroleum Corporation gives Anadarko exploratory access to 3.3 million acres of land controlled by ASRC and exploration rights to 2.3 million acres. In addition, ASRC and the Kaktovik Iñupiat Corporation own 92,000 subsurface and 92,000 surface acres, respectively, in ANWR. Chevron Texaco and BP currently hold leases to all of the ASRC/Kaktovik Iñupiat Corporation land in the Refuge (ASRC, 2003). While these lands have been identified as having oil and gas potential, they cannot be developed unless Congress opens the rest of the coastal plain to oil and gas leasing and related activities.

ANWR is the most northern and one of the largest wildlife refuges in the United States, and is managed by the U.S. Fish and Wildlife Service. The original 8.9 million acre Arctic National Wildlife Range was created in 1960 by the Secretary of the Department of the Interior to "preserve the unique wildlife, wilderness, and recreation values" of the area. Under ANILCA, the range was doubled in size to 19.6 million acres to include the wintering grounds of the Porcupine caribou herd and renamed the Arctic National Wildlife Refuge.

Most of the original range was designated as wilderness under the 1964 Wilderness Act. Approximately eight million acres of the current wildlife refuge are designated as wilderness. However, the 1.5 millions acre coastal plain is not designated as wilderness, and under ANILCA this area of ANWR is referred to as the "1002 Area." Section 1002 of ANILCA directed the Department of the Interior to prepare a report on oil and gas potential in the coastal plain and to identify the effects that oil development would have on the area's natural values. Section 1003 of ANILCA stated that

any oil and gas leasing or production anywhere in ANWR would require authorization by an act of the U.S. Congress.

A land exchange was completed in 1983 transferring the subsurface title of Kaktovik Iñupiat Corporation lands within ANWR from the federal government to ASRC. This allowed for an exploratory well to be drilled by industry in 1985 within the Refuge's boundary on these private lands. The results of the drilling operations remain confidential (U.S. Fish and Wildlife Service, 2001).

5.4 Competitive Advantages of Alaska Native Corporations

Several federal programs provide Alaska Native corporations and other Native American corporations with important competitive advantages, particularly in terms of competing for large federal projects. The importance of these programs to ASRC and its subsidiaries is demonstrated by recent contract awards to ASRC Management Services. ASRC Management Services is wholly owned subsidiary of ASRC formed in 2002 and certified as an Alaskan Native Corporation 8(a) with the Small Business Administration in January 2003 (ASRC Federal Holding Company 2005). On April 1, 2005, ASRC Management Services was awarded a Department of Treasury, Internal Revenue Service (IRS) contract supporting the Management of Seized and Forfeited Assets for the IRS Criminal Investigation Division at 36 sites across the U.S. The estimated value of the five year contract is $23.8 million. On July 5, 2005, a $230 million federal contract was awarded to Computer Sciences Corporation (CSC) of Falls Church Virginia. ASRC Management Services is a sub-contractor to CSC and will provide financial management support for the project. The advantages conferred by the U.S. Small Business Administration 8(a) Program, HUBZone Empowerment Contracting Program, Indian Self Determination Act and Education Assistance Act of 1975, and the Indian Incentive Program (all discussed below) are another reason why many village corporations on the North Slope have spun off subsidiaries in environmental management and other types of businesses that do not require a large, up-front capital investment.

5.4.1 U.S. Small Business Administration 8(a) Program

The SBA 8(a) certification program provides enhanced access to federal contracts and has provided business opportunities to Native corporations that do not require heavy capital investments. This program has rescued several Native corporations on the verge of bankruptcy. This is a program to help minority-owned businesses win federal government contracts. Ninety-one of the 166 firms in Alaska with a SBA 8(a) certification are affiliated with ANCSA corporations. A subsidiary of ASRC—Piquniq Management Corporation—was the first Native subsidiary in Alaska to be certified under the program (Stricker, 2003).

Usually, to qualify, these businesses or their affiliates must meet strict size requirements as defined by average revenue requirements or in some cases, the number of employees. Since ASRC has been a large corporation for some time, it does not qualify under this program. If a disadvantaged business is certified as being in good standing and eligible to participate in the SBA 8(a) certification program, the business can negotiate large sole-source contracts with agencies of the federal government. While there are typically limits on for-service and manufacturing contracts, Alaska Native corporations are exempt from these limitations.

5.4.2 HUBZone Empowerment Contracting Program

All the villages on the North Slope have been classified as HUBZones. The HUBZone Empowerment Contracting Program is part of the Small Business Reauthorization Act of 1997. The acronym HUBZone stands for Historically Underutilized Business Zone. The goal of the program is to stimulate economic development and create jobs in urban and rural communities by providing federal contracting preferences to small businesses. These preferences go to small businesses that obtain HUBZone certification in part by employing staff that live in a HUBZone. The company must also maintain a "principal office" in one of these specially designated areas. These companies are given a price break in bidding for federal contracts of up to 10 percent. This gives them a competitive advantage since they can win contracts even when they are not the lowest bidder. There are four types of HUBZone contracting opportunities including (U.S. Small Business Administration, 2003):

- **Competitive**: Contracts can be set-aside for HUBZone competition when the contracting officer has a reasonable expectation that at least two qualified HUBZone small business concerns (SBCs) will submit offers and that the contract will be awarded at a fair market price.
- **Sole-source**: HUBZone contracts can be awarded if the contracting officer determines that:
  - ⇒ only one qualified HUBZone SBC is responsible to perform the contract,
  - ⇒ two or more qualified HUBZone SBCs are not likely to submit offers and
  - ⇒ the anticipated award price of the proposed contract, including options, will not exceed:
    - \$5 million for a requirement within the North American Industry Classification System (NAICS) code for manufacturing or
    - \$3 million for a requirement within all other NAICS codes
- **Full and open** competitive contracts can be awarded with a price evaluation preference. The offer of the HUBZone small business must not be 10 percent higher than the offer of a non-small business.
- **Subcontracting**: All subcontracting plans for large business federal contractors must include a HUBZone subcontracting goal.

5.4.3 Indian Self Determination Act and Education Assistance Act of 1975

The aim of this law (P.L. 93-658) and its amendments is to facilitate "partnering between government and indigenous people." Alaska Native corporations and American Indian tribes can obtain federal government contracts without competitive bidding. The law allows for the optional inclusion of outside agencies. As a result, Native organizations may enter into a self-determination contract to plan, conduct, and administer programs, including those that benefit the organization itself. The Act provides that tribes may enter into "self-determination contracts" with the Secretary of the Interior and the Secretary of Health and Human Services to administer programs or services that otherwise would have been administered by the federal government. Such programs include education, medical services, construction, and law enforcement (General Accounting Office, 1999).

5.4.4 Indian Incentive Program

Originating from the Buy Indian Act, the Indian Incentive Program gives prime contractors of the Department of Defense a five percent bonus payment on work subcontracted to Indian-owned enterprises. The Department of Defense Indian Incentive Program strives to provide opportunities to

Indian organizations and Indian-owned economic enterprises, by providing for the payment of five percent of the amount subcontracted to an Indian organization or Indian-owned economic enterprise at any sub-tier, when authorized under the terms of the contract. The definition of an "Indian Organization," is the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C. Chapter 17. An "Indian-Owned Economic Enterprise," is any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that the Indian ownership constitutes not less than 51 percent of the enterprise (U.S. Department of Defense, 2003).

5.5 Arctic Slope Regional Corporation

This section presents background information on the business operations and corporate structure of ASRC and provides context for the discussion of revenues, dividends, and employment that follows. Contributions to the North Slope economy by Alaska Native corporations take place in many ways. ASRC pays dividends, employs shareholders and other residents of the Borough, provides educational and training opportunities, and pays tax-free dividends to village elders.

5.5.1 History of Alaska Slope Regional Corporation

When ASRC was formed in 1972, all the regional Alaska Native corporations faced similar initial conditions, including the general stability of the surrounding economy and the statewide and worldwide menu of potential investment opportunities available (Colt, 2001). However, there were significant differences between the corporations in terms of natural resource endowments, size of local markets, human capital, and cultural backgrounds (Colt, 2001).

While the North Slope was favorably endowed with potential oil and gas deposits, local markets were small, and the same small pool of people was called upon to start up the regional and village corporations, select lands, and organize a new local governmental entity, the NSB—all at the same time. ASRC was incorporated on July 7, 1972, and the NSB was incorporated as a first class borough on July 1, 1972. The limits of the human capital available are summed up by the following quote from a letter to shareholders in the *1975 Annual Report* of ASRC.

> …we have, as a small population of people, been attempting to establish a new system of government, the North Slope Borough, in a vast land area, at the very same time that we have had the responsibility of using the same people to create a business corporation (ASRC, 1975).

In 1973, ASRC recorded its first revenue of $6,000 (ASRC, 2001). By 2002, ASRC with its numerous subsidiaries, partnerships, and joint ventures reported almost $974 million in revenue. ASRC (2003) describes itself as follows:

> ASRC is a private, for profit Alaska Native owned corporation representing the business interests of the Arctic Slope Iñupiat. Corporation headquarters are based in Barrow, Alaska with administrative and subsidiary offices located at Anchorage and through out the world.
>
> This natural resource based corporation employs 6,000 people, has a growing shareholder population of 9,000, and has title to approximately five million acres of land. A founding principle of ASRC is respect for the Iñupiat heritage.
>
> ASRC is committed to preserving the Iñupiat culture and traditions which strengthen both our shareholders and ASRC. By adhering to the traditional values of protecting the land, the

environment and the culture of the Iñupiat, ASRC has successfully adapted and prospered in an ever changing economic climate.

Table 5-2 presents a selection of important milestones in the history of ASRC. This timeline, as does the organizational chart displayed in Figure 5-1 on page 115, helps demonstrate the growth, complexity, diversity, and far-reaching impact of ASRC.

Table 5-2. Timeline of Alaska Slope Regional Corporation Activities

Year	Event
1972	ASRC created.
1973	Receives $3 million from Standard Oil of California for oil leases on land ASRC is considering for selection.
	Establishes Iñupiat Builders, Inc. to build homes and commercial buildings on the North Slope. Builds 8 private homes in Kaktovik at an average price of $30,000.
1974	Establishes Eskimos Inc., which is involved in heavy-duty equipment and operations, fuel distribution, auto equipment repair, and a service station.
	Incorporates Tundra Tours (TT) a joint venture with Ukpeagvik Iñupiat Village Corporation to construct a hotel–restaurant complex in Barrow.
	Eskimos, Inc. partners with SKW/Clinton to form SKW/Eskimos, Inc., which is involved in industrial, general, and civil construction.
	Opens office in Anchorage.
1975	Screening and selection of almost 6 million acres completed.
	Establishes Iñupiat Builders, Inc. to construct homes in Point Lay
	Top of the World Hotel becomes entirely owned and operated by TT. TT enters into a joint venture contract with Alaska Catering Company to provide food and maintenance services to construction camps along the TAPS.
	Forms Arctic Technical Services, Inc. to provide parent corporation and other subsidiaries with engineering, geotechnical and scientific planning, economic and environmental analysis, and other technical information.
	Participates in joint venture with Alaska General Construction, Inc. as sub-contract to Husky Oil Company for work in NPR-A
	Reorganizes ASRC/Communications to provide services to requesting agencies.
	Receives $4.9 million for payments of lease agreements with major oil companies, with an additional $2.6 million to be received subsequent to land conveyance.
1977	Acquires Barrow Cable TV as a division.
	Spins off ASRC Communications from division to subsidiary.
	Posts first $1.4 million net profit.
1978	Establishes Arctic Education Foundation to provide scholarships and other benefits for shareholders and children.
	Distributes first dividends.
1979	Signs land exchange with U.S. Department of Interior, which allows ASRC to obtain land in the NPR-A and ANWR. The exchange is ratified in 1980 by ANILCA.
1981	Establishes first start up firm, an engineering company later to become Arctic Slope Consulting Group (ASCG).
1984	Establishes Piquiniq Management Corporation (PMC), a full service facility and maintenance contractor.
1985	Acquires interest in Petro-Star, a small refinery in North Pole.
	Acquires 80 percent interest in Houston Construction, a pipeline construction and maintenance company.

Year	Event
	Petroleum refining and energy services now account for two thirds of total annual revenue.
1987	Natchiq forms Alaska Petroleum Contractors (APC) and ASCG acquires Ocean Technology, Ltd.
1988	"1991" amendments signed into law.
1989	Develops long range international development program to explore worldwide business opportunities.
1991	Receives a $30 million advance on sale of net operating losses, which is used to establish a permanent fund and Elder's Settlement Trust and reduce debt.
	Expands shareholder hiring and training program.
1993	Creates ASRC Contracting Company, Inc. (ACCI)
1994	Resolves dispute with U.S. Internal Revenue Service over net operating losses, releasing proceeds of $91 million.
1995	Earns the highest annual revenues of any Alaska-owned company.
	Oil discovered at Alpine on land owned by ASRC, Kuukpik Corporation, and State of Alaska
	Increases ownership interest in Petro Star Valdez Refinery to 75.2 percent.
	Newly incorporated subsidiary, Puget Plastics Corporation acquires Portland, Oregon-based plastic products manufacturing division of Puget Corporation.
1996	Begins holding its annual meeting in a different North Slope village each year, thereby providing economic benefits to the communities.
	Acquires 35 percent of outstanding stock of PMC and increases ownership to 91 percent.
	Subsidiary ASCG, Inc. acquires Leedshill Herkenhoff, Inc., an engineering and design firm in Albuquerque, New Mexico
1997	Opens Iñupiat House at the University of Alaska Fairbanks.
	Forms Arctic Slope World Services (government services contractor) when subsidiaries PMC and ACCI are transferred to the new entity.
1998	Natchiq, Inc. acquires Omega Services Industries, a full service onshore and offshore construction and fabrication contractor. Forms Natchiq Sakhalin, Inc.
	Petro Star, Inc. and SKW Constructors enter into partnership with CDM Resource Management, Ltd., a gas compression company
2000	Acquires Tri Ocean Engineering, Ltd., an engineering and consulting firm located in Calgary, Canada with offices in Nova Scotia and Russia.
	ASCG acquires assets of McLaughlin Water Engineers, Ltd., an engineering and design firm based in Denver, Colorado
	SKW/Eskimos enters into joint venture with the Kuukpik Corporation and completes $50 million of civil construction for Phillips Alaska on Alpine Field Development Project.
	Production at Alpine oil field begins.
2001	Experiences a decrease in engineering and construction revenue due to completion of NSB water and sewer construction projects and completion of development of Alpine oil field.
	Forms new subsidiary, ASRC Service Center, Inc., to consolidate business support services of subsidiaries.
2002	ASRC and Anchorage-based subsidiaries housed together in a new 10-story, 210,000 square-foot office building. Plans to shift business support functions such as IT, accounting, and human resources into one shared services organization.

Source: ASRC Annual Reports and Web pages.

5.5.2 Corporate Structure of Alaska Slope Regional Corporation and its Subsidiaries and Joint Ventures

As demonstrated by the timeline in Table 5-2, ASRC has numerous subsidiaries, joint ventures, partnerships, and other business activities. Its business activities include commercial construction, resource exploration and development, petroleum refining and products sales, plastic products

manufacturing, automotive merchandise sales, oil field support, hotel ownership, tourism, engineering, consulting, environmental remediation, governmental contracting, communications, and television operations (ASRC, 2000, 2001).

Figure 5-1 shows an organizational chart for ASRC. It includes eleven first tier subsidiaries. Under these subsidiaries are other fully owned ASRC companies and joint venture partnerships. This diagram is included to demonstrate ASRC's complex arrangement of subsidiaries, partnerships, and joint ventures. The list is not exhaustive and is constantly changing to meet corporate needs and business demands and opportunities.

Figure 5-1 also shows some of the joint ventures between the ASRC subsidiary SKW/Eskimos, Inc. and the Alaska Native village corporations in the NSB. These joint ventures will be discussed in more detail in the followings sections.

Also of note is that while the headquarters of ASRC are in Barrow, the headquarters for many of the subsidiaries are located in Anchorage. In addition, many of ASRC's subsidiaries and partnerships have offices or headquarters outside of Alaska. In 2002, the Anchorage office of ASRC and ASRC's Anchorage-based subsidiaries became the primary tenants in a new office building in Anchorage.

It is beyond the scope of this report to assess the performance of ASRC and its operations, but a brief description of each of the 11 first tier subsidiaries is provided below.

Alaska Growth Capital is a business and industrial development corporation (BIDCO), which is a new type of non-bank financial institution designed to fill the financing gap between typical bank financing and the capital needs of Alaska's businesses. The company was formed in 1997 with $3 million from ASRC and a matching grant of $3 million from the former Alaska Science and Technology Foundation. In 2002, they made $20 million in loans and expect to reach or exceed $25 million in 2003 (Bradner, 2003).

Arctic Slope World Services (ASWS) was formed when subsidiaries Piquniq Management Corporation (PMC) and ASRC Contracting Company, Inc. were transferred to the new entity in 1997. According to ASWS (2003), the company has annual revenues of $90 million and 481 employees, with operating locations in various areas of the United States, Greenland, and England. Among the services that ASWS provides are radar, electrical, and communication system operations and maintenance services; utilities and facilities operations and maintenance services; and support services to the commercial and government aviation communities.

ASCG, Inc. provides engineering, architectural, and technical services to commercial clients and federal, state, and municipal agencies. ASCG, Inc. was founded in 1981 and holds the distinction of being the first start-up subsidiary of ASRC. ASCG, Inc. has approximately 600 employees. Its headquarters are in Anchorage. ASCG and its subsidiaries have offices in Alaska, Colorado, Idaho, New Mexico, Oregon, and Washington. Its services include architectural design, civil, mechanical, structural, electrical, and environmental engineering, hydrogeology, surveying and mapping, planning, and construction management, and non-destructive testing and inspection services. ASCG is consistently ranked in the nation's top 500 design firms by *Engineering News Record,* placing number 133 in 2002 (ASCG, 2003).

ASRC Aerospace is a diversified enterprise formed in November 1997. Its operations include six principal business segments: systems engineering and operations, information management, hardware maintenance and operations, hardware electronics, software engineering, and spaceport and range research and technology. Its clients include NASA Goddard Space Flight Center in Maryland and the NASA White Sand Complex in New Mexico. The company currently supports 15 contracts with a base of over 700 employees (ASRC Aerospace, 2003).

ASRC Communications is a technical services and information technology company offering a variety of analytical, computer technology, and other types of support for government and commercial customers. It has offices in Alaska, Arizona, Colorado, Maryland, New Jersey, and New Mexico. Services include test and evaluation, modeling and simulation, intelligence, information management, software engineering, help desk operations, computer facilities management, networking, and cabling. ASRC Communications developed its present organization from the merger of two companies with compatible business interests. ASRC Communications merged with Correa Enterprises, Inc., a Native American-owned information technology company in Albuquerque, New Mexico in 1999. Correa Enterprises, Inc. had been providing contract support to various government agencies and commercial clients since 1980. ASRC Communications headquarters were relocated from Anchorage, Alaska to Albuquerque, New Mexico (ASRC Communications, 2003).

ASRC Energy Services is organized into three business units and includes more than 20 companies. The operations and maintenance unit focuses on Alaska and Russia and includes businesses formerly known as APC Natchiq and Natchiq Sakhalin, Ltd. The pipeline and power unit includes Houston Nana LLC and Global Power and Communications. Its activities focus on the pipeline and power transmission industry both in Alaska and in the lower 48 states. The engineering and technology unit includes Omega Natchiq, Tri-Ocean Natchiq, and E&P Technology. Its activities are directed towards Gulf of Mexico fabrication, domestic and international engineering, drilling support, well completion, and exploration and production management (ASRC, 2002).

Eskimos, Inc. provides heavy-duty equipment and operators, local fuel distribution in Barrow, and automotive parts and repairs, and a Polaris dealer. In 1974, Eskimos, Inc. formed a partnership with SKW/Clinton called SKW/Eskimos, Inc. (ASRC, 1975, 2002; Arctic Development Council, 2003).

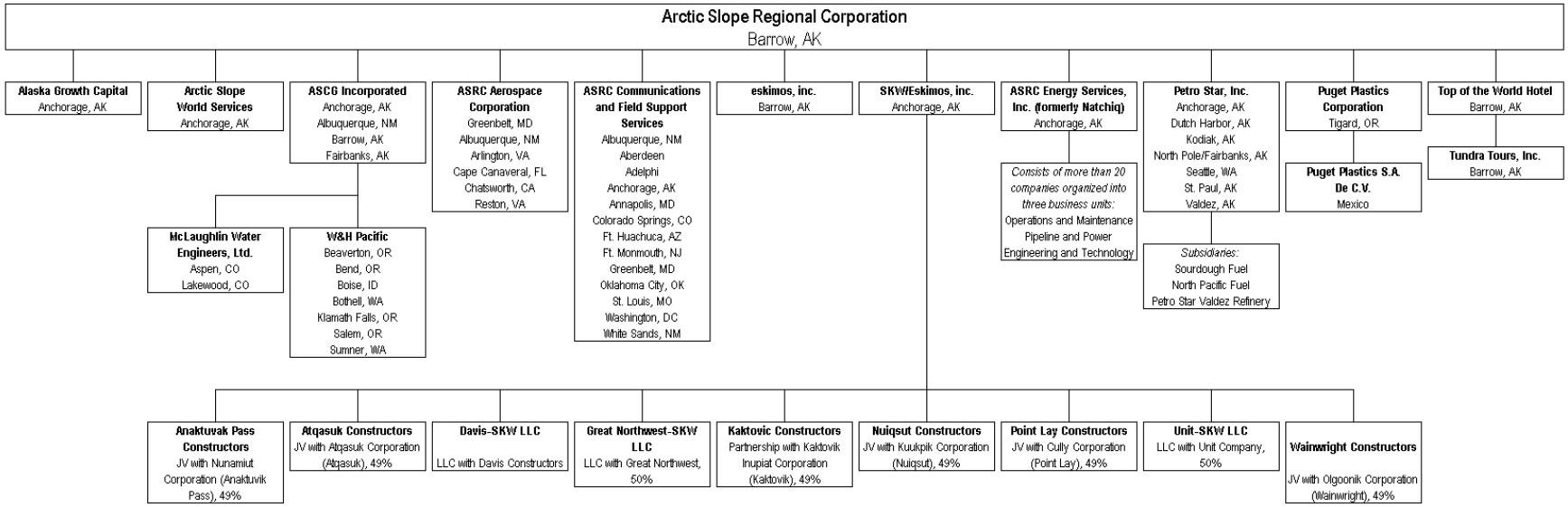
Petro Star and its subsidiaries produce jet, heating, and diesel fuels from crude oil from the trans-Alaska pipeline, which they refine and distribute and sell to the Alaska market. Petro Star has refineries in Valdez and North Pole (ASRC, 2002).

Puget Plastics Corporation manufactures custom injection molded plastic parts, precision fabricated metal products, and electronic assemblies and subassemblies (ASRC, 2002).

SKW/Eskimos, Inc. is a general construction contractor that performs commercial, industrial, earthwork, ice, and oil field service construction. The company has operated in Alaska since 1974 and has offices in Anchorage and Barrow. According to their web page, SKW/Eskimos, Inc. is one of the largest general contractors in Alaska with annual revenues averaging $75 million over the last three years. Their client list includes the U.S. Army Corps of Engineers, Federal Aviation Administration, U.S. Air Force, U.S. Postal Service, Bureau of Indian Affairs, Public Health Service, State of Alaska, NSB, University of Alaska, and a number of private sector clients, including Phillips Alaska Petroleum (SKW/Eskimos, Inc., 2003).

Top of the World Hotel provides hospitality and tourism services in Barrow. In 1974, ASRC embarked on a joint venture with Ukpeagvik Iñupiat Village Corporation to build a hotel–restaurant complex in Barrow, Alaska. Tundra Tours was incorporated in 1974 and provides package tours to Barrow from Fairbanks and Anchorage, Alaska. Tundra Tours is the oldest of ASRC's wholly-owned subsidiaries.

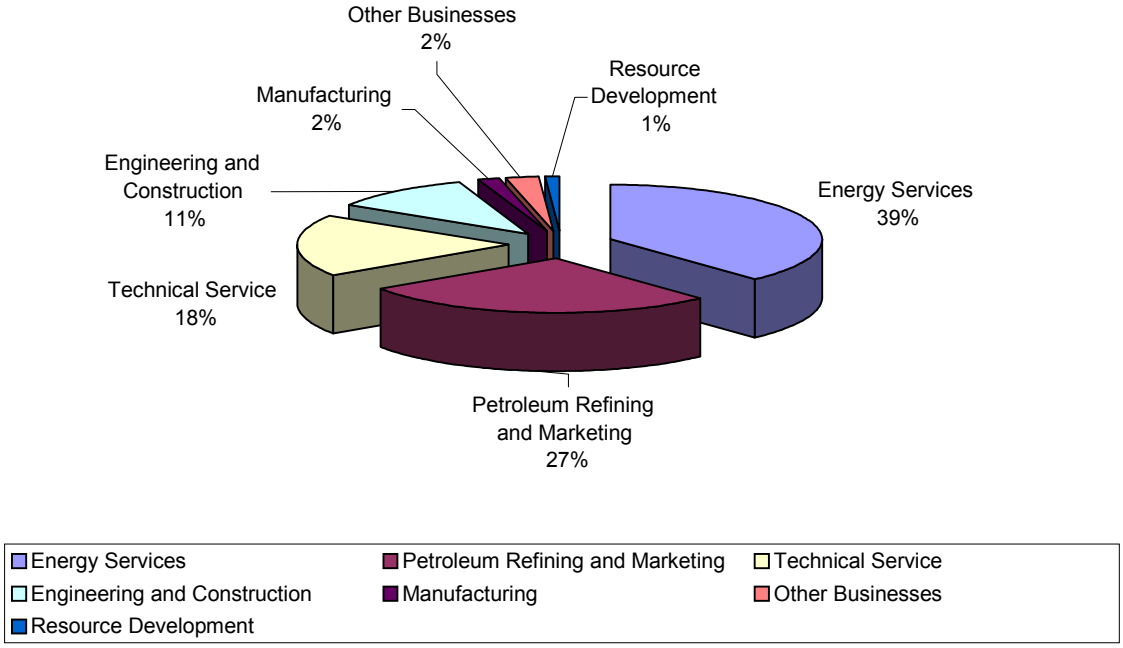
Figure 5-1. Organizational Chart for Arctic Slope Regional Corporation



5.5.3 Alaska Slope Regional Corporation Revenues and Dividends

In the early years of ASRC, income was dependent on natural resources. Oil lease agreements were an important source of revenue for the new corporation. In 1973, for example, Standard Oil of California paid $3 million for leases on lands ASRC was considering for selection. However, according to its *2002 Annual Report*, ASRC revenues from resource development accounted for only one percent ($10.8 million) of total revenues. In the *2002 Annual Report*, ASRC operations are classified into seven industry segments: energy services, petroleum refining and marketing, technical services, engineering and construction, manufacturing, other businesses, and resource development of the lands received as part of the ANCSA settlement. Figure 5-2 shows the contributions of these various segments to ASRC's revenues. The primary source of ASRC's revenue is service and construction contracts (ASRC, 2000, 2001, 2002).

Figure 5-2. Contributions of Business Segments to Arctic Slope Regional Corporation Revenue

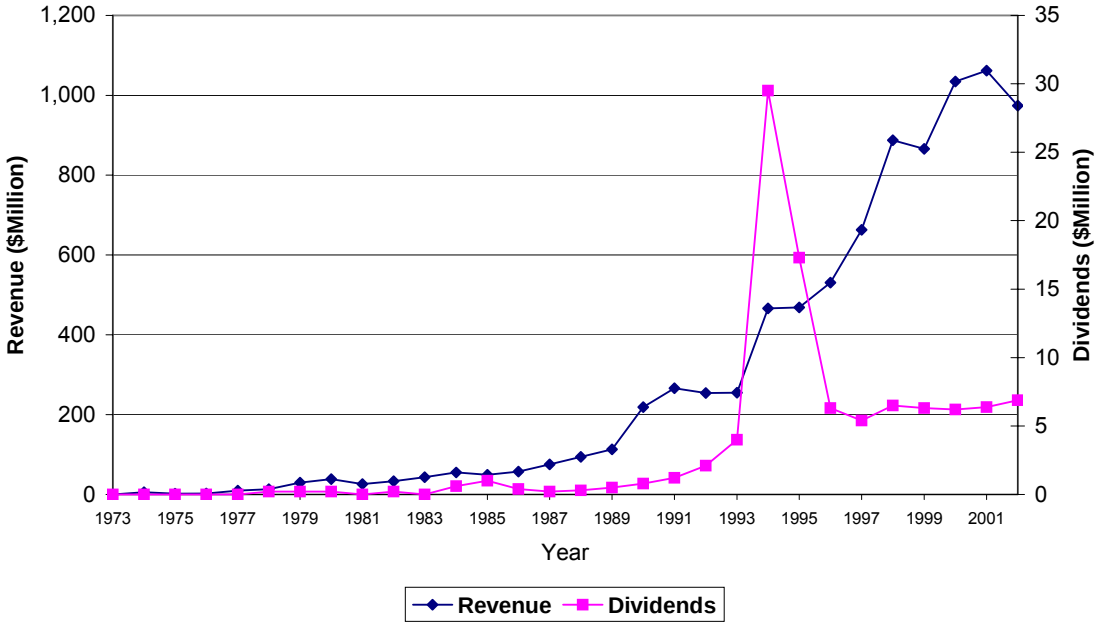


Source: ASRC, 2002.

In Figure 5-3, ASRC revenues are compared to dividends. In 1996, ASRC set an ambitious goal of doubling its revenues to $1 billion by the year 2001. They accomplished that goal a year early in 2000. In 2001, ASRC reported income of $1.2 billion—the highest in the corporation's history. Revenues for 2002 decreased by approximately 8 percent to $974 million.

The first dividends were distributed in 1978, and except for 1981 and 1983, dividends have been distributed every year since. Between 1978 and 2002, ASRC paid out $136.7 million in dividends. In 1994 and 1995, exceptionally high dividends were paid, totaling more than $64 million paid in those two years. The large sum was the result of a resolution of a dispute between ASRC and the Internal Revenue Service over net operating losses; the resolution released $91 million in proceeds. ASRC distributed a one-time dividend of $50 per share (ASRC, 2001). In 2002, ASRC distributed $6.9 million in dividends.

Figure 5-3. Arctic Slope Regional Corporation Revenues and Dividends, 1973-2002



Source: ASRC, 2001, 2002.
Note: In 1994, a dispute between ASRC and the Internal Revenue Service over net operating losses was resolved releasing $91 million in proceeds. ASRC distributed a one-time dividend of $50 per share (ASRC, 2001).

Table 5-3 presents ASRC's operating revenue, estimated net income, shareholder equity, dividends distributed to all shareholders, shareholders dividend payout ratio (as a percent of net income), and the estimated dividends distributed to shareholders living in the NSB for 1973 through 2002.

Glenn (2001) estimates that 75 percent of ASRC shareholders live in the NSB, and based on that estimate, NSB residents received $102.7 million in dividends between 1978 and 2002. However, it must be noted that while residents received dividends, it is unlikely that all of these monies were spent in North Slope communities.

Since 1973, ASRC has increased its revenues at an average rate of 37 percent per year. Shareholder equity has grown at an average rate of 27 percent.

The net income column in Table 5-3 shows estimated income, shareholders' equity, and the total dividend payout for the year. Shareholders' equity represents the difference between the total value of the corporation's assets (including cash, marketable securities, physical assets, and receivables) and its liabilities (including payables and short and long-term debt). Changes from year to year reflect net income and any dividends that are paid out from profits. The dividend payout reflects the percentage of each year's net income that was paid out directly to shareholders, which represents 36.1 percent of the $383.8 million in net income over that period.

Table 5-3. Arctic Slope Regional Corporation Revenues, Dividends, and Shareholders' Equity, 1973-2002

Year	Operating Revenue ($ Millions)	Estimated Net Income ($ Millions)	Shareholders' Equity ($ Millions)	Dividends Distributed ($ Millions)	Dividend Payout Ratio (Percent)	Dividends to Shareholders/ Residents of North Slope ($Millions) [1]
1973	0.1	-	0.2	0.0	-	0.0
1974	5.3	4.0	4.2	0.0	0	0.0
1975	1.8	0.9	5.1	0.0	0	0.0
1976	2.3	-0.9	4.2	0.0	0	0.0
1977	9.4	1.9	6.1	0.0	0	0.0
1978	12.8	3.2	9.1	0.2	6	0.2
1979	29.5	5.2	14.0	0.3	6	0.2
1980	38.6	10.6	24.3	0.3	3	0.2
1981	25.9	2.5	26.8	0.0	0	0.0
1982	33.2	-6.5	20.0	0.3	na	0.2
1983	43.0	1.8	21.8	0.0	0	0.0
1984	55.0	4.3	25.3	0.8	19	0.6
1985	48.8	1.9	25.9	1.3	68	1.0
1986	57.3	0.9	26.3	0.5	56	0.4
1987	75.0	2.1	28.2	0.2	10	0.2
1988	93.7	2.8	30.6	0.4	14	0.3
1989	112.8	7.2	37.1	0.7	10	0.5
1990	218.4	12.0	48.0	1.1	9	0.8
1991	265.8	15.4	61.8	1.6	10	1.2
1992	254.3	26.7	85.7	2.8	10	2.1
1993	254.9	13.6	94.0	5.3	39	4.0
1994	466.2	95.9	150.6	39.3	41	29.5
1995	468.5	22.9	150.4	23.1	101	17.3
1996	530.3	21.8	163.8	8.4	39	6.3
1997	662.8	24.1	180.7	7.2	30	5.4
1998	887.5	27.8	199.9	8.6	31	6.5
1999	865.6	15.1	206.6	8.4	56	6.3
2000	1,034.5	20.1	218.5	8.2	41	6.2
2001	1,061.8	30.3	240.3	8.5	28	6.4
2002	973.7	16.2	247.3	9.2	57	6.9
Total	8,588.8	383.8	2,356.8	136.7	36.4	102.7

Source: ASRC, 2001, 2002; Glenn, 2001.

[1] The assumption is made that 75 percent of shareholders are residents of the North Slope.

na - Data were unavailable for this report

In assessing the performance of a corporation, one corporation is often compared with another. Typically, a comparison would be made between ASRC and another public corporation to document ASRC's relative performance. However, this comparison for an Alaska Native corporation is complicated by a number of factors. First, shares of ASRC are treated differently than publicly traded

shares. Since ASRC shareholders cannot sell their shares, there is no market for ASRC shares, and a market value cannot be determined. While some comparisons may be made based upon book value per share, the lack of a market value prevents most analysis. Several other methods are available for determining the value of a business, but each faces limitations due to the lack of available information.

An alternative technique to determine the intrinsic value of a company is to utilize projected growth rates. However, it is unreasonable to assume that ASRC will continue to grow 30 to 40 percent per year in the future. Such high growth rates are typical in the expansion phase of new companies, but are rare for established companies.

Second, because ASRC shares have no market value, most financial measures cannot be calculated. For instance, while the dividend payout ratio may be determined from the total dividends paid and the net income for a given year, there is no way to determine the dividend yield, which is the annual dividend paid as a percentage of the corporation's market value. The payout ratio may be useful to compare individual business segments against peers, but the yield is the more useful measure when comparing with the broader equity market.

A third factor that confuses an analysis of the performance of ASRC is the revenue-sharing agreement between the twelve regional corporations. The agreement makes it difficult to analyze investment opportunities for ASRC without accounting for all the opportunities available to all the regional corporations, which introduces uncertainty arising from the varied financial performance among the other eleven corporations. Calculations of rate of return must account for the revenues ASRC expects to keep from various investments, as well as the revenues ASRC expects to receive from or share with other corporations. ASRC's return on its own natural resource related investments is only 30 percent of the full return due to sharing. However, at the same time, other corporations are expected to share revenues from their natural resource development with ASRC. These receipts contribute to ASRC's net income, but cannot be attributed to any particular investment or capital.

Table 5-4 shows consolidated income for ASRC for 1995 through 2002. Over the eight-year period, ASRC's revenues more than doubled, from $468 million to $974 million. The greatest portion of ASRC's sales come from contracting, sales and services, with smaller amounts from shared 7(i) revenues ($10.8 million in 2002), earnings from affiliates ($24.8 million in 2002) and interest and investment earnings ($1.6 million in 2002).

Earnings before taxes varied from $20.2 million in 1995 to $14.9 million in 2002, with a low of $118,000 in 2000. Income tax benefits and provisions resulted in a net income after taxes of $19.8 million in 1995 and $16.8 million in 2002, with a high of $20.9 million in 2001 and a low of $15.6 million in 1999.

Retained earnings increased from $131.6 million in 1995 to $217.7 million in 2002. Dividends ranged from $23.1 million in 1995 to $9.2 million in 2002. In addition, ASRC paid distributions in the form of "Elders' Trust Distributions" of approximately $445,000 in 1995 and $675,000 in 2002.

Table 5-4. Arctic Slope Regional Corporation Consolidated Income Statement, 1995-2002

	1995	1996	1997	1998	1999	2000	2001	2000	2002
Revenues									
Contracting, sales, and services	447,611	513,301	636,884	867,549	864,965	1,031,326	1,048,439	1,031,326	962,840
Natural resources, net of 7(i) obligation	4,595	3,694	10,447	1,134	658	3,204	13,400	3,204	10,830
Earnings from unconsolidated affiliates	5,636	5,492	5,062	3,772	4,618	4,790	9,298	4,790	24,781
Interest and investment earnings	8,361	4,987	6,928	9,852	5,972	1,478	2,966	1,478	1,610
Other revenues (expenses), net	2,321	2,836	3,503	16,569	5,318	(3,868)	(1,903)	(3,868)	(608)
Total Revenues	468,524	530,310	662,824	898,876	881,531	1,036,930	1,072,200	1,036,930	999,453
Expenses									
Direct cost of operations	383,410	442,182	560,353	751,443	763,016	918,056	910,931	918,056	863,145
Administrative and general	56,784	56,132	66,690	94,912	85,328	101,590	104,545	101,590	99,615
Interest expense	6,903	6,132	7,787	16,865	11,703	12,609	15,580	12,609	14,666
Net income allocable to minority interests	1,201	2,973	2,990	5,647	4,471	4,557	7,328	4,557	7,161
Total Expenses	448,298	507,419	637,820	868,867	864,518	1,036,812	1,038,384	1,036,812	984,587
Income before taxes	20,226	22,891	25,004	30,009	17,013	118	33,816	118	14,866
Income tax benefit (provision)	(382)	(573)	(431)	(1,596)	(1,377)	20,604	(2,939)	20,604	1,926
Net income	19,844	22,318	24,573	28,413	15,636	20,722	30,877	20,722	16,792
Retained earnings at beginning of year	131,594	127,889	141,308	158,193	177,412	184,108	195,989	184,108	217,710
Net income	19,844	22,318	24,573	28,413	15,636	20,722	30,877	20,722	16,792
Dividends declared	(23,104)	(8,428)	(7,177)	(8,646)	(8,354)	(8,226)	(8,514)	(8,226)	(9,177)
Elders' Trust distributions	(445)	(471)	(511)	(548)	(586)	(615)	(642)	(615)	(675)
Retained earnings at end of year	127,889	141,308	158,193	177,412	184,108	195,989	217,710	195,989	224,650
Dividend per share	31.00	10.95	9.07	10.68	10.07	9.66	9.75	9.66	10.28

Source: ASRC, 2001, 2002.

5.5.4 Alaska Slope Regional Corporation Employment

This section begins with a description of the available ASRC employment data and its limitations. Next, employment information for ASRC, its subsidiaries, joint ventures, and partnerships are presented.

5.5.4.1 Data Limitations

Estimating the number of jobs on the North Slope that can be attributed to Alaska Native corporations proved to be a difficult task. Information on employment was requested from ASRC and all eight village corporations. A limited amount of information on employment and other contributions was received from ASRC, the Cully Corporation of Point Lay, and the Tikigaq Corporation of Point Hope. The Ukpeagvik Iñupiat Corporation of Barrow provided some information on educational benefits.

The data that best fit the needs of this study (i.e., the number of North Slope residents who work for ASRC and the village corporations) came from economic and census profiles compiled by the NSB (Circumpolar Research Associates, 1999, 2004; North Slope Borough Department of Planning and Community Services, 1989, 1995). The information is based on surveys conducted in each of the villages in the Borough. However, one limitation of this data is that they are available for only four years—1988, 1993, 1998, and 2003—while the study covers the period from 1965 to the present. To some extent, census information collected by Alaska Consultants, Inc. (1981) in 1981 can also be used, thereby expanding the time covered, but the employment categories of the 1981 census are not completely compatible with the categories in the 1988, 1993, 1998, and 2003 census. This cross-sectional information is presented in the section on village corporation employment.

The employment information provided by ASRC or in ASRC annual reports also has limitations. For example, when ASRC reports the number of its employees working on the North Slope, it does not necessarily mean those individuals are permanent residents of the North Slope.

5.5.4.2 Alaska Slope Regional Corporation Employment.

The employment and education of shareholders is a priority for ASRC (McDiarmid et al., 1998) Hiring priorities for ASRC are:

1. Qualified ASRC shareholders
2. Qualified spouses of shareholders
3. Qualified Alaska Natives who are not ASRC shareholders
4. Other Native Americans
5. Others

ASRC, its subsidiaries, joint ventures, and partnerships are major employers not only of shareholders but of other Alaska residents as well. ASRC has 6,000 employees (ASRC, 2003). Alaska Petroleum Contractors (APC), one of ASRC's subsidiaries, ranked 7th on the 2002 list of Alaska's 100 largest private employers with 1,210 employees (Fried, 2002). APC is an oil service company and is perennially the largest Native-owned subsidiary on the annual list. A second subsidiary of ASRC, Petro Star, was on the list for the first time in 2002. Petro Star is an oil refiner, distributor, and retailer. It was ranked 83rd with 308 employees. Houston NANA, LLC is a joint venture between ASRC and the NANA Development Corporation and is ranked 57th on the list with 412 employees.

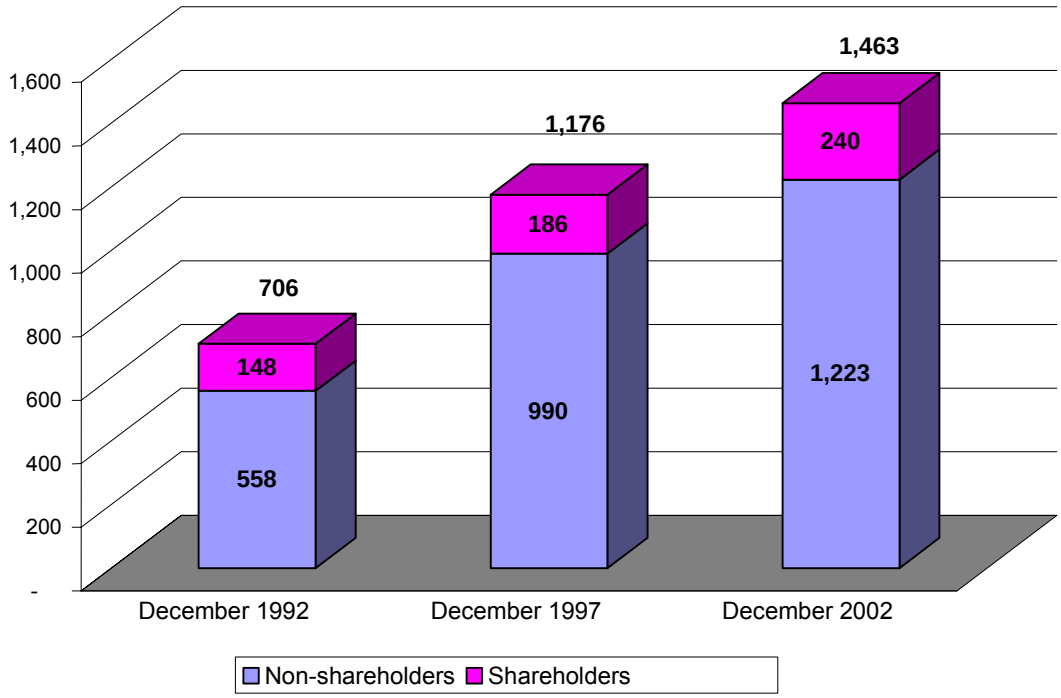
However, it is difficult to assess the impact of ASRC employment on the North Slope economy. All of the subsidiaries, joint venture activities, partnerships, and other business activities contribute to ASRC's bottom line, but its effects on the economy of the North Slope may be quite different from its effects on shareholders or on Alaska's economy as a whole. For example, ASRC Communications has offices and worksites in Anchorage; Colorado Springs, Colorado; Ft. Monmouth, New Jersey; Aberdeen, Adelphi, Annapolis, and Greenbelt, Maryland; and St. Louis, Missouri. None of its business activities take place on the North Slope. As a result, the impact of ASRC Communications on the North Slope economy is limited. Employees of ASRC Communications do not contribute to the region's economy unless they are North Slope residents or shareholders.

In contrast, SKW/Eskimos, Inc. has offices in Anchorage and Barrow. It offers commercial, industrial, earthwork, ice and oil field service construction. The company has also carried out numerous projects on the North Slope employing local residents and shareholders. SKW/Eskimos, Inc. has proved adept at partnering with Alaska Native village corporations and as a result has had a more direct economic impact on the North Slope region and individual villages. It has formed joint ventures or partnerships

with at least seven of the eight North Slope communities. SKW/Eskimos, Inc. gives hiring preference to North Slope residents and Alaska Native corporation shareholders. In addition, it buys local services including fuel and camp facilities.

ASRC provided information on the number of its employees working on the North Slope at five-year intervals dating back to 1992 for the month of December. Figure 5-4 presents this information, comparing the total number of employees to the number of shareholders employed. In December 1992, ASRC reports 706 (21 percent) employees working on the North Slope. That number increased to 1,176 (16 percent) in December 1997, and to 1,463 (16 percent) in December 2002.

Figure 5-4. Employment of Arctic Slope Regional Corporation in the North Slope Borough, 1992, 1997, and 2002



Source: ASRC, 2003.

Table 5-5 present a more detailed accounting of ASRC employees by company including employment of spouses, other Alaska Natives, other Native Americans, and an "other" category. Of the 1,463 individuals employed by ARSC and its subsidiaries in December 2002, 240 were shareholders, 45 were shareholder spouses, 36 were Alaska Natives but not shareholders, and 29 were other Native Americans. Of the total individuals employed in December 2002, approximately 76 percent or 1,113 fall into the "other" category (Table 5-7).

Several issues make the information in these tables problematic in terms of documenting the impact of ASRC employment on the economy of the North Slope. First, the contributions to the local economy of individuals who work, live, and spend their wages on the North Slope will be significantly different than the contributions to the local economy of workers who work on the North Slope and reside elsewhere. For example, the majority of ASRC employees working on the North Slope are based in the industrial enclave at Prudhoe Bay. Alaska Petroleum Contractors' operations in Prudhoe Bay account for the highest number of ASRC employees in 1992, 1997, and 2002.

While it is not possible to tell from the data presented here where people permanently reside, it is probable that the majority of ASRC's workers at Prudhoe Bay are not residents of the North Slope. In particular, it is likely that nearly all of the non-shareholder ASRC employees follow the same pattern as most other workers at the Prudhoe Bay oil facilities—they commute between Prudhoe Bay and their permanent residences elsewhere in the state or the lower 48 states (U.S. Bureau of Land Management, 1996).

Table 5-5. Distribution of Employment of Arctic Slope Regional Corporation in the North Slope Borough, 1992

Company (Location)	Total	Shareholders	Shareholder Spouses	Other Alaska Natives	Other Native Americans	Other
ASCG (Barrow)	9	6	0	0	0	3
Coal Project (Point Lay)	4	4	0	0	0	0
AXIS Communications (Barrow)	1		0	0	0	1
ASRC (Barrow)	61	52	0	0	0	9
BCTV (Barrow)	7	4	0	0	0	3
Eskimos Inc.	15	13	0	0	0	2
Natchiq (Prudhoe Bay)	90	12	0	0	0	78
APC (Prudhoe Bay)	303	20	0	0	0	283
Houston Contracting Co. (Prudhoe Bay)	75	2	0	0	0	73
VRCA (Prudhoe Bay)	38	4	0	0	0	34
Petro Star (Prudhoe Bay)	2		0	0	1	1
Piquniq Management Corporation (Barrow)	3		1	1	0	1
Piquniq Management Corporation (Prudhoe Bay)	54	13	0	5	0	36
SKW/Eskimos (Barrow)	17	7	2	0	0	8
Top of the World Hotel (Barrow)	10	4	0	0	0	6
UAS/BGF JV (Barrow)	17	7	1	2	0	7
Total	706	148	4	8	1	545

Source: ASRC, 2003

Table 5-6. Distribution of Employment of Arctic Slope Regional Corporation in the North Slope Borough, 1997

Company/Location	Total	Shareholders	Shareholder Spouses	Other Alaska Natives	Other Native Americans	Other
ASCG (Barrow)	22	5	1	0	0	16
OceanTech-Pipeline	10	0	0	0	0	10
ASRC (Barrow)	46	41	1	0	0	4
PMC-Prudhoe	32	5	2	8	-	17
BCTV (Barrow)	7	4	1	0	0	2
Eskimos Inc.	18	14	3	0	0	1
Natchiq-Prudhoe Bay	3	0	0	0	0	3
Alaska Petroleum Contractors-Prudhoe Bay	833	31	18	24	6	754
Houston Contracting Co.-Alyeska (PS# 1-12)	36	0	0	0	0	29
Houston Contracting Co.-Prudhoe Bay	23	1	0	0	0	20
Sourdough Fuel-Coldfoot	12	1	0	1	0	10
SKW/Eskimos (Barrow)	59	40	1	2	1	15
Villages + JV	39	19	0	0	0	20
Top of the World Hotel (Barrow)	36	25	0	0	0	11
Total	1,176	186	27	44	7	912

Source: ASRC, 2003.

Table 5-7. Distribution of Employment of Arctic Slope Regional Corporation in the North Slope Borough, 2002

Company/Location	Total	Shareholders	Shareholder Spouses	Other Alaska Natives	Other Native Americans	Other
ASCG (Barrow)	16	3	2	0	0	11
ASRC (Barrow)	40	36	1	0	0	3
PMC-Village Clean Water[1]	61	37	7	1	0	16
BCTV (Barrow)	3	2	0	0	0	1
Eskimos Inc.	19	13	4	0	0	2
Alaska Petroleum Contractors-Prudhoe Bay	1,107	89	25	10	28	955
Houston Contracting Co.-Alyeska (PS# 1-12)	109	2	0	21	0	86
Houston Contracting Co.-Prudhoe Bay	6	1	0	0	0	5
TRI-Ocean- Prudhoe Bay	2	0	0	0	0	2
SKW/Eskimos (Barrow)	17	9	2	2	1	3
Villages Joint Venture	65	35	4	2	0	24
Top of the World Hotel (Barrow)	18	13	0	0	0	5
Total	1,463	240	45	36	29	1,113

Source: ASRC, 2003.
[1]A project that operates in various North Slope communities.

Table 5-8 presents additional information on employment for ASRC and some of its subsidiaries. These data are from ES-202 Reports submitted to DOLWD, which summarize the employment, wages, and contributions of workers covered by unemployment insurance. While the Department maintains these records back to 1977, the information for a particular employer can be tracked only if the name of the company has not changed. Another problem with using ES-202 data is that the data are based on reported addresses. These addresses may be for an accounting service or company headquarters rather than the actual work location, thus causing some distortion in the numbers and the potential for double counting. As a result, while Table 5-8 shows ASRC employment, the work location of employees cannot be identified.

Table 5-8. Employment of Arctic Slope Regional Corporation, Selected Subsidiaries, and Joint Ventures, 1977- 2002

Company	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
ASRC	47	70	78	51	44	39	37	35	35	33	34	35	40	48	57	76	78	80	83	78	79	67	72	78	74	62
Houston/Nana JV	-	-	-	-	-	-	-	-	-	-	-	-	-								94	374	380	468	506	412
Great Northwest-SKW LLC	-	-	-	8	6	12	9	16	15	9	11	14	17	15	20	23	26	17	22	28	38	61	74			
Alaska Growth Capital	-	-	-	-	-	-	-	-	-	-	-	-	-									3	4	6	7	10
Alaska Petroleum Contractors	-	-	-	-	-	-	-	-	-	1	165	325	407	813	801	553	554	678	1006	1103	913	1093	2079	1315	1105	1210
ASRC Energy Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	73	63	-	-	-
Arctic Slope World Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	20	21	-
ASCG, Inc.	-	-	-	-	-	3	6	11	17	21	31	44	56	73	91	122	119	85	81	108	117	103	219	92	112	105
ASRC Communications	-	-	-	28	6	5	6	6	6	5	5	6	5	6	5	7	7	6	6	7	7	15	34	24	0	0
Eskimos, Inc.	20	67	49	44	30	14	7	9	11	9	10	10	8	12	15	16	16	16	17	17	18	20	21	22	19	18
Global Power & Communication	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	37	33	45	-
Houston Contracting Co.	-	-	-	-	-	-	-	-	-	160	72	68	100	132	100	153	139	280	132	54	65	209	193	-	-	-
Houston Contracting Co-Ak, Ltd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	188	190	127
Natchiq	-	-	-	-	-	-	-	-	-	1	12	49	69	101	119	108	56	33	80	37	35	53	53	84	94	105
Petro Star, Inc.	-	-	-	-	-	-	-	-	4	15	16	13	14	16	25	29	32	35	35	33	33	47	101	50	60	308
SKW/Eskimos, Inc.	-	-	-	-	-	-	-	-	-	51	59	44	42	34	61	77	57	85	119	107	130	152	189	204	130	130
Top of the World Hotel	27	23	44	33	11	9	9	9	10	10	10	9	22	22	20	25	25	21	25	24	20	21	21	22	20	16

Source: Alaska Department of Labor and Workforce Development.

5.5.5 ASRC Education Contributions

This section provides a brief description of some of the educational benefits provided by ASRC. In addition, some of the educational contributions of the village corporations are discussed. It is important to note that the educational benefits offered by ASRC and village corporations are available to eligible individuals living in Fairbanks, Anchorage and other areas outside the North Slope region. Consequently, the economic effects associated with these benefits extend beyond the boundaries of the North Slope.

ASRC and its subsidiaries foster educational opportunities through the Arctic Education Foundation, (AEF), Eileen Paniegeo MacLean House, and Shareholder Development Programs. AEF, a non-profit entity of ASRC, was established in 1978 to support higher education at the university level and in specialized vocational training programs. AEF's mission is to:

> …promote, develop, implement, sponsor and maintain programs of assistance for worthy and needy Iñupiat Natives of the Arctic Slope Region of Alaska, or descendants of such persons, so as to aid them in the furtherance of their education or vocational training (ASRC, 2003)

In 1994, ASRC committed $7 million of income from NOL's to fund an endowment for AEF. AEF spent over $8 million between 1988 and the end of 2002 in support of university and vocation training programs (Okakok, 2003).[42] Approximately $500,000 has been spent on student support in 2003 as of September 3 (Okakok, 2003).

According to the AEF link on the ASRC Web site, an applicant for funding must be a U.S. citizen and resident and must verify that he or she is one of the following (ASRC, 2003):

- A Northern Alaskan Iñupiat Native currently residing in the Arctic Slope Region of Alaska; or
- An original ASRC shareholder; or
- A direct lineal descendant of an original ASRC shareholder.

In 1997, ASRC, through a partnership with the University of Alaska Fairbanks, designed, financed, constructed, and furnished the $1.8 million Eileen Paniegeo MacLean House. ASRC and others had identified a need for transitional housing for students coming to the large campus at the University of Alaska-Fairbanks from their rural villages on the North Slope. The purpose of the Eileen Paniegeo MacLean House is to improve recruitment, retention, and graduation of Alaska Native students (University of Alaska Fairbanks, 1998, 2001). Funding for the project was arranged through AEF and a $1.0 million endowment was provided through ASRC.

According to ASRC's *1998 Annual Report*, one of its most notable accomplishments of the year was the creation of "Itqanaiyavik," a joint venture between ASRC and BP Exploration to provide shareholders with engineering training and technical craft certifications. Seven individuals completed a summer civil engineering internship program at BP Exploration and then enrolled in engineering schools. Craft training takes place in pipefitting/welding and electrical/instruction. Up to 12 individuals can participate in each program. Additional support is provided by AEF through a contract with the Arctic Slope Native Association to provide supplemental support through BIA Higher Education grants and BIA Adult Vocational Training grants for students from all the villages except Barrow.

The ASRC Land Department offers scholarships to shareholders who want to undertake a college degree in natural resource development. The scholarship is administered through the Arctic Education Foundation. The scholarships pay the tuition and other expenses of students accepted into a full-time

[42] An estimate of AEF expenditures before 1988 is unavailable because of the loss of records in a fire.

four-year degree program or graduate program in geology, petroleum engineering, or mineral engineering. The Land Department provides summer employment and acts as mentor for these students. There are currently two students enrolled in this program.

In 2001, ASCG, Inc., a subsidiary of ASRC, initiated a Shareholder Career Development Program providing financial assistance for classes, on the job training, conferences, internships, workshops, and participation in career and technical associations. One purpose of the program is to raise shareholders in entry-level positions to more advanced and higher paying jobs. Such job promotions help shareholders advance their careers, and free entry-level positions for additional shareholders (Hartwell, 2001).

5.5.6 Other Benefits Provided by Alaska Slope Regional Corporation

This section lists some of the contributions ASRC has made to the economy of the North Slope that are more difficult to quantify. The list is not exhaustive and is simply intended to illustrate the range of economic-related activities that ASRC has been involved in over the years.

- The early land claim initiatives of the Arctic Slope Native Association were partially financed by grants from the Presbyterian Church. In 1972, when Prudhoe Bay oil and gas operators blocked tax revenues for the NSB, a Presbyterian foundation purchased $150,000 of revenue anticipation notes that helped provide early operating funds for the Borough. The newly-formed ASRC voluntarily paid the $95,000 grant and repaid the tax anticipation notes to the Presbyterian Church foundation with interest.
- In the early 1970s, transportation to and from most North Slope communities was very limited. To facilitate the movement of people and goods among villages ASRC arranged for chartered aircraft to fly from Barrow to Kaktovik and Point Lay once a week (Dupere and Associates, 1973).
- In the 1970s, ASRC provided seed money for the engineering and regulatory approval needed to start a local telephone company for North Slope communities that lacked telephone service. Today, the Arctic Slope Telephone Association Cooperative provides telecommunications services to Anaktuvuk Pass, Atqasuk, Barrow, Deadhorse-Prudhoe Bay, Kaktovik, Nuiqsut, Point Hope, Point Lay, and Wainwright (Pounds, 2001).
- Recently, ASRC, Sealaska Corporation, and nine other Native American organizations contributed $1 million each to capitalize the Native American Bank, which will focus on business, agricultural, and community economic development loans that benefit Native Americans (Bradner, 2002c).
- In 1991, ASRC was authorized to establish a program that would provide elder shareholders a monthly cash benefit. The ASRC Board of Director's established a grantor Settlement Trust in order to make monthly payments to shareholders who turned 65 on or before June 30, 1998. The Elders Settlement Trust Agreement was amended in 1999 to allow an extension of eligibility to shareholders who reach age 65 on or before December 31, 2004 (ASRC, 2001). The Trust allows ASRC to lower its tax liability and pay tax-free dividends to shareholders. In 2000, 2001, and 2002, payments totaling $615,000, $645,000, and $675,000, respectively, were distributed to elder shareholders (ASRC, 2002).
- In the mid-1990s, the Stock Department of ASRC provided assistance and training to North Slope village corporations in organizing shareholder record systems (ASRC, 1998). These record-keeping systems are needed by village corporations to track the current addresses of shareholders.

5.6 Employment by Alaska Native Corporations in the North Slope Borough

Using available data, this section describes employment by Alaska Native corporations in the NSB. This employment data complements the previously discussed employment data provided by ASRC, because this data set is limited to employment of residents in the NSB. Table 5-9 shows the number of North Slope residents employed by ASRC and village corporations in 1981, 1988, 1993, and 1998. The data presented were obtained from a study prepared by Alaska Consultants, Inc. (1981) and census reports prepared by or for the NSB Department of Planning and Community Services (Circumpolar Research Associates, 1999, 2004; North Slope Borough Department of Planning and Community Services, 1989, 1995).

The percentage of resident employment accounted for by Alaska Native corporations increased from approximately 11 percent in 1981 to about 17 percent in 1998. In Barrow, the largest community on the North Slope, the percentage increased from 7 percent in 1981 to just over 12 percent in 1998. About one-third of all working residents of Point Hope were employed by Native corporations in 1981 and 1998, although the percentages were lower in the intervening years.

Table 5-9. Employment of Arctic Slope Regional Corporation and Village Corporations in the North Slope Borough, 1981, 1988, 1993, and 1998

Location	Iñupiat	Non-Iñupiat	Total Native Corporation	Total Number of Jobs	Native Corporation Employment as Percent of Total Employment
North Slope Borough					
1998	315	92	407	2,418	16.8
1993	247	57	304	1,943	15.6
1988	256	55	311	2,506	12.4
1981	-	-	183	1,689	10.8
Anaktuvuk Pass					
1998	13	3	16	80	20.0
1993	24	2	24	97	24.7
1988	15	1	16	132	12.1
1981	-	-	0	102	0
Atqasuk					
1998	5	0	5	56	8.9
1993	10	0	10	64	15.6
1988	14	1	15	87	17.2
1981	-	-	0	45	0
Barrow					
1998	128	61	189	1,541	12.3
1993	119	48	167	1,210	13.8
1988	104	31	135	1,567	8.6
1981	-	-	75	1,052	7.1
Kaktovik					

Location	Iñupiat	Non-Iñupiat	Total Native Corporation	Total Number of Jobs	Native Corporation Employment as Percent of Total Employment
1998	16	1	17	76	22.4
1993	11	1	12	64	18.8
1988	17	0	17	107	15.9
1981	-	-	0	98	0
Nuiqsut					
1998	26	7	33	124	26.6
1993	19	0	19	96	19.8
1988	21	1	22	146	15.1
1981	-	-	5	98	5.1
Point Hope					
1998	64	11	75	222	33.8
1993	36	3	37	202	18.3
1988	20	1	21	172	12.2
1981	-	-	42	124	33.9
Point Lay					
1998	10	0	10	80	12.5
1993	2	0	2	60	3.3
1988	10	1	11	64	17.2
1981	-	-	0	26	0
Wainwright					
1998	53	9	62	239	25.9
1993	28	3	31	150	20.7
1988	55	19	74	231	32.0
1981	-	-	15	144	10.4

Source: Alaska Consultants, Inc., 1981; Circumpolar Research Associates, 1999, 2004; North Slope Borough Department of Planning and Community Services, 1989, 1995.
- Data were unavailable for this report

5.6.1 Atqasuk Corporation

Atqasuk Corporation is the village corporation established for Atqasuk. The Corporation owns approximately 73,000 acres of surface lands in and around Atqasuk (ASRC, 2003).

The Atqasuk Corporation provides water, sewer and refuse services in the community (Alaska Department of Commerce, Community and Economic Development, 2005a). In addition, the Corporation owns the Atqasuk Restaurant and Hotel and Mead River Store, a local grocery and merchandise store. Another subsidiary, Atqasuk Fuel Division, sells propane, gas, diesel, and motor oil fuel (Arctic Development Council, 2003). In 1987, Atqasuk Corporation and SKW/Eskimos formed a joint venture called Atqasuk Constructors. To date, this company has completed projects worth $47.1 million (SKW/Eskimos, 2003). Three of the six current business licenses issued in the community are

for the Corporation (Alaska Department of Commerce, Community and Economic Development, 2005a).

Table 5-10 shows employment information for the Atqasuk Corporation and Atqasuk Constructors derived from available ES-202 unemployment insurance information. In 1977, the first year for which information is available, the Atqasuk Corporation had one employee. By 2002, according to the ES-202 data, the Corporation had 24 employees. These addresses may be for an accounting service or company headquarters rather than the actual work location. In the employment estimates shown, and in subsequent tables with the same data source, the location of the reporting unit is not available and the employment estimates may include workers outside of the community.

Table 5-10. Atqasuk Corporation and Subsidiary Average Annual Employment, 1977-2002

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Atqasuk Corporation	1	2	6	4	4	4	7	8	8	10	13	10	9
Atqasuk Constructors	0	0	0	0	0	0	0	27	6	2	1	6	6
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Atqasuk Corporation	14	9	9	10	11	11	13	15	16	19	19	22	24
Atqasuk Constructors	14	5	4	5	7	3	3	4	3	0	0	0	0

Source: Alaska Department and Labor and Workforce Development

5.6.2 Cully Corporation

Cully Corporation is the Alaska Native village corporation for Point Lay. The Cully Corporation owns approximately 90,000 acres of surface lands in and around the community (ASRC, 2003b). As of 2003, the Corporation has not paid any dividends to shareholders (Hendryx, 2003). Two of the three current business licenses issued to the community are for the Corporation (Alaska Department of Commerce, Community and Economic Development, 2005a).

In 1973, the only full time job in the community was the land chief position of the Cully Corporation (Dupere and Associates, 1973). Today, the Corporation has from six to ten year-round employees in Point Lay (Hendryx, 2003). Two individuals hold administrative positions, while four employees operate the community's water and sewer system. The Corporation is hiring additional workers on a week on/week off schedule to enable individuals to participate in subsistence activities.

The Cully Corporation also employs two people in Anchorage who manage the Corporation's construction company. In the past, this company has completed small construction projects for the NSB. However, as the Borough privatizes services and cuts back on expenditures, the Corporation anticipates fewer business opportunities on the North Slope and has shifted its focus to possible projects in Anchorage (Hendryx, 2003).

In 1989, the Cully Corporation established a joint venture with SKW/Eskimos called Point Lay Constructors. To date, this partnership has completed projects worth $51.7 million (SWK/Eskimos, 2003).

Table 5-11 shows employment information for the Cully Corporation derived from ES-202 unemployment insurance information. Employment information was not available for Point Lay Constructors.

Table 5-11. Cully Corporation Average Annual Employment, 1983-2002

1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
28	9	15	6	6	3	0	0	0	-	1	1	1	1	2	5	4	6	12	6

Source: Alaska Department and Labor and Workforce Development
- Data were unavailable for this report

5.6.3 Kaktovik Iñupiat Corporation

The Kaktovik Iñupiat Corporation is the Alaska Native village corporation for Kaktovik. The Corporation owns approximately 92,000 acres of surface lands in and around the community (ASRC, 2003b). All of the Kaktovik Iñupiat Corporation's land is within ANWR. In recent years, the Corporation has strongly supported legislation to open the coastal plain of ANWR to oil and gas development.

The Kaktovik/Qunuyak Hotel is a subsidiary of the Corporation. In addition, the Corporation owns and operates the local general merchandise store in Kaktovik. In 1983, the Corporation formed a joint venture with SKW/Eskimos, Inc. called Kaktovik Constructors. To date, the joint venture has completed projects worth $81.4 million (SWK/Eskimos, 2003). Two of the 19 current business licenses issued to the community are for the Corporation (Alaska Department of Commerce, Community and Economic Development, 2005a).

ES-202 employment data are only available for 2000, 2001, and 2002, when average annual employment was 13, 14, and 15, respectively.

5.6.4 Kuukpik Corporation

The Kuukpik Corporation is the Alaska Native Village Corporation of Nuiqsut. The Corporation owns approximately 146,000 acres of surface lands in and around the community (ASRC, 2003b). This surface estate includes approximately 50 percent of the Alpine Oil Field, which began production in late 2001. As part of the agreement between Kuukpik Corporation and ARCO's (now ConocoPhillips) Alpine Development Project, a natural gas pipline is being constructed to provide heating and power generation for the community. The natural gas is provided at no cost to local residents. The Kuukpik Corporation also received a substantial signing bonus, annual lease payments, and employment opportunities for community residents.

The Corporation owns the hardware store and Kuukpik Arctic Catering, a local restaurant, and a hotel are subsidiaries of the Corporation. At least 2 of the 11 current business licenses issued to the community are for the Corporation (Alaska Department of Commerce, Community and Economic Development, 2005a). In 1991, Kuukpik Corporation formed a joint venture with SKW/Eskimos, Inc. called Nuiqsut Constructors. While the joint venture was active, it completed projects worth $146.5 million (SKW/Eskimos, 2003). Currently, the Kuukpik Corporation is conducting construction work independently. Nearly one-third of the work force in Nuiqsut is employed in the private sector, mostly by the Corporation and the construction industry (ASRC, 2003b).

Table 5-12 provides an estimate of the number of individuals employed by the Kuukpik Corporation from 1977 to 2002 based on ES-202 unemployment insurance data.

Table 5-12. Kuukpik Corporation Average Annual Employment, 1977-2002

1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
10	13	6	46	29	27	29	16	18	16	14	18	23
1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
23	28	30	30	31	30	26	32	36	52	27	34	3

Source: Alaska Department and Labor and Workforce Development

5.6.5 Nunamiut Corporation

Nunamiut Corporation is the Alaska Native village corporation of Anaktuvuk Pass, Alaska with a population of 282 according to the 2000 U.S. Census. The Nunamiut Corporation owns approximately 92,000 acres of surface lands in and around the community (ASRC, 2003b).

In 1973, employment was limited to two teaching positions, a school janitor, a school cook, a postmaster, and workers in a few small village stores (Dupere and Associates, Inc., 1973). Some members of the community worked seasonally for the Bureau of Land Management fighting fires.

The village corporation provides several services for the community including provision of cable service (Alaska Department of Commerce, Community and Economic Development, 2005a). The Nunamiut Store and Nunamiut Camp, a hotel and restaurant complex, are subsidiaries of the Nunamiut Corporation. The corporation also sells fuel (Arctic Development Council, 2003). Two of the 10 current business licenses issued to the community are for the Corporation (Alaska Department of Commerce, Community and Economic Development, 2005a).

Anaktuvuk Pass Constructors, a joint venture between the Nunamiut Corporation and SKW/Eskimos has completed $47.1 million in projects (SKW/Eskimos, 2003).

Table 5-13 shows employment estimates for the Nunamiut Corporation and Anaktuvuk Pass Constructors based on ES-202 unemployment insurance data.

Table 5-13. Nunamiut Corporation Average Annual Employment, 1977-2002

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Nunamiut Corporation	-	-	-	2	8	13	10	6	7	7	11	9	17
Anaktuvuk Pass Constructors	-	-	-	-	-	-	0	2	3	2	2	2	2
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Nunamiut Corporation	23	17	16	13	13	13	12	14	12	15	14	13	15
Anaktuvuk Pass Constructors	2	3	2	8	12	16	10	12	8	13	0	0	0

Source: Alaska Department and Labor and Workforce Development
- Data were unavailable for this report

5.6.6 Olgoonik Corporation

Olgoonik Corporation is the Iñupiat Alaska Native Village Corporation of Wainwright. The Olgoonik Corporation owns the surface estate to approximately 115,000 acres and has 412 shareholders (Olgoonik, 2003). ASRC provided both management assistance and start-up capital for the formation of Olgoonik Corporation. ASRC also assisted with the selection of Olgoonik Corporation lands.

The first business venture of the Olgoonik Corporation was the purchase of fuel storage tanks from the co-op store in 1974-1975. Financing for the venture came from the Alaska Native Fund. A source of fuel was needed for 18 new houses and the recently constructed elementary school. The co-op did

not have the capital resources available to maintain an adequate fuel supply for the new buildings (Chilkat Institute 1985). Olgoonik Corporation's first order was for 32,000 gallons of fuel. However, by 1982 the annual shipment was up to 800,000 gallons. The corporation also opened a small store where the fuel was sold locally.

By 1977, major construction improvement projects were underway in the community. The corporation bought heavy construction equipment to lease to the contractor building local roads. Next, the corporation hired a mechanic and then built a garage in order to maintain the equipment. The corporation also negotiated with the NSB to form joint ventures to provide labor for construction projects. As of 1983 (Chilkat Institute 1985), these joint ventures were the major source of income for the Olgoonik Corporation.

In 1973, 20 residents of Wainwright had full time employment: 2 employees of the waterworks, 3 at the local store, 2 maintenance men for the school, a minister, a postmaster, 2 people who worked at the DEW line site, 4 teacher's aides, and 4 people working with the Head Start program (Dupere and Associates, Inc., 1973).

Under the provisions of 14(c)3 of ANCSA, village corporations are required to reconvey over 1,200 acres to the local municipal government for future expansion. The Olgoonik conveyed approximately 1,000 acres of land immediately adjacent to the townsite of the City of Wainwright in 1976. According to the DCCED website, the transfer of final acreage is "in process," but no agreement has been signed.

The corporation provides many services for Wainwright, including equipment maintenance and management and operation of the water and sewer utility system. Two of the ten current business licenses issued to the community are for the Corporation (Alaska Department of Commerce, Community and Economic Development, 2005a). The Corporation operates a hotel, restaurant, fuel sales, and a general store in Wainwright. From 1995 through 2000, Olgoonik Corporation and its subsidiaries have been involved in five contracts for the construction, operation, and management of the Wainwright Water and Sewer Utility Projects. Phase I in 1995 was a $16 million project and Phase II in 1997 was a $29 million project.

Olgoonik Corporation has organized a holding company and four for-profit subsidiaries. The holding company, Olgoonik Development, LLC with an office in Anchorage, provides management services for all of the subsidiaries including accounting, administrative, contracts, human resources, information and technology records, marketing, policies and procedures, purchasing and procurement, and risk management.

The KUK Construction, LLC has taken over the Olgoonik construction division and has participated as a majority partner in the joint venture of Wainwright Constructors. Wainwright Constructors has participated in more than $50 million of capital improvement projects in Wainwright. Wainwright Constructors is a joint venture partnership between the Olgoonik Corporation and SKW/Eskimos, Inc., which was formed in 1985, and has $69.5 million in completed projects (SKW/Eskimos, 2003). KUK Construction, LLC has constructed two four-bedroom and three three-bedroom houses for the NSB with a contract value of $1,020,000. A contract for upgrades to the Wainwright power plant was valued at $1,127,275.

Olgoonik Management Services LLC (OMS) is a start up company with one employee established in 1999. OMS currently has a teaming agreement to provide operational support for the operations of a Job Corps contractor. OMS is certified as a SBA 8(a) business and its HUBZone application is in the final certification approval stages.

O.E.S. Inc., an environmental services company, is a wholly owned subsidiary of the Olgoonik Corporation. According to O.E.S.'s statement of qualifications, O.E.S. was incorporated in 1997 to meet the environmental challenges of the villages located within the NSB.

Table 5-14 shows employment information for Olgoonik Corporation and some of its subsidiaries based on ES-202 unemployment insurance data.

Table 5-14. Olgoonik Corporation and Subsidiary Average Annual Employment, 1977-2002

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Olgoonik Corporation	-	-	-	4	18	46	45	33	30	23	26	37	36
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Bowhead Inc.	33	30	28	26	22	20	30	43	43	84	41	40	37
Bowhead Manufacturing Company	-	-	7	8	4	5	7	6	7	6	4	0	-
Kuk Construction LLC	-	-	-	-	-	-	-	-	-	-	-	-	2
Olgoonik Development LLC	-	-	-	-	-	-	-	-	-	-	-	7	7
O.E.S., Inc.	-	-	-	-	-	-	-	-	-	-	-	1	4
Olgoonik Logistics LLC	-	-	-	-	-	-	-	-	-	-	14	2	4
Olgoonik Management Services	-	-	-	-	-	-	-	-	-	-	-	2	3

Source: Alaska Department and Labor and Workforce Development
- Data were unavailable for this report

5.6.7 Tikigaq Corporation

The Tikigaq Corporation is the Alaska Native village corporation of Point Hope. The corporation was formerly known as the Tigara Corporation. The Corporation has 1,000 shareholders, 850 of whom live in the village (Tikigaq Corporation, 2003). Tikigaq Corporation owns the surface estate to approximately 138,000 acres in and around the community of Point Hope (ASRC, 2003b).

In 1973, full-time employment in the community was limited to four teaching positions, four teaching aids, two maintenance men, a cook, employment at the electric cooperative system, the local Native store, and several social service programs (Dupere and Associates, Inc., 1973). About 12 individuals in the community were construction union members and worked outside of the community each summer.

Tikigaq Corporation owns the Point Hope Native Store and fuel station (Arctic Development Council, 2003). The Whalers Inn in Point Hope is a subsidiary (Arctic Development Council, 2003). At least 2 of the 12 current business licenses in Point Hope are for the Corporation (Alaska Department of Commerce, Community and Economic Development, 2005a).

According to the Summer 2002 Tikigaq Corporate Newsletter, Tikigaq changed the direction of its core business in 2000 and began the transition into a SBA 8(a) certified business. The Tikigaq Corporation has SBA 8(a) certified subsidiaries in the fields of construction, engineering, and environmental services. These subsidiaries include Aglaq Construction Enterprises, Inc., Agviq Environmental, and Tikigaq Technology Services.

The Tikigaq Corporation has offices in Anchorage and Point Hope. Tikigaq Corporation currently has a 48 percent shareholder-hire ratio in its Alaska operations (Cheatham, 2003). The company provides jobs in the village in construction, fuel services, retail operations of the store, and maintenance and operation. The corporation provides hazardous materials worker training, operator training, and other

trades training so that shareholders can find employment during summer construction seasons. Over 54 hazardous material trained shareholders have been employed on company projects for the past three years at remote sites (Cheatham, 2003).

The Corporation also provides travel assistance, burial assistance, and subsidizes prices in the village store, fuel services, and Internet costs. Additional services such as sponsorships and emergency assistance are provided to shareholders and their families on a case-by-case basis. In addition, employees are required to volunteer 30 minutes a week working with a student in the school (Cheatham, 2003).

Table 5-15 shows employment estimates for the Tikigaq Corporation and the Tikigak/Conam Joint Venture generated from ES-202 unemployment data.

Table 5-15. Tikigak Corporation Average Annual Employment, 1977-2002

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Tikigak Corporation	-	-	-	-	-	-	-	-	-	7	33	24	36
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Tikigak Corporation	45	45	51	51	55	58	65	64	63	71	92	78	79
Tikigak/Conam	-	-	-	-	-	8	24	17	56	52	5	-	4

Source: Alaska Department and Labor and Workforce Development
- Data were unavailable for this report

5.6.8 Ukpeagvik Iñupiat Corporation

Ukpeagvik Iñupiat Corporation (UIC) is the Native village corporation in Barrow. UIC has more than 2,000 shareholders. Like ASRC, UIC has numerous subsidiaries; some of the subsidiaries are based in the NSB and mainly employ individuals who reside in the Borough, but many of the subsidiaries are based outside of the North Slope region. According to the UIC Construction web page, the Ukpeagvik Iñupiat Corporation family of companies includes Bowhead Transportation, UIC Construction, LCMF Inc., and Umiaklik Insurance Company. According to the Arctic Development Corporation (2003), UIC Utilities and UIC Construction in Barrow are also subsidiaries of UIC.

Bowhead Transportation is a wholly owned subsidiary of Ukpeagvik Iñupiat Corporation and began operation in August 27, 1982 (Bowhead Transportation, 2003). Bowhead Transportation is certified as a SBA 8(a) corporation. The company has provided barge service to the coastal villages of the NSB for over 14 years. In 1995, it expanded its service area to include Kotzebue and contract service to Westward Alaska. The expansion entailed establishment of a separate company—Qayg Marine, LLC—a partnership with Sea Coast Towing (Bowhead Transportation, 2003). Bowhead Transportation has offices in Anchorage and Seattle and a seasonal office in Barrow. The company also operates in the Puget Sound area of Washington.

Bowhead Transportation has established an Alaska Native SBA 8(a) corporation with Eagle Support Services Corporation. The joint venture, Bowhead Eagle, LLC, provides support services for the programs and interests of the U.S. National Guard (Eagle, 2003). Bowhead Support Services is also an Alaska Native SBA 8(a) corporation. It provides information technology support services to government agencies. The company's headquarters is in Dahlgren, Virginia.

Bowhead Manufacturing Company, LLC is another Alaska Native SBA 8(a) corporation that was formed in 2001 under the Bowhead Holding Company. It manufactures and distributes environmental products through direct mail (Bowhead Manufacturing Company, 2003).

UIC Construction, LLC (UICC) is a wholly owned subsidiary of Harpoon Construction Group, Inc. which, in turn, is a wholly owned subsidiary of UIC. UIC Construction provides construction services and has completed more than $600 million of projects—many of them on the North Slope. UICC was incorporated in 1978. In 1986, UICC entered into a joint venture with SKW/Eskimos, LLC and has been the managing partner for more than $175 million of utility projects. The joint venture has maintained a 75 percent local NSB resident hire on these projects.

LCMF, LLC provides architectural, civil and structural engineering, and surveying services and is a wholly owned subsidiary of Barrow Technical Services, Inc., which is a UIC company. LCMF has 36 employees with 5 in Barrow. UIC established a joint venture between Barrow Technical Services and LCMF in 1986. In 1996, UIC purchased LCMF and merged it with Barrow Technical Services.

Table 5-16 shows estimates of employment of the Ukpeagvik Iñupiat Corporation and some of its subsidiaries based on ES-202 unemployment data.

Table 5-16. Ukpeagvik Iñupiat Corporation Average Annual Employment, 1977-2002

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Ukpeagvik Iñupiat Corporation	2	2	4	9	13	19	38	46	53	42	40	40	40
Umialik Insurance Co	-	-	-	-	3	4	5	6	6	6	6	8	9
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Ukpeagvik Iñupiat Corporation	45	45	51	51	55	58	65	64	63	71	92	78	79
Barrow Technical Services Inc	-	-	-	-	-	-	-	-	-	-	-	-	5
Harpoon Construction Group Inc	-	-	-	-	-	-	-	-	-	-	-	33	176
UIC Development Co Inc	-	-	-	-	-	-	-	-	-	-	-	-	14
Umialik Insurance Co	12	13	14	18	21	22	23	22	22	23	23	27	31

Source: Alaska Department and Labor and Workforce Development
- Data were unavailable for this report

6 The Role of Other Government and Non-profit Organizations and the Economic Linkages among Entities

In previous chapters, the economic roles of the Borough government, city governments, and for-profit Native corporations were discussed. This section adds to this discussion the roles of the federal government, state government, tribal governments, and non-profit organizations. In addition, this section provides an overview of the important economic linkages among government and non-profit entities on the North Slope.

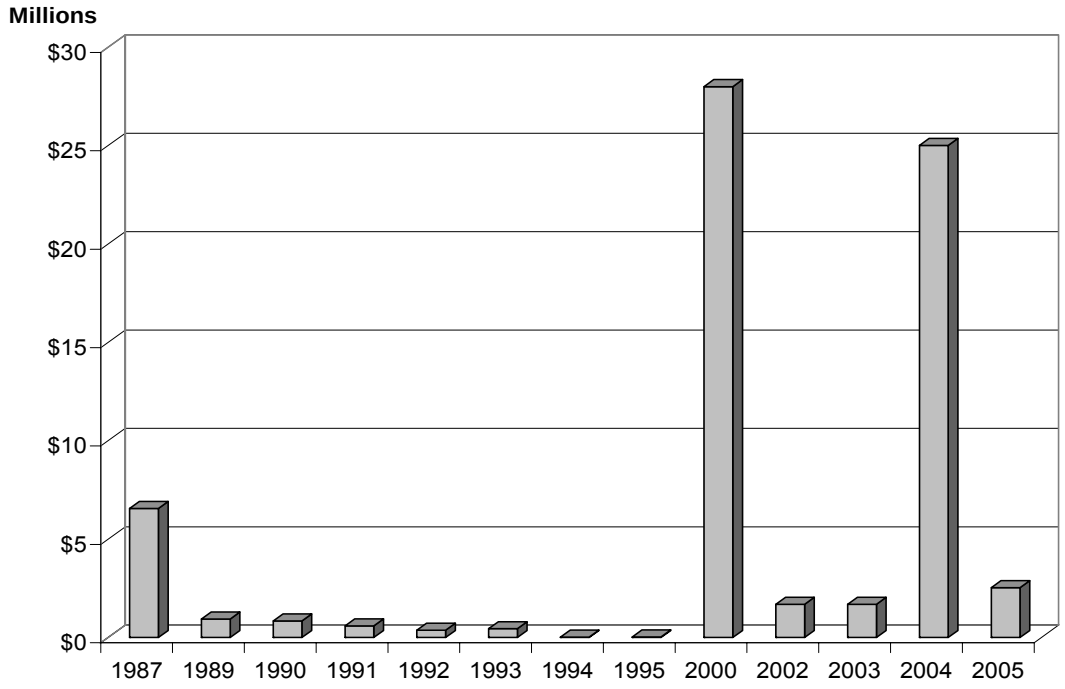
6.1 The Role of the Federal Government

The federal government performs several functions that affect the economy and the communities in the NSB. The following section discusses these various functions and provides historical information where data are available.

6.1.1 Federal Land Ownership and Management

Before Alaska achieved statehood, the only governmental presence on the North Slope was federal. As noted in Chapter 2, the presence of the BIA and U.S. military in the region resulted in employment opportunities for North Slope residents and a modicum of public services. In addition, the federal government was, and continues to be, a major landowner on the North Slope. Over half of the land within the NSB is owned by the federal government (NSB, 2005). Federal lands include areas that are known to have oil and gas reserves, such as the National Petroleum Reserve-Alaska (NPR-A) and the Arctic National Wildlife Refuge. Management decisions by federal agencies regarding development and/or conservation of these federal lands affect the pace and patterns of economic change on the North Slope; as federal actions (or non-actions) resulting from these decisions ultimately influence access to cash (i.e., monies in the form of industry tax payments, lease payments, and federal grants) and non-cash resources (subsistence resources). As described in Chapter 4, for example, the State of Alaska receives 50 percent of federal revenues from oil and gas lease sales located in the NPR-A. Those revenues are deposited into the NPR-A Special Revenue Fund to provide grants to communities impacted by oil and gas development. From 1987 to 2005, several North Slope communities and the NSB have been awarded a total of approximately $68.7 million in Impact Mitigation Grants for various community projects (Figure 6-1). In 2000 and 2004, NPR-A grants exceeded $20 million; the highest grants in those two years were for the "Village Power Plant/Electrical Distribution & Waste Heat Conversion Upgrade" and the "Barrow Sewage Treatment Facility", respectively. The lists of project grants and dollar amounts by community are provided in Table 6-1 through Table 6-5. These tables show the amount of dollar flows into each of the communities and the types of projects funded. Grants awarded to the cities are typically administered by the NSB.

Figure 6-1. Total Amount of NPR-A Impact Mitigation Grants Awarded to the North Slope Borough and North Slope Communities, 1987-2005



Source: Alaska Department of Commerce, Community, and Economic Development

Table 6-1. NPR-A Impact Mitigation Grants Awarded to the City of Atqasuk, 1987-2004

Year	Project Description	Amount ($)
1987	Community Center Operations and Maintenance	$99,000
1987	Community Center Expansion	$500,000
1987	Basic Local Government Operations	$90,000
1990	Basic Local Government Operations	$79,130
1990	Community Center Planning and Operations	$96,982
1991	Community Center Operations and Maintenance	$21,181
1992	Basic Local Government Assistance	$69,802
1992	Community Center Operations and Maintenance	$14,328
1993	Basic Local Government Assistance	$50,000
1994	Basic Local Government Assistance	$4,167
1995	Basic Local Government Assistance	$8,172
2000	Community Center Maintenance and Operations	$90,000
2000	Basic Local Government Operations	$109,000
2003	Renovate Recreation Center	$49,000
2003	City Operations	$249,057
2004	Local Government & Community Center Operations & Maintenance	$368,621

Source: Alaska Department of Commerce, Community, and Economic Development

Table 6-2. NPR-A Impact Mitigation Grants Awarded to the City of Barrow, 1987-2005

Year	Project Description	Amount ($)
1987	Boat Ramps	$825,000
1990	Cultural Center Planning	$48,250
1990	Basic Local Government Assistance	$74,788
1990	City's Public Facilities Operations and Maintenance	$238,843
1991	Volunteer Fire Department Operations	$133,980
1991	Search and Rescue Operations	$104,000
1991	City Facilities Operations and Maintenance	$49,319
1992	Public Facilities Operations and Maintenance	$146,951
1993	Public Facilities Operations and Maintenance	$200,000
1994	Public Facilities Operations and Maintenance	$6,440
1995	Public Facilities Operations and Maintenance	$7,662
2000	Public Facilities - Maintenance and Operations	$650,000
2000	Renovation/Upgrade of Barrow Teen Center and Community Center	$1,000,000
2000	Design, Construction & Purchase Retractable Boat Ramp	$1,000,000
2000	Maintenance Building Construction	$630,000
2002	Public Facilities - Maintenance and Operation	$334,540
2003	Summer Youth Program	$50,000
2003	Public Facilities Operations	$350,000
2004	Renovate Multi-Purpose Facility	$53,719
2004	Public Facilities Operations and Maintenance	$420,705
2004	Recreation Building Addition Feasibility	$40,000
2004	Basic Local Government Operations and Maintenance	$1,309,806
2004	Quest Mentorship Program with KBRW	$265,000
2004	Addition to Cemetery Road	$44,230
2005	Tuzzy Library	$180,000

Source: Alaska Department of Commerce, Community, and Economic Development

Table 6-3. NPR-A Impact Mitigation Grants Awarded to the City of Nuiqsut, 1987-2005

Year	Project Description	Amount ($)
1987	Dry Boat Storage	$551,395
1987	Basic Local Government Operations	$109,250
1990	Community Center/City Hall Operations and Maintenance	$57,900
1991	Boat Storage Operations and Maintenance	$30,500
1992	Basic Local Government Assistance	$49,963
1992	Utilities Operations and Maintenance	$5,878
1993	Basic Local Government Assistance	$90,000
1994	Basic Local Government Assistance	$4,167
1995	Basic Local Government Assistance	$3,320
2000	Basic Government Operation/Maintenance	$200,000
2000	Various Community Projects	$61,078
2000	Install Graveyard Fencing	$111,369
2002	Basic Government Operations and Maintenance	$200,000
2005	Local Government Operations	$250,000

Source: Alaska Department of Commerce, Community, and Economic Development

Table 6-4. NPR-A Impact Mitigation Grants Awarded to the City of Wainwright, 1987-1995

Year	Project Description	Amount ($)
1987	Boat Ramp Construction	$550,000
1987	Boat Ramp Planning	$61,380
1990	Basic Local Government Operations	$82,961
1990	Community Center Operations and Maintenance	$157,891
1991	Community Center Operations and Maintenance	$51,020
1992	Basic Local Government Assistance	$66,128
1992	Community Center Operations and Maintenance	$14,328
1993	Basic Local Government Assistance	$107,126
1994	Basic Local Government Assistance	$4,167
1995	Basic Local Government Assistance	$6,385

Source: Alaska Department of Commerce, Community, and Economic Development

Table 6-5. NPR-A Impact Mitigation Grants Awarded to the North Slope Borough, 1987-2005

Year	Project Description	Amount ($)
1987	Barrow - Residential Care	$539,637
1987	Barrow - Juvenile Detention	$3,000,000
1987	Comprehensive Subsistence Management Plan	$232,500
1989	Alcohol and Drug Abuse Facility	$937,000
1991	Arctic Women in Crisis	$200,000
2000	Village Power Plant/Electrical Distribution & Waste Heat Conversion Upgrade	$10,069,367
2000	All Infrastructures Services Study	$1,500,000
2000	Nuiqsut Above Ground Service Connections	$2,100,000
2000	Nuiqsut Police Officer for 3 years	$100,000
2000	Wainwright Community Center Renovations	$191,283
2000	Fire Department Equipment & Training	$1,114,150
2000	Harvest Monitoring: Subsistence Documentation Project	$100,000
2000	Survey & Inventory of Fish Resources in the Lakes & Streams of Eastern NPRA	$150,000
2000	Tracking & Analysis of Teshekpuk Lake Caribou Herd Movement and Distribution	$150,000
2000	Waterfowl Surveys	$150,000
2000	Nuiqsut Natural Gas Piping Distribution	$3,800,000
2000	Nuiqsut Natural Gas Home/Building Conversion	$2,200,000
2000	Nuiqsut Natural Gas Pipeline	$1,580,000
2000	Nuiqsut City Hall/Kisik Center Renovation	$943,753
2002	Harvest Monitoring , Subsistence Documentation	$100,000
2002	Waterfowl Surveys	$150,000
2002	Tracking & Analysis of the Teshekpuk Lake Caribou Herd	$150,000
2002	Wainwright Basic Operations	$250,000
2002	Nuiqsut Cultural Center Operations	$288,000
2002	Nuiqsut Teen Center Operation and Maintenance	$121,310
2002	Nuiqsut Wooden Deck Ball Court Construction	$30,000
2002	Nuiqsut Emergency Hunting Shelters Construction	$60,000
2003	Wainwright Basic Operations	$250,000
2003	Nuiqsut Natural Gas Project	$450,000
2003	Capacity Building	$100,000
2003	Mayor's Workforce Job Training Program	$188,048
2004	Nuiqsut Natural Gas Upstream Conditioner	$2,000,000
2004	Waterfowl in NPRA Continuation	$443,619
2004	Arctic Fox Satellite Project	$316,582
2004	Caribou Movements & Distribution	$359,245
2004	Survey and Inventory of Fish Resources	$362,931
2004	Fish Petroleum Hydrocarbon Study	$405,659
2004	Subsistence Harvest Monitoring	$188,030
2004	Electric Thermal Oxidation/Waste Heat	$1,500,000
2004	Grant Oversight and Supervision	$213,418
2004	Volunteer Search and Rescue Equipment	$565,425
2004	Fire Department Equipment Upgrades	$250,276

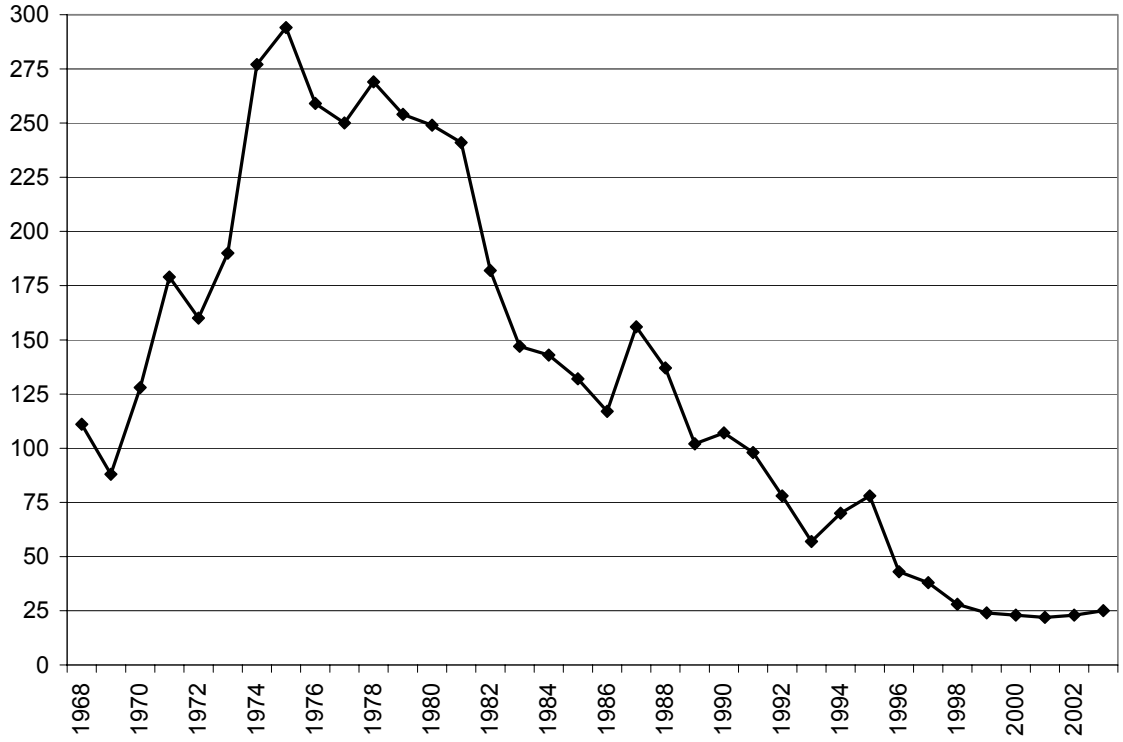
Year	Project Description	Amount ($)
2004	Barrow Sewage Treatment Facility	$10,000,000
2004	Emergency Radio Communications	$1,550,570
2004	Police Department Facilities and Training	$728,999
2004	Telecommunications System Update	$156,145
2004	Research Equipment for NPR-A Activities	$250,000
2004	Barrow School Resource Officers	$237,240
2004	NPR-A Village School Counselors	$435,736
2004	Project Compliance and Fiscal Coordinator	$198,250
2004	Childcare/Learning Center/Training	$56,123
2004	Village Summer Recreation Program	$121,374
2004	Mayor's Job Program	$653,929
2004	Workforce Development Program	$1,515,825
2005	Wainwright Local Government Operations	$250,000
2005	Barrow Allied Health Care Training Program	$320,000
2005	Social and Cultural Impacts Study	$300,586
2005	Oil/Gas Development Comprehensive Plan	$400,000
2005	School Counselors Extended Program	$205,000
2005	School Resource Officers	$125,000
2005	School Based Programs	$500,000

Source: Alaska Department of Commerce, Community, and Economic Development

6.1.2 Federal Employment

The federal government provides direct employment in the region. Prior to the formation of the Borough, the federal government provided most of the year-round jobs in the region. According to historical accounts, there were virtually no cash paying, steady-wage type jobs on the North Slope until the Navy began petroleum exploration in the 1940s in the Naval Petroleum Reserve IV between Barrow and the Brooks Range (now known as the NPR-A). Because of the Navy's petroleum exploration program, the population of Barrow increased as opportunities for employment as guides and construction laborers grew. In the 1950s, some additional employment was provided by construction and operation of the distant early warning (DEW) radar sites (NRC, 2003). Figure 6-2 shows the historical trend in federal employment on the North Slope from 1968 to 2003. These estimates are based on the number of jobs by place of work (includes resident and non-resident employment). From 1969 to 1975, federal jobs on the North Slope almost tripled from fewer than a hundred jobs to almost 300. After 1975, besides the DEW site jobs being eliminated, the regional government (NSB) took over several federal functions, and eventually federal jobs on the North Slope dwindled. Today, there are only about 25 federal jobs based in the North Slope region. The federal government pays about $1.5 million in wages and salaries for federal operations in the region (CFFR data, U.S. Census Bureau, 2003). Federal agencies currently operating in the region include the U.S. Postal Service, National Park Service (Department of the Interior), National Oceanic and Atmospheric Administration (Department of Commerce), General Services Administration, Transportation Security Administration (U.S. Department of Transportation), and the Arctic Research Commission (DOLWD, 2005). In contrast, the number of state and local government jobs grew substantially from 1968 to 2003. In 1968, there were only 20 combined state and local government jobs in the region; by 2003, there were 62 state jobs and more than 1,800 local government jobs recorded.

Figure 6-2. Employment in Federal Agencies, North Slope Borough, 1968-2003



Source: Alaska Department of Labor and Workforce Development

6.1.3 Federal Spending

The federal government is a source of revenue for the region, providing federal dollars in the form of grants (i.e., block, formula, project, and cooperative agreements), procurement contracts, retirement/disability payments for individuals, other direct payments to individuals, salaries and wages, and direct payments other than for individuals.

Federal dollars flow into the North Slope region in various ways, either directly—to individuals living on the North Slope, local governments (the NSB and city governments), and local non-profit organizations—or indirectly through the state government. The following describes some of important types of federal funding that flow into the North Slope region:

- *Formula grants* are distributed to state and local governments to assist in implementing federal policies in areas such as health, transportation, and education. The amount each governmental entity receives is determined by mathematical formulas that use factors, such as population, poverty, growth, income, etc.
- *Project grants* are usually awarded to tribes, non-profits, businesses, individuals, school districts, universities, and the state government for specific projects that usually have an explicit deadline.
- A *block grant* is a large sum of money granted by the federal government to a regional government with only general provisions as to the way it is to be spent, allowing states an opportunity to develop programs and policies based on local needs rather than a one-size-fits-all federal perspective.

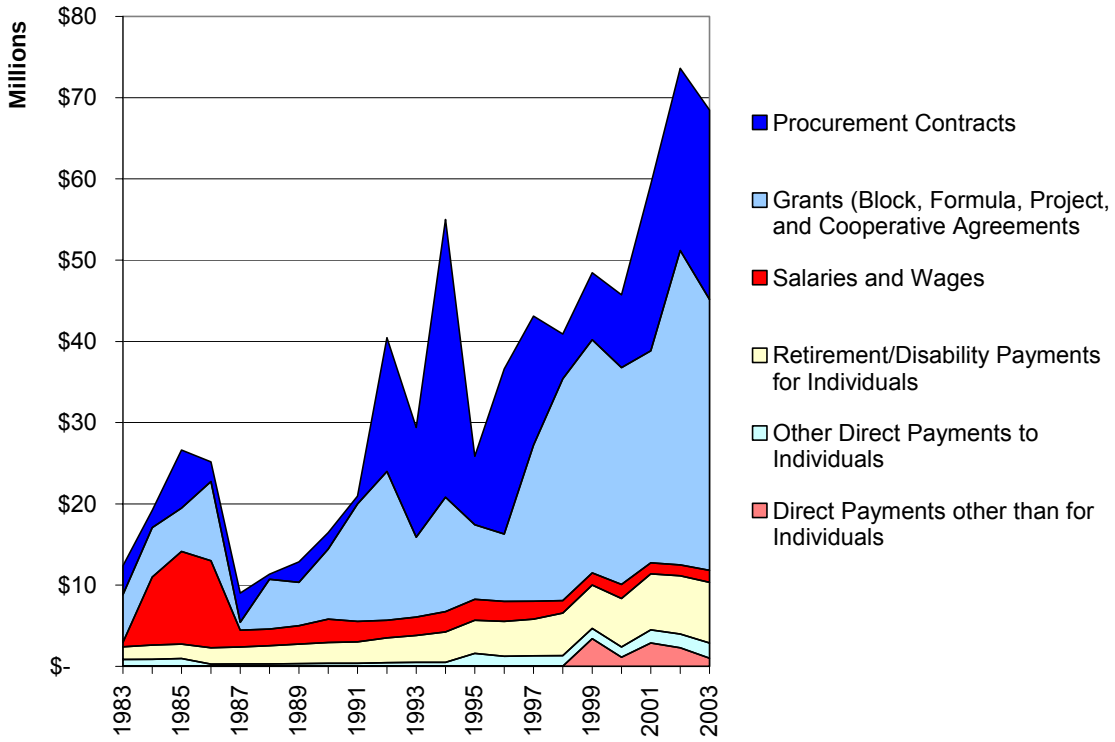
- A *cooperative agreement* is used instead of a grant when substantial involvement is expected between the executive agency and the state, local government or other recipient when carrying out the activity contemplated in the agreement.
- *Direct payments to individuals*. The federal government also gives money directly to North Slope residents in the form of wages and salaries, Social Security benefits, Medicare, unemployment insurance, federal retirement, workers' compensation, food stamps and other benefits prescribed by federal law.
- *Direct Payments other than to Individuals*. Aside from direct payments to individuals, the federal government also makes direct payments to communities businesses, tribes, non-profits, and other organizations as subsidies, transfers, or entitlements. The largest programs making direct payments are for tribal self-governance, Indian Housing, and Essential Air Service

Federal expenditures that fall under these categories are reported in the annual Consolidated Federal Funds Report. [43] Annual federal expenditures or obligations and the relative contribution of each source or category to total federal spending in the region from 1983 to 2003 are shown in Figure 6-3. The federal government spent about $68.5 million on the North Slope in 2003; grants accounted for 49 percent of the spending, and procurement contracts accounted for 44 percent of the spending. Historically, grants and federal procurements have accounted for at least half of federal spending in the region.

Figure 6-4 shows federal spending on grants and federal procurements from 1983 to 2003. Federal procurement contracts were highest in 1994, with $31 million dollars worth of Department of Defense contracts. Grant awards were highest in 2002. Six federal programs on education, health, arctic research, and highway construction received at least $1 million in funding that year, including: 1) Impact Aid ($9.02 million); 2) Indian Health Services Health Management Development Program ($7.94 million); 3) Medical Assistance Program ($5.58 million); 4) Coastal Zone Management Administration Awards ($1.94 million); 4) Polar Programs ($1.79 million); 5) Highway Planning and Construction ($1.46 million); 5) Fund for the Improvement of Education ($1 million); and 6) Alaska Native Educational Programs ($1 million).

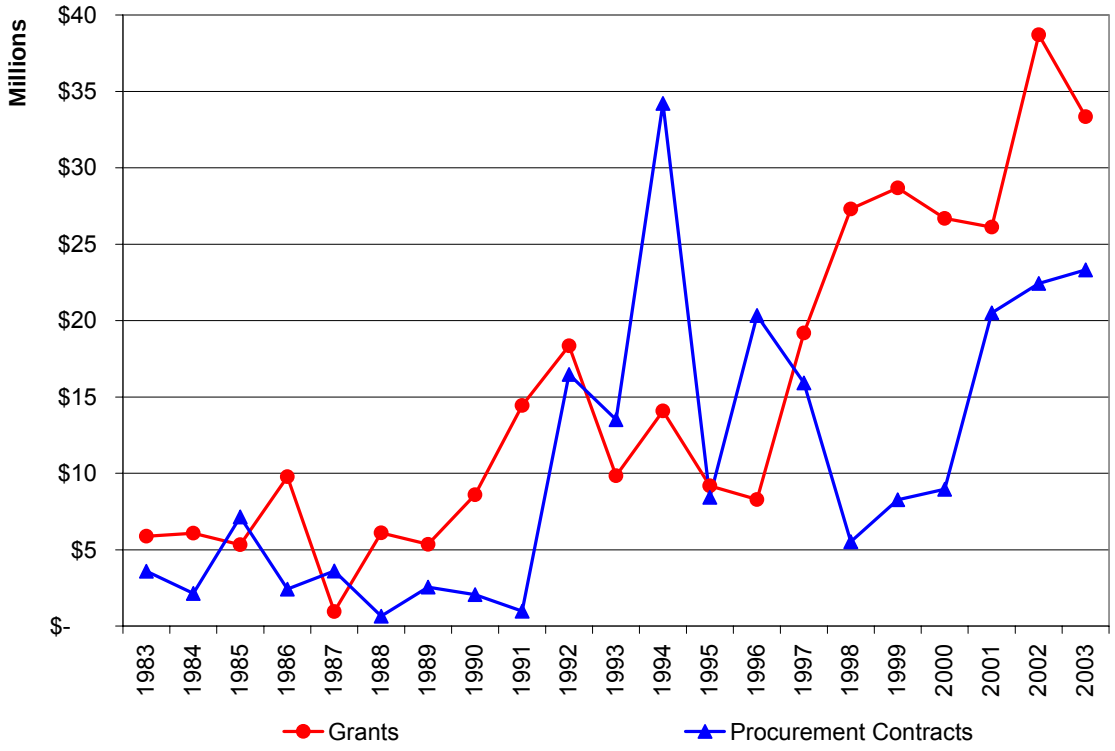
[43] The Consolidated Federal Funds Report is a presentation of federal expenditures or obligations in state, county, and sub-county areas of the United States. Expenditure data include the following categories: grants, salaries and wages, procurement contracts, direct payments for individuals, other direct payments, direct loans, guaranteed or insured loans, and insurance. Dollar amounts reported are either actual expenditures or obligations.

Figure 6-3. Federal Spending, North Slope Borough, 1983-2003



Source: Consolidated Federal Funds Report; U.S. Census Bureau

Figure 6-4. Federal Spending on Grants and Procurement Contracts, North Slope Borough, 1983-2003

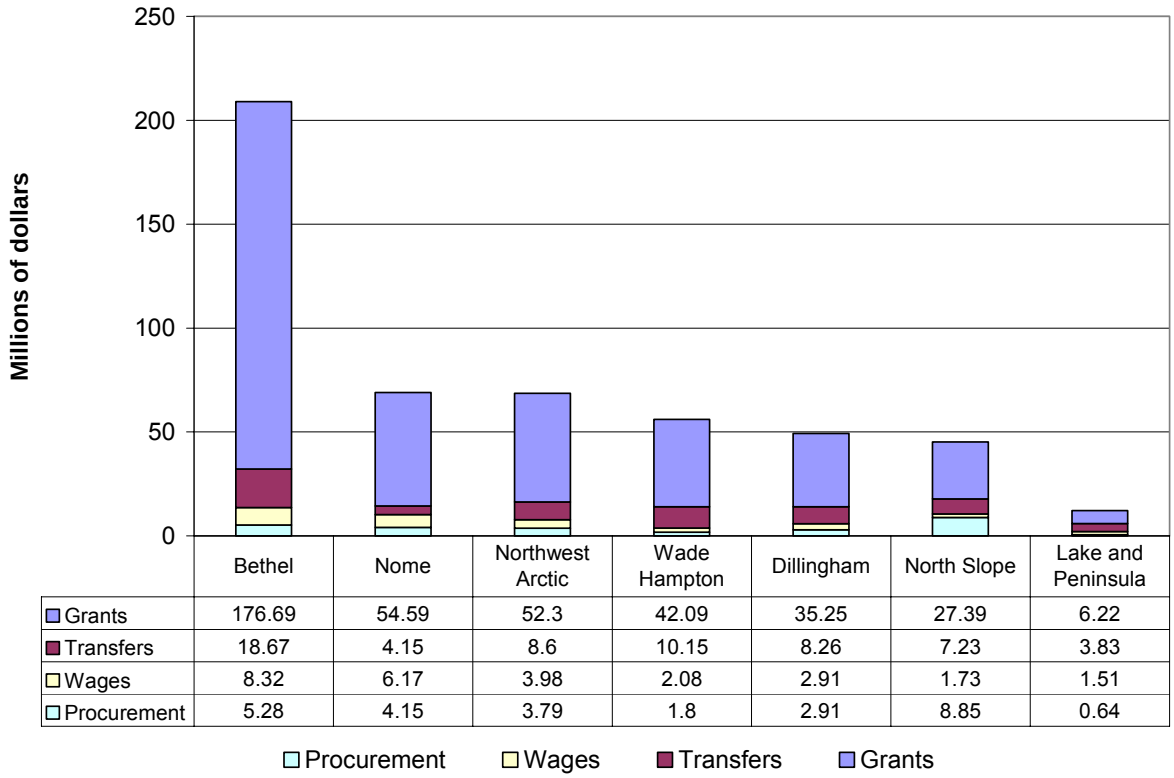


Source: Consolidated Federal Funds Report, U.S. Census Bureau

It should be noted that in comparison with other rural regions in Alaska, the NSB actually has received less federal support. In 2002, for example, federal grant funding ranged from a low of $6.22 million in Wade Hampton to a high $176.69 million in Bethel. The NSB received the second lowest grant funding at $27.39 million (Figure 6-5). On a per capita basis, as shown in Table 6-6, the North Slope Borough ranks low in federal spending compared to other remote rural Census areas.

An organizational study of the NSB by Information Insights (2002) suggested that the Borough "seek state and federal funding to support traditional state and federal responsibilities." The study recommended that the NSB begin discussions with federal and state agencies to either give back services to the appropriate governmental agencies or to receive funding for the services usually provided by the federal and/or state government in other areas. However, the study also noted that constraints on the state budget may impede these attempts.

Figure 6-5. Federal Expenditures in Remote Rural Census Areas including the North Slope Borough, 2002



	Bethel	Nome	Northwest Arctic	Wade Hampton	Dillingham	North Slope	Lake and Peninsula
Grants	176.69	54.59	52.3	42.09	35.25	27.39	6.22
Transfers	18.67	4.15	8.6	10.15	8.26	7.23	3.83
Wages	8.32	6.17	3.98	2.08	2.91	1.73	1.51
Procurement	5.28	4.15	3.79	1.8	2.91	8.85	0.64

Source: ISER, 2004; Consolidated Federal Funds Report.

Table 6-6. Per Capita Federal Expenditures in Remote Rural Census Areas including the North Slope Borough, 2002

Borough/Census Area	Amount
Bethel	$13,055
Dillingham	$10,022
Northwest Arctic	$9,527
Wade Hampton	$7,985
Nome	$7,510
Lake and Peninsula	$6,692
North Slope	$6,121

Source: Per capita federal spending was estimated using information from the ISER (2004) report and population estimates based on U.S. Census data as reported by the Alaska Department of Labor and Workforce Development.

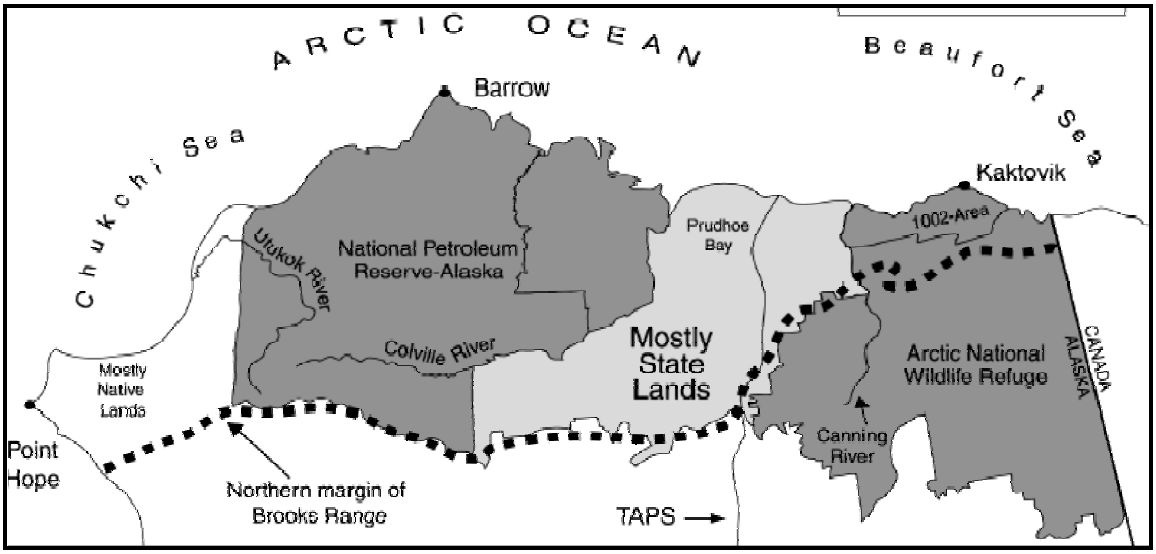
6.2 The Role of the State Government

The State of Alaska, like the federal government, owns and manages lands on the North Slope, provides employment and income to the region, funds various programs and special projects, and administers several federal programs in North Slope communities.

6.2.1 State Land Ownership and Management

The area between the NPR-A and Alaska National Wildlife Refuge is primarily made up of state-owned lands (Figure 6-6). The state, through the Department of Natural Resources, manages state oil and gas leases in the area. Most oil production on the North Slope takes place on state lands (in the general area of Prudhoe Bay). There are 11 million acres in active lease plan areas and 3.9 million acres in existing leases. As a result of these leases, the state and NSB receive significant amounts of payments to support government operations. However, these leases also have the potential to significantly change the way of life of North Slope residents. The expansion of oil and gas infrastructure into areas important for subsistence activities is of particular concern to Borough residents.

Figure 6-6. Land ownership on the North Slope



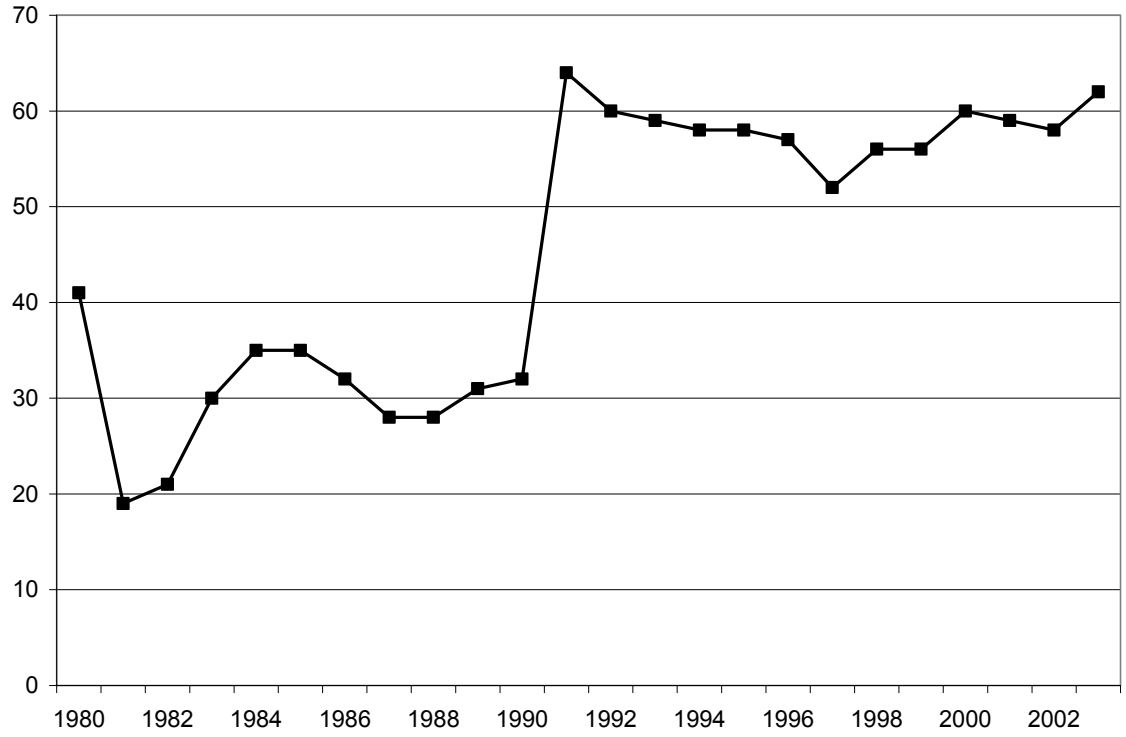
Source: U.S. Government Accounting Office (adapted from a Bureau of Land Management map); available at http://www.gao.gov/new.items/d02357.pdf

Notes: The areas designated in the map as the National Petroleum Reserve-Alaska, the Arctic National Wildlife Refuge, and the area titled "Mostly State Lands" also contain some Alaska Native lands. Finally, the area on the far left portion of the map labeled "Mostly Native Lands" also includes some state and federal lands.

6.2.2 State Employment

Figure 6-7 shows the number of state government jobs in the NSB from 1980 to 2003. As stated earlier, there were only 20 local and state government jobs in 1968 (historical data show combined local and state employment estimates for the years 1968 to 1979), by 1980, the number of state jobs rose to about 40. Currently, there are about sixty state jobs recorded in the North Slope region, and the state pays about $3.6 million in wages per year. The following state agencies currently provide employment on the North Slope: Legislative Affairs Agency, Department of Administration, Alaska Court System (NC41), Department of Law, Department of Corrections, Department of Public Safety, Department of Health and Social Services, Department of Environmental Conservation, Department of Fish and Game, Department of Transportation and Public Facilities, and the University of Alaska. In 2003, state employment only accounted for 3 percent of government jobs in the region; local government jobs accounted for 96 percent and federal jobs accounted for 1 percent of total public sector jobs.

Figure 6-7. State Employment, North Slope Borough, 1980-2003

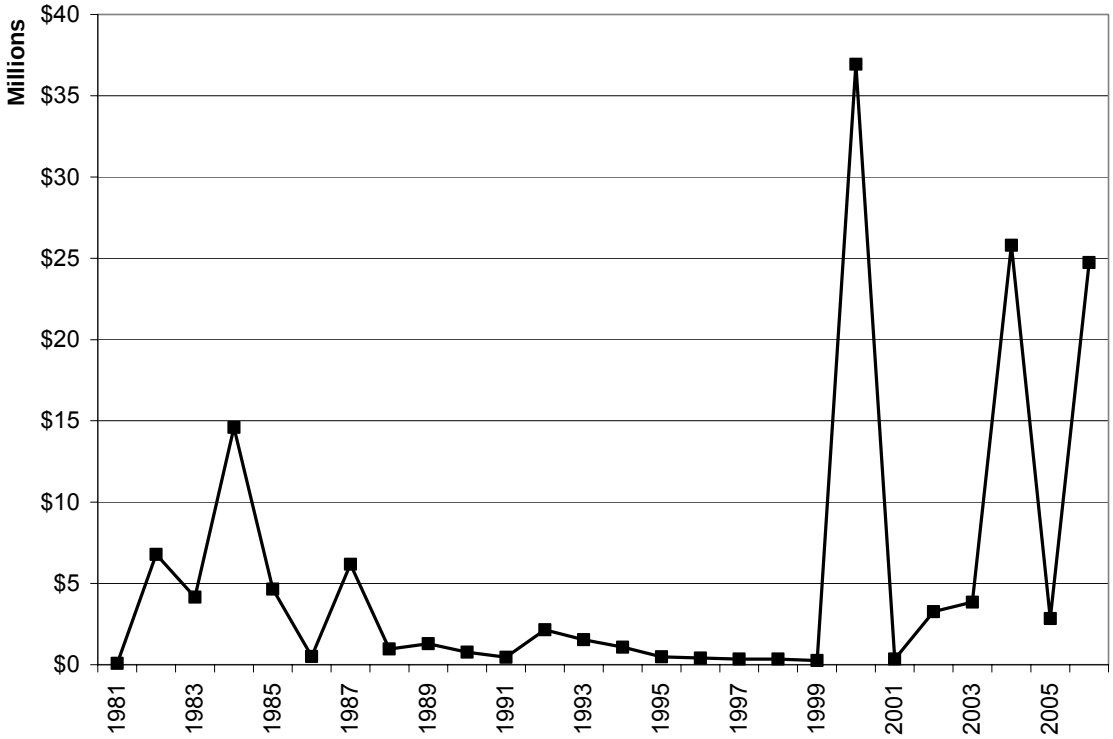


Source: Alaska Department of Labor and Workforce Development

6.2.3 State Spending

The State of Alaska, through the Department of Commerce, Community, and Economic Development administers several state and federal grants and revenue sharing programs that provide financial assistance to regional and local governments. The State's *Community Funding Database* provides historical information on grants and revenue sharing funds from fiscal year 1981 through 2006. Total amounts of State-administered grants and funds awarded to the NSB and North Slope communities are shown in Figure 6-8. The spikes in fiscal year 2000, 2004, and 2006 are due to NPR-A grants (which are pass-through funds from the federal government).

Figure 6-8. State of Alaska Administered Grants and Revenue Sharing Funds Received by the North Slope Borough and North Slope Communities, FY 1981-2006



Source: Community Funding Database, Alaska Department of Commerce, Community, and Economic Development

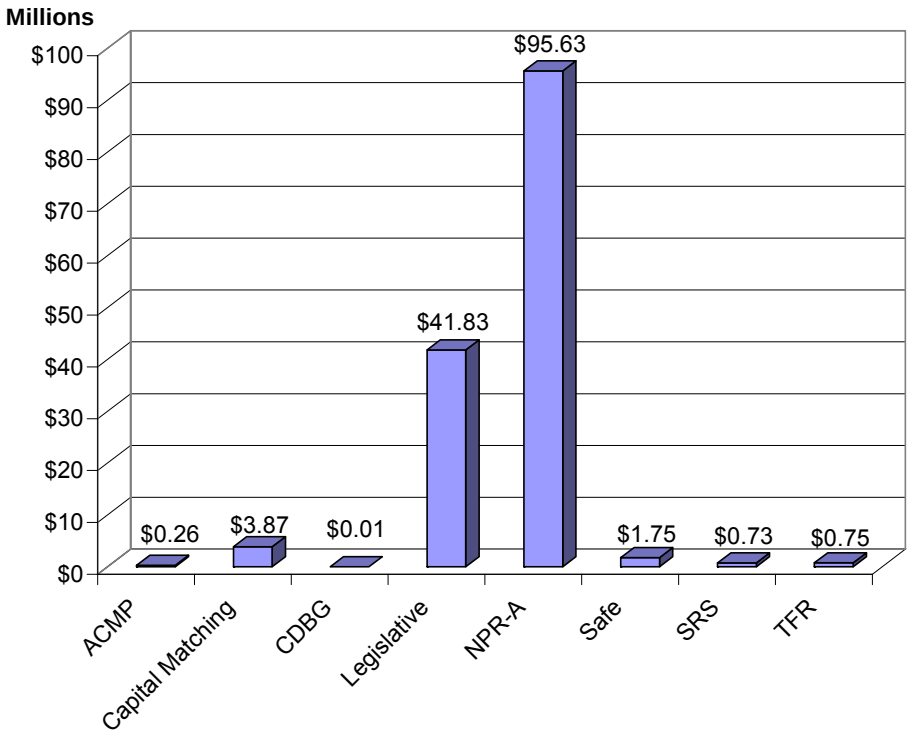
Figure 6-9 shows the total amount by type of grant, adding annual state-administered grants and funds received by the NSB and its communities from fiscal year 1981 to 2006. Historically, looking at data for the years available, the NPR-A funds and legislative appropriation account for about 95 percent of total state-administered funds awarded to the Borough and its communities. The *Community Funding Database* tracks the amount of dollars awarded per year for the following sources or types of grants (most of these grants are federal pass throughs administered by the state):

- *Alaska Coastal Management Program (ACMP):* Under this program, federal funds are awarded to "coastal districts" (municipalities and coastal resource service areas) for coastal management activities and community planning assistance. The amounts awarded annually range from $38,250 for large boroughs to $6,000 for cities. The federal government provides a total of about $1 million annually to be allocated by the state to various coastal communities. The NSB and North Slope communities received a total of $264,000 from 2002 to 2005.
- *Capital Matching Grants:* Eligible projects for this program include "capital projects," which are defined by Alaska Statue as a project with a cost exceeding $10,000 to acquire or improve an asset with an anticipated life exceeding one year and includes land acquisition, construction repair or structural improvement of a facility, engineering and design for a facility, and acquisition or repair of equipment. Ineligible activities include operations and maintenance costs and feasibility studies. The NSB and several North Slope communities received total capital matching

grants of $3.87 million for various projects from 1994 to 2004, when funding for this program was vetoed by the Governor.

- *Community Development Block Grants (CDBG):* The U.S. Department of Housing and Urban Development funds competitive grants to municipalities with at least a 51 percent "low to moderate income" population. Approximately $2.7 million is available annually to eligible municipalities for public facilities and planning activities that address issues detrimental to the health and safety of local residents or reduce the costs of essential community services. Maximum award amount is $500,000. The City of Barrow received about $10,000 under this program in 2001 for an ADA-compliant Handicap ramp.
- *Legislative Grants:* These grants are awarded by the State Legislature, with final approval by the Governor, and are delegated to a specific department for administration. The NSB and North Slope communities have received a total of $41.83 million in legislative grants since 1981 for various capital projects, repairs, and equipment purchases.
- *National Petroleum Reserve-Alaska (NPR-A) Grants:* The U.S. Department of the Interior refunds a portion of fees received as a result of oil development in the reserve to the State of Alaska. These funds are made available as grants to mitigate adverse impacts due to oil development. NPR-A grants to the NSB and North Slope communities have amounted to $95.6 million since 1987. Descriptions of grants awarded to the North Slope region are shown in Table 6-1 through Table 6-5.
- *Safe Communities Program (Safe):* This program provides financial assistance to municipalities to help fund public services such as police and fire protection, emergency medical services, and sanitation services. The NSB and North Slope communities received Safe funds in 2002 and 2003 amounting to a total of $1.75 million. Funding for this program was vetoed by the Governor in FY 2004.
- *State Revenue Sharing (SRS) Program:* This program provides financial assistance to municipalities, eligible unincorporated communities, and eligible volunteer fire departments to help fund public services. These services include education, water and sewer, police, road maintenance, health care and fire protection. The North Slope region received SRS grants in 2002 and 2003 amounting to $733,571. Funding for this program was vetoed by the Governor in FY 2004.
- *Temporary Fiscal Relief (TFR):* These funds were provided in FY 2004 to help weather the loss of State Revenue Sharing, Safe Communities, and Capital Matching grants. Special "one time" federal funds were provided under the "Fiscal Relief Program". Small communities received a minimum payment of $40,000. A total of about $753,000 was awarded to the NSB and North Slope communities.

Figure 6-9. State of Alaska Administered Funds Received by the North Slope Borough and North Slope Communities by Type of Grant, FY 1981-2006



Source: Community Funding Database, Alaska Department of Commerce, Community, and Economic Development

6.3 The Role of Tribal Governments

Tribes may be represented by a traditional council or by an IRA council organized under the Indian Reorganization Act (IRA) of 1934, as amended in 1936. The Act allowed groups of Natives associated with a place to petition the Secretary of the Interior for incorporation and recognition as a tribe. The majority of the Alaskan tribes currently recognized by the federal government were incorporated under these provisions.

The following are federally-recognized tribes on the North Slope:

- Naqsragmuit Tribal Council (City of Anaktuvuk Pass)
- Atqasuk Village
- Native Village of Barrow
- Kaktovik Village
- Native Village of Nuiqsut
- Native Village of Point Hope IRA
- Native Village of Point Lay IRA
- Village of Wainwright

Tribal governments were among the first means by which Alaska Natives participated in the political process. After ANCSA, Alaska Natives continued to hold tribal affiliation, but also became shareholders in regional and village corporations. In the ensuing years, there has occasionally been competition and tension between the tribal governments and Alaska Native corporations. For example, tribes and corporations sometimes competed for certain federal grant money.

The tribal entities are viewed as representing the interests of the tribal membership and a potential partner with the NSB in providing community services. As noted in Chapter 6, tribal governments have access to funds through federal agencies such as the BIA, but the amount of money available at any one time through these organizations is not on the same scale as what the NSB collects in property taxes. In many cases, the NSB works closely with the tribal governments in a synergistic manner. For example, the NSB might secure funding for a project, which a tribal government later operates and manages. In Point Lay, the only unincorporated community on the North Slope, the tribal council acts as the local government. Funding for tribal operations or tribal affairs typically flows from the federal government, and from and through the NSB. The BIA traditionally has taken the lead in supporting and funding law-related programs by tribal governments. BIA also provides baseline funding under the Indian Self-Determination Act for tribes to allocate according to their own priorities. In Alaska, most villages receive the minimum funding of $160,000 per village. Villages frequently allocate much of this funding to general programs like tribal operations or tribal government services that have a wide range of allowable uses.

In several North Slope villages, tribal governments continue to exercise judicial or mediation functions to resolve individual disputes. The decision to take on or expand this role often originates in concern for community law enforcement or child welfare. As tribal governments grow in strength, they also turn their attention to judicial functions as a role of government. The cases they address most commonly involve minor criminal offenses, children in need of aid, adoptions, custody, property, and probate. From village to village, there is a wide variation in dispute resolution methods, court structure, and caseload (Alaska Judicial Council, 1999). For example, the Native Village of Barrow is the IRA council for the Barrow area. The council regularly convenes itself as an adjudicatory body, hearing 50-70 cases per year. The caseload is primarily traditional adoptions, custody, and child in need of aid cases. The council does not receive separate funding for its adjudicatory work. An elders' advisory board at the Barrow Senior Center provides advice on elders' issues like burial plots, elder abuse, and assisted living. The elders also help train Borough police. The Point Hope IRA council occasionally sits as a juvenile committee to hear juvenile delinquency cases. The Point Hope community is discussing possible formation of a community court to hear juvenile offenses. It has a traditional law committee to discuss how certain matters traditionally would be handled in an Iñupiaq community. In 1990, the Native Village of Point Hope received a $140,000 grant to promote management and capacity-building for the tribal government, economic development, and planning and ordinance work for development of a tribal court. The reach of the grant was ambitious, and the village was unable to do all of the work necessary to develop a tribal court (Alaska Judicial Council, 1999).

In addition to these village tribal entities, there is also the Iñupiat Community of the Arctic Slope (ICAS)—a regional IRA tribal government overseen by a Joint Tribal Council composed of elected village representatives. The ICAS was organized by the leadership within the Arctic Slope Native Association to further solidify the North Slope communities (Smythe and Worl, 1985). Although the first ICAS election was held in 1971, it wasn't until 1979 that the first region-wide election was conducted to include all the villages on the North Slope. The formation of a regional tribal government did not mean that the village tribal governments surrendered their autonomy; they continued to utilize their local IRA governments (Smythe and Worl, 1985).

ICAS was fairly inactive from the time of its organization until the mid-1970s, but its council members initiated actions which established its links to other institutions (Smythe and Worl, 1985).[44] The board

[44] During the early 1970s the ICAS also engaged in law suits to protect Native lands such as *Edwardsen v. Morton*, which asked for trespass damages to Native residences, fishing and hunting areas resulting from oil exploration on the North Slope (Arctic Circle Virtual Classroom, 2005).

passed several resolutions which effectively transferred its tribal authority and its ability to provide services for its membership to the NSB and ASRC; housing (HUD), health (PHS), and education were transferred to the NSB; gas operations were delegated to a utilities organization through an agreement between the U.S. Navy, the BIA, and ASRC. These actions maximized the financial base for each of the institutions and increased the services to its membership. ICAS began expanding its operations in 1978. The enactment of the Indian Self-Determination and Education Assistance Act of 1975 and Indian Child Welfare Act of 1978 provided funds for Native education, social service, and economic development programs administered by ICAS. From 1976 to 1982, ICAS administered approximately $1.5 million in direct, and $1.5 million in indirect, grants. However, these programs ended in 1982 when the BIA withdrew its funding for the programs (Smythe and Worl, 1985).

In recent years, ICAS has renewed its function as a conduit for federal program funds, contracting through the NSB to provide social and educational services to provide economic development programs. In 2000, the U.S. Department of Education awarded the ICAS a $311,796 Rehabilitation Services Grant through the American Indians with Disabilities Program. In 2002, the ICAS partnered with the NSB to administer a $126,000 grant from the BIA to develop a transportation improvement plan.

ICAS offers its member communities various services including scholarship grants, and clothing or work-related tools for members in need. Revenue from state-granted bingo license allows ICAS to send council members to state and regional meetings at which important subsistence matters are discussed. ICAS also helps resolve disputes over Native allotments and also offers its members dispute resolution services (Alaska Judicial Council, 1993). Finally, the ICAS continues to be engaged in the protection of subsistence, sovereignty, and dominion with respect to various land problems involving the North Slope Iñupiat.

6.4 Role of Non-Profit Organizations

Non-profit organizations in the NSB are primarily involved in education, health/medical services, public housing services, and other community services. Non-profit organizations obtain funding from regional and village for-profit Alaska Native corporations, the NSB government, and the federal and state governments.

A list of the major non-profit organizations based in the NSB and their most current income data are provided in Table 6-7. The income data are based on income tax returns filed with the Internal Revenue Service. Historical income data for non-profit organizations are not available from this source.

Table 6-7. Assets and Income of Major Non-profit Organizations, North Slope Borough, 2004

Non-Profit Entity	Income
Barrow	
Arctic Slope Native Association, Ltd	$22,557,457
Barrow Utilities and Electric Cooperative	$11,882,325
Ilisagvik College	$10,257,970
Barrow Arctic Science Consortium	$1,948,900
Barrow Search and Rescue Inc	$1,165,789
Alaska Eskimo Whaling Commission	$1,113,055
Silakkuagvik Communication Inc (Radio)	$1,085,014
Utqiagvigmiut Agviqsiuqtit Agnanich	$691,661
International Association of Lions Club	$185,221
UIC Foundation Inc	$128,440
Arctic Development Council, Inc	$105,865
Barrow Curling and Hockey Association	$101,131
Zion Unlimited	$65,286
Nuiqsut	
Kuukpikmiut Subsistence Oversight Panel Inc	$70,410
Utuqqanaaqaguk Inc.	$0
Kaktovik	
Salligutchit Inc.	$0
Anaktuvuk Pass	
Aaniyak Inc	$0
Anaktuvuk Pass Health Corporation	
Point Hope	
Tigara Educational Foundation Inc	$116,759
Tikigaqmiut Inc.	$0
Wainwright	
Wainwright Cooperative Association	$1,643,253
Allualikmiut Inc	$0
Point Lay	
Native Village of Point Lay 3BA	$836,532

Source: Melissa Data, 2005.

A discussion of the major non-profit corporations involved in education, public housing services, and health care on the North is provided in the following sub-sections.

6.4.1 Ilisagvik College

The college had its origins in 1986, when the NSB created the North Slope Higher Education Center. The name was changed in 1991 to Arctic Sivunmun Ilisagvik College, and in 1995 the Borough passed an ordinance incorporating Ilisagvik College as a public and independent non-profit corporation.

The two-year college manages the Iñupiat Heritage Center and the Tuzzy Consortium Library under agreements with the NSB. The college also provides adult basic education instruction and offers the GED, as well as coursework in a variety of vocational and academic programs leading towards certificate and associate degrees. It offers associate degrees in Arts and in Applied Sciences, and one-year certificates in a variety of trades. Programs offered include Carpentry/Carpenter, Electrician, Diesel Mechanics Technology/Technician, Truck and Bus Driver/Commercial Vehicle Operation, Art/Art Studies, General Mental and Social Health Services and Allied Professions.

The College is the principal employer in the education field in the NSB. The College's expenditures in 2002 and 2003 amounted to $7.1 million (North Slope Borough, 2005).

The NSB, Ukpeagvik Iñupiat Corporation, Arctic Slope Native Association, ASRC and the Kuukpik Corporations have all provided financial and logistical support to the students and programs of Ilisagvik College.

6.4.2 Tagiugmiullu Nunamiuulu Housing Authority

Tagiugmiullu Nunamiuulu Housing Authority (TNHA) is the housing authority in the North Slope region. The NSB Housing Department has acted as the agent for TNHA through management of its low-income, HUD-subsidized housing programs (NSB School District, 2005b). In 2004, the NSB announced that all the Housing Department's rental units would be transferred to the TNHA as part of its budget reform program to transfer certain community services to private enterprise and non-profit service organizations (North Slope Borough, 2004). Table 6-8 provides details on the amount of funding and the kinds of projects undertaken by TNHA. Based on information in the table, TNHA has administered housing projects worth over $51.5 million since 1998. The lead agency typically covers total costs of the projects; except in the low-rent units construction project, in which case funds were leveraged from other sources including AHFC and the North Slope Borough.

Table 6-8. Funded Projects for Tagiugmiullu Nunamiuulu Housing Authority, North Slope Communities

Lead Agency	Year	Project Description	Project Stage	Agency Cost ($)	Total Cost ($)
Anaktuvuk Pass					
HUD	2004	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Preliminary	158,229	158,229
HUD	2003	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Construction	201,251	201,251
HUD	2002	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	173,928	173,928
HUD	2000	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	168,206	168,206
HUD	1999	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	168,206	168,206
HUD	1998	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	179,863	179,863
Subtotal				1,049,683	1,049,683

Lead Agency	Year	Project Description	Project Stage	Agency Cost ($)	Total Cost ($)
Atqasuk					
HUD	2004	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Preliminary	137,424	137,424
HUD	2003	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Construction	140,288	140,288
HUD	2000	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	117,056	117,056
HUD	1999	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	117,056	117,056
HUD	1998	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	125,127	125,127
Subtotal				636,951	636,951
Barrow					
HUD/AHFC	2001	Construct Low Rent units in 7 North Slope Villages	Completed	183,863	6,841,782
HUD	2001	Indian Housing Block Grant for communities in the Region (not yet allocated)	Completed	4,506,411	4,506,411
HUD/AHFC	2000	Construct Low Rent units in 7 North Slope Villages	Completed	183,863	6,841,782
HUD	2000	Indian Housing Block Grant - Arctic Slope Regional Corporation	Completed	3,293,624	3,293,624
HUD/AHFC	1999	Construct Low Rent units in 7 North Slope Villages	Completed	205,292	6,841,782
HUD	1999	Indian Housing Block Grant - Arctic Slope Regional Corporation	Completed	3,293,624	3,293,624
HUD/AHFC	1998	Construct Low Rent Units in 7 North Slope Villages	Completed	678,429	6,841,782
HUD	1998	Indian Housing Block Grant - Arctic Slope Regional Corporation	Completed	2,997,418	2,997,418
Subtotal				15,342,524	41,458,205
Kaktovik					
HUD	2004	Indian Housing Block Grant	Preliminary	164,637	164,637
HUD	2003	Indian Housing Block Grant	Construction	211,432	211,432
HUD	2000	Indian Housing Block Grant	Completed	173,600	173,600
HUD	1999	Indian Housing Block Grant	Completed	173,600	173,600
HUD	1998	Indian Housing Block Grant	Completed	186,168	186,168
Subtotal				909,437	909,437

Nuiqsut					
HUD	2004	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Preliminary	301,911	301,911
HUD	2003	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Construction	268,999	268,999
HUD	2000	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	217,284	217,284
HUD	1999	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	217,284	217,284
HUD	1998	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	233,455	233,455
Subtotal				1,238,933	1,238,933
Point Lay					
HUD	2004	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Preliminary	198,825	198,825
HUD	2003	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Construction	135,977	135,977
HUD	2000	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	108,439	108,439
HUD	1999	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	108,439	108,439
HUD	1998	Indian Housing Block Grant NAHASDA administration, operating & construction funds	Completed	115,842	115,842
Subtotal				667,522	667,522
Wainwright					
HUD	2004	Indian Housing Block Grant	Preliminary	339,922	339,922
HUD	2003	Indian Housing Block Grant	Construction	438,031	438,031
HUD	2000	Indian Housing Block Grant	Completed	355,599	355,599
HUD	1999	Indian Housing Block Grant	Completed	355,599	355,599
HUD	1998	Indian Housing Block Grant	Completed	379,830	379,830
Subtotal;				1,868,981	1,868,981
North Slope Borough					
HUD	2004	Indian Housing Block Grant - Arctic Slope Region	Preliminary	3,694,943	3,694,943
Total				25,408,974	51,524,655

6.4.3 Arctic Slope Native Association (ASNA) and Other Non-Profit Organizations Involved in Health Care

As noted in Chapter 2, the Arctic Slope Native Association (ASNA) was established as a non-profit corporation in 1966 to advocate for Native control of land and resources on the North Slope. It was active in this mission until 1972, at which time the Iñupiat Community of the Arctic Slope was formed.[45] ASNA was dormant as an organization until 1991. In that year the ASNA board of directors reorganized and revitalized ASNA with a new focus: to bring local control of federally funded programs and services to the North Slope Iñupiat. Since 1996, ASNA has been working principally as the administrator of the Samuel Simmonds Memorial Hospital, an Indian Health Service health care facility in Barrow. The ASNA assumed management of the hospital under a P.L. 93-638 self-determination contract.[46] ASNA also currently manages the health clinics in Barrow, Atqasuk, Kaktovik, Nuiqsut, Point Lay, and Wainwright.

Anaktuvuk Pass receives medical care through a contract with the Tanana Chiefs Conference, while Point Hope receives medical care through a contract with the Maniilaq Association. The Tanana Chiefs Conference is an Alaska Native non-profit corporation charged with advancing tribal self-determination and enhancing regional Native unity. The Maniilaq Association is an Alaska tribally-operated, non-profit, health and social services organization in Northwest Alaska.

6.5 Economic Linkages Among Entities

As described in Chapters 4 and 5, local government and Native Alaska corporations have played key roles in the North Slope economy. This section provides an overview of the economic linkages among the entities within each of these two groups, and then examines the linkages between the two groups.

Local government on the North Slope consists of the NSB and the cities. As discussed in Chapter 4, most of the cities on the North Slope transferred nearly all municipal powers to the NSB, including operation of basic services and facilities. Moreover, the NSB has provided directly or indirectly the majority of full time employment in the villages. The NSB, given its functions and powers, has been a conduit for channeling federal and state dollars as well as property tax revenues to the cities in the form of public facilities, programs, and services.

The NSB and cities have also been linked through residents who serve on different NSB agencies, commissions, and committees or are directly employed by the Borough programs within the villages. In addition, NSB-related business consumes a significant portion of the agenda items of city council meetings in terms of land, housing, services, and employment (Smythe and Worl, 1985).

Linkages between the two types of Alaska Native corporations—regional and village—have also developed over the years. Joint ventures between Alaska Native village corporations and ASRC companies have helped reduce the village corporation's exposure to risk, uncertainty, and opportunism from companies outside of Alaska. It is also likely that alliances made between the village corporations and ASRC companies help the newer or smaller village corporations obtain access to resources and legitimacy.

[45] The initial ASNA is considered to be the predecessor of the ASRC. In most regions of Alaska the Native Associations involved in the settlement of land issues during the 1960s evolved into the regional corporations established under ANCSA.

[46] Under the Indian Self-Determination and Education Assistance Act (Public Law 93-638, as amended) Alaska Native corporations could assume from the Indian Health Service the administration and operation of health services.

The local governments and Alaska Native corporations have been closely linked almost since their formation. In particular, the NSB and ARSC have a long history of cooperation and mutual support. In the 1970s, there were some areas of initial conflict between the NSB and ARSC due in part to personality conflicts and different strategies toward development (see, for example, the discussion in Arctic Circle Virtual Classroom (2005)) about early government-corporate disagreements with respect to oil and gas development). According to Worl et al. (1981), these conflicts were the result of inherent differences between the two entities:

> The NSB has, in one sense, a broader and somewhat different constituency than the ASRC, although at first glance the constituencies appear to be identical. The NSB represents and serves all residents of the region, deals directly with all major and most minor private industry and businesses, and is responsible to and a legal partner of federal and state governments. ASRC, on the other hand, represents an essentially closed class of shareholders, is directly influenced by a smaller number of local residents, and is responsible to and a business partner of many non-local as well as local businesses. Informants suggest that the disjunctures in the values of the shareholders (profit versus traditional life-style) are not equally represented within the corporation, nor is it required that they should be, given its mission.

In addition, there were initial complaints by ASRC that it had too small a share of major contracts let by the NSB (Worl et al., 1981). The NSB received early and considerable pressure from its constituency to provide services and facilities quickly; ASRC, as a new corporation, could not guarantee that it could deliver projects in time for the NSB to fulfill its promises. Over time, however, NSB contracts were given more frequently to ASRC as the corporation's capacity to perform these contracts in a satisfactory manner expanded. Moreover, as indicated in Chapter 5, ASRC has become a dominant economic force on the North Slope in its own right. As a result of its investments in oil development on the North Slope, ASRC and its subsidiaries constitute the largest local property tax payers in the region (National Research Council, 2003).

Alaska Native village corporations were also able to contract NSB capital improvement projects as they increased their capacity to perform these contracts. As the village corporations participated in more joint ventures with ASRC their collective capacity to compete for NSB contracts was considerably improved (Worl et al., 1981).

Over the years, the tribal governments have generated additional economic activity on the North Slope through their government-to-government relationship with the federal government. As part of this relationship, the tribal governments have used funds previously supplied to federal agencies and provided services traditionally supplied by those agencies. The tribal entities have been viewed as representing the interests of the tribal membership and a potential partner with the NSB in providing community services.

The economic linkage that have evolved among these various entities over the years have formed a complex web or network that provides jobs and public services to residents of the North Slope. The network has acted as a means through which there can be a transfer and flow of resources—whether material (money, equipment) or non-material (information, support, training). It also has linked up not only the organizations, agencies, and actors themselves, but their actions: policies, programs, and projects. The formation and operation of this network has been facilitated by "board interlocks"—ties among organizations through a member of one organization sitting on the board of another. For example, members of the North Slope Borough Assembly have also often served on the ASRC Board of Directors. The social embeddedness created by interlock ties has helped ensure that economic development on the North Slope has been shaped by shared value systems and needs in the local communities.

7 Individual and Household Economic Impacts and Responses

The preceding chapters of this study presented a detailed description of the role that various entities have played in shaping the North Slope economy over the past three decades. In this chapter, these higher-level forces of economic change are linked to economic impacts and responses at the individual and household level.

This chapter draws on readily available census and economic data to describe changes in Iñupiat households and their economies, including changes in public services (Section 7.1.1), educational attainment (Section 7.1.1.3), employment and income (Section 7.1.2), cost of living (Section 7.1.3, demographic characteristics (Section 7.1.4), the harvest of subsistence resources (Section 7.1.5), and the overall quality of life (Section 7.1.6) between 1965 and the present. In addition, changes in selected characteristics of non-Iñupiat households on the North Slope are examined. As noted in Section 1.2, historical U.S. Census Bureau data correspond to two slightly different geographic areas. The demographic data provided by the 1960 and 1970 Censuses are for the Barrow Census Division (which only included the communities of Anaktuvuk Pass, Barrow, and Wainwright), while the data provided by the 1980, 1990, and 2000 Censuses are for the North Slope Borough and cover all eight North Slope communities.

7.1.1 Community and Household Services

As described in Chapter 2, despite some improvements in economic conditions during the post-World War II years, the overall quality of life in North Slope villages through the 1960s continued to be poor in comparison with that in most communities in the United States. During these years none of the villages, with the exception of Barrow,[47] had a central plant capable of generating electricity for the entire community (Circumpolar Research Associates, 1999). Other public utilities and law enforcement services were minimal, schools were inadequate, and there were no public libraries, community centers, or recreational facilities.

With the inception of the ASRC and NSB in the 1970s, employment opportunities for the North Slope Iñupiat greatly improved, as did the provision of many public services in the villages. As discussed in Chapter 4, the NSB assumed area-wide responsibility for a wide range of municipal services. This section examines the improvements that occurred in water and sanitation facilities, health and social services, education, housing, public safety, transportation and communications.

7.1.1.1 Water and Sanitation Services

During the past twenty-five years, there has been a substantial increase in basic public services within North Slope communities that have significantly improved the quality of village life. Previously, for example, to obtain drinking water in winter, ice blocks was cut from freshwater lakes, hauled by dog team and stacked next to the house until they were needed. A 1973 survey of public services in the NSB noted that Barrow was by far the most populous community in Alaska without a safe source of potable water or piped water and sewer system (Dupere and Associates, Inc., 1973).[48] According to the U. S. Census, as late as 1980, more than 80 percent of the year-round housing units in the

[47] In 1946, generators were introduced to Barrow to supply electricity (Worl and Smythe, 1986).

[48] The exception in Barrow was the federally owned housing in which U.S. government employees resided. This housing compound had potable water and was connected to a piped water and sewer system (Dupere and Associates, Inc., 1973).

Borough did not have access to a public sewage disposal system. Since 1982, Ukpeagvik Iñupiat Corporation Construction Inc. has performed $180 million worth of utility work to provide six NSB communities with long-awaited modern water and sewer service (DCCED, 2004a). A state-of-the-art 3.5 mile insulated underground tunnel known as the "utilidor" contains water, sewer, electric and telephone lines, and provides service to roughly 1,000 households in Barrow (73 percent of households), nearby subdivisions and nearly all of the public buildings (DCCED, 2004a). Today, the majority of households in North Slope communities have access to public water and sanitation facilities. Table 7-1 provides an overview of current water and sanitation sources in the region. While the availability of utilities has greatly increased over the years due to completion of capital improvement projects, there are still many homes without complete plumbing or kitchen facilities (Circumpolar Research Associates, 2004).

Table 7-1. Water and Sanitation Sources, North Slope Communities, 2000

	Drinking Water				Sanitation		
	Total Number of Housing Units	Number of Housing Units on Public Water	Percent Housing Units on Public Water	Percent Housing Units on Other Systems[1]	Number of Housing Units on Public Sewers	Percent Housing Units on Public Sewers[2]	Percent of Housing Units on Other Systems
Anaktuvuk Pass	101	99	98	2	99	98	2
Atqasuk	60	50	83	17	50	83	17
Barrow	1,620	1,568	97	3	1,568	97	3
Kaktovik	95	81	85	15	81	85	15
Nuiqsut	126	125	99	1	125	99	1
Point Hope	215	188	87	13	188	87	13
Point Lay	67	64	96	4	64	96	4
Wainwright	179	134	75	25	134	75	25

[1] May include cisterns and streams.

[2] May include haul systems.

Source: Alaska Department of Commerce, Community and Economic Development, 2004

The Ukpeagvik Iñupiat Corporation Construction continues to serve as the prime mechanical contractor on water and sewer treatment plant projects under construction across the NSB. The company also installs heating and plumbing and manages subcontractors installing fire protection and environmental controls.

7.1.1.2 Health and Social Services

The first hospital on the North Slope was constructed in Barrow in 1920 by Presbyterian missionaries (NSB Commission on Iñupiat History, Language and Culture, 2004), but health conditions in other North Slope communities remained extremely poor. During World War II it was reported that half of the young Iñupiat men who volunteered for military duty had to be discharged as physically unfit (Chance, 1990). Ten percent of all Iñupiat children died before their first birthday, and tuberculosis was a major cause of death among adults. Health conditions improved in the 1950s as a result of federal programs (Kruse, 1984). However, in many North Slope villages routine modern medical care continued to be unavailable (Hess, 1993). By this period, the U.S. Public Health Service (through its Indian Health Service) operated the hospital in Barrow, but it only provided itinerant medical and dental care to the smaller villages of the region.

In 1976, the Borough became a central player in providing improved health services on the North Slope. The Iñupiat Community of the Arctic Slope passed a resolution transferring to the newly-created NSB Department of Health authority to contract for health services.[49] The establishment of the department led to a dramatic improvement in the overall health and social services available to North Slope residents. As the administrative center of the NSB, many regional health and social services are located in Barrow, including the Samuel Simmonds Memorial Hospital, which receives significant funding from the NSB. The hospital, which was constructed in 1963 by the Indian Health Service, is a 14-bed qualified acute care facility and state-certified medevac service (DCCED, 2004). In 1996, the Arctic Slope Native Association assumed management of the hospital under a P.L. 93-638 contract. The Ukpeagvik Iñupiat Corporation provides hospital support services, which include administration, housekeeping and facilities maintenance, under a P.L. 93-638 contract.

The NSB Search and Rescue, organized in 1979, provides rescue capabilities and medevac services for all North Slope villages (Hess, 1993; NSB Search and Rescue, 2004). Medevac aircraft can transport patients to Barrow, Fairbanks or Anchorage.

In the outlying villages, health clinics constructed by the NSB and staffed by community health aides are open 24 hours a day for emergencies (NSB School District, 2005b). Physicians at the Samuel Simmonds Memorial Hospital in Barrow are able to exchange graphic and video images with village health clinics and assist in long-distance diagnosis of injuries or illness. This technology provides distant physicians and laboratories the information to determine appropriate treatment and whether or not patients require transport to out-of-town facilities for treatment. It can reduce unnecessary patient travel and disruptions to patient's family and lifestyle.

The NSB also maintains a range of social services to meet the mental, emotional and social well being of residents (NSB School District, 2005). Some of these services include housing, meals and transportation for senior citizens; mental health counseling; and day care services.

In 2003, the NSB Department of Health and Social Services began a two year plan to transfer many of its services to the Arctic Slope Native Association and other non-profit corporations, and some functions may eventually be transferred to the private sector (North Slope Borough, 2005b). These actions are part of the NSB's budget reform program to curb its operating costs. The Arctic Slope Native Association currently manages the health clinics in Barrow, Atqasuk, Kaktovik, Nuiqsut, Point Lay, and Wainwright. The health clinic in Anaktuvuk Pass is managed through a contract with the Tanana Chiefs Conference, while Point Hope is managed through a contract with the Maniilaq Association.

7.1.1.3 Education

In 1960, 32 percent of North Slope residents 25 years old and over had completed only the first years of elementary school and 17 percent lacked any formal education (Table 7-2). When the Borough assumed responsibility for education in the mid-1970s, there was still no high school program offered in any school in the region except for ninth grade classes in Barrow (Underwood et al., 1978). Students wishing to continue their education into high school were therefore required to leave the region to attend BIA schools at Mt. Edgecumbe (Sitka), Chemawa (Oregon), or elsewhere or they could attend high schools in communities such as Anchorage and Fairbanks and board with families in

[49] The NSB Department of Health was established in 1976 (Worl and Smythe, 1986). In the early 1980s, social service programs were consolidated under the health department, resulting in a new and expanded NSB Department of Health and Social Services (Smythe and Worl, 1985).

those towns. The dropout rate is believed to have been very high. Those who did complete the program often found it difficult to return to their village way of life.

When the North Slope Borough School District became responsible for the Borough's schools in 1974-75, it acquired control over policy decisions, buildings, curriculum, and finances. The NSB initiated a borough-wide high school program in 1975, and the provision of adequate educational facilities was a very high-priority item in the NSB Capital Improvements Program (Underwood et al., 1978).[50] When the Barrow high school was opened in 1983, it was ranked as one of finest facilities in the state (Worl and Smythe, 1986), but even the most isolated villages had the resources to build modern high schools (thereby eliminating the necessity of for high school students to migrate to distant boarding schools).

These improvements in the education system not only raised education levels over time, but also gave each community's youth a better chance of going to college in Fairbanks, Anchorage, or some other large population center. In 1986, the NSB created the North Slope Higher Education Center, a cooperative effort between the Borough and the University of Alaska Fairbanks.[51] The North Slope Higher Education Board and the North Slope Borough Assembly changed the institution's name to Arctic Sivunmun Ilisagvik College in 1991 to reflect its development into a community college. Arctic Sivunmun Ilisagvik College merged with the Mayor's Workforce Development Program in 1994, adding facilities and resources to support the growing number of vocational education opportunities available at the College. In 1995, the NSB established, by ordinance, the Ilisagvik College Corporation, an independent, public, non-profit corporation of the NSB with full power for governance of the College vested in the Board of Trustees. While the number of Barrow residents enrolled in the College declined from 877 in 1993 to 768 in 1998, the number of individuals from other villages enrolled increased by 146 for the same period (Circumpolar Research Associates, 1999). Additional information on Ilisagvik College is provided in Chapter 6.

ASRC has also contributed to raising the educational level of the North Slope Iñupiat. The Corporation constructed a dormitory for Alaska Natives at the University of Alaska Fairbanks and spends $600,000-$800,000 a year on scholarships (Thompson, 1998).

The improvement in educational facilities in North Slope communities is reflected in changes in the educational level of the region's residents. Median years of education among North Slope residents ages 25 and over doubled between 1960 and 1977, moving from less than 4 years to nearly 9 years (Kruse et al., 1981). Younger North Slope residents had much higher levels of education than older residents; residents ages 18-34 in 1977 had a median of more than 12 years of education.[52] By 2000, 21 percent of North Slope residents 25 years old and over had earned a degree from a 2- or 4-year college or had completed a graduate degree (Table 7-2). An additional 21 percent had at least some college education. These percentages are comparable to national averages and values for the State of Alaska as a whole.

[50] After the 1972 Hootch v. Alaska State Operated School System lawsuit and the 1976 Tobeluk v. Lind consent decree, the NSB was compelled to build schools in each of its villages so Native children could attend school in their home communities.

[51] In 1974, the NSB organized its own post-secondary institution — the Iñupiat University of the Arctic. Although the University was granted candidacy status for accreditation purposes, the compromises to the Iñupiat character and orientation that this necessitated produced considerable dissension in the ranks of the University's supporters (Barnhardt and Harrison, 1993). These concerns, along with growing political and financial conflicts led to the closure of the school by the borough Assembly in 1980.

[52] The large increase in the non-Iñupiat resident population that occurred between 1970 and 1980 contributed to the increase in educational levels on the North Slope. Many of these new residents were highly-educated professionals, such as teachers and administrators.

Table 7-2. Educational Attainment of North Slope Residents, 1960, 1970, 1980, 1990, and 2000

	United States	Alaska	North Slope
	Percent of Persons 25 Years Old and Over		
1960			
No school years completed	2.4	3.5	12.7
Elementary 1-4 years	6.9	4.6	23.4
5-8 years	32.4	20.2	23.1
9th to 12th grade, no diploma	18.7	18.9	9.9
High School graduate (inc. equiv.)	21.2	32.3	13.1
College 1-3 years	8.6	12.9	13.7
4 years or more	9.6	0.5	4.1
1970			
No school years completed	-	-	15.1
Elementary 1-4 years	5.3		17.3
5-8 years	22.5	12.5	40.1
9th to 12th grade, no diploma	17.1	14.9	8.4
High School graduate (inc. equiv.)	34	37.7	9
College 1-3 years	10.2	14.9	3.6
4 years or more	11.1	14.1	6.5
1980			
Less than 9th grade	17.5	9	33.8
9th to 12th grade, no diploma	13.7	8.5	9.7
High School graduate (inc. equiv.)	36.8	38.9	27.4
College 1-3 years	14.9	22.6	16.4
4 years or more	17	21.1	12.6
1990			
Less than 9th grade	10.4	5.1	19
9th to 12th grade, no diploma	14.4	8.2	12.5
High School graduate (inc. equiv.)	30	28.7	30.5
Some college, no degree	18.7	27.6	19.2
Associate degree	6.2	7.2	4.7
Bachelor's degree	13.1	15	9.3
Graduate or professional degree	7.2	8	4.8
2000			
Less than 9th grade	7.5	4.1	11.8
9th to 12th grade, no diploma	12.1	7.5	10.8
High School graduate (inc. equiv.)	28.6	27.9	35.1
Some college, no degree	21	28.6	21.5
Associate degree	6.3	7.2	3.9
Bachelor's degree	15.5	16.1	11.1
Graduate or professional degree	8.9	8.6	5.9

Source: U.S. Census Bureau

Table 7-3. Educational Attainment in North Slope Communities, 1990 and 2000

	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Pt. Hope	Pt. Lay	Wainwright
	Percent of Persons 25 Years Old and Over							
1990								
Less than 9th grade	23	29	15.8	28.6	32.5	22.1	26.3	30.7
9th to 12th grade, no diploma	14.3	19	10.5	6.8	26.9	16.5	11.3	15.9
High School graduate (inc. equiv.)	38.9	34	28.3	34.6	18.8	37.5	45	39.4
Some college, no degree	15.9	12	19.9	21.8	15	15.8	12.5	4.8
Associate degree	0	0	7.2	0	1.3	1.1	5	0
Bachelor's degree	4.8	0	12.4	3.8	1.3	5.1	0	6
Graduate or professional degree	3.2	6	5.9	4.5	4.4	1.8	0	3.2
2000								
Less than 9th grade	14.3	10.1	9.8	24.7	20.6	14.8	9.6	12.1
9th to 12th grade, no diploma	16.2	35.4	8.2	11.1	16.2	8.7	16.5	18.8
High School graduate (inc. equiv.)	49.4	36.4	31.1	33.3	42.2	42	37.4	48.6
Some college, no degree	6.5	8.1	25.2	14.8	13.7	18.3	30.4	9.6
Associate degree	1.9	6.1	5.3	0	0	2.6	0	0
Bachelor's degree	6.5	2	13.6	4.9	4.9	9.6	6.1	6.7
Graduate or professional degree	5.2	2	6.7	11.1	2.5	4.1	0	4.3

Source: U.S. Census Bureau

Some analysts believe that Alaska Native teachers may be more effective than other teachers in helping Alaska Native students learn, in part because Native teachers would be more likely to stay in small villages long-term, provide better continuity for students, and share cultural values (Goldsmith et al., 2004). The number of Alaska Native teachers in North Slope schools has not changed appreciably over the years. In both 1984 and 2001, about 12 percent of the teacher positions in the NSB School District were held by Alaska Natives (Goldsmith et al., 2004; Smythe and Worl, 1985). In comparison, about five percent of the teachers in all Alaska school districts are Alaska Natives (Goldsmith et al., 2004). However, 20 of the 55 school districts in the state have a higher percentage of Alaska Native teachers than the NSB School District.

7.1.1.4 Housing

Between 1947 and 1953, the Alaska Native Services initiated a housing program with support from the navy to provide 100 new frame houses in Barrow (Worl and Smythe, 1986). However, many North Slope families continued to live in substandard housing through the 1960s and early 1970s. Some additional efforts at upgrading housing began about 1967 with a BIA program at Anaktuvuk Pass to replace sod homes and at Barrow to realign streets and rehabilitate some houses (Underwood et al., 1978). The Farmers Home Administration has financed much of Barrow's new housing and made a number of renovation loans. The Alaska State Housing Authority assisted in projects at Point Hope in 1970 and at Wainwright in 1972.

At the time the NSB was incorporated, housing on the North Slope was still more crowded and less thickly insulated than urban houses elsewhere in Alaska (Underwood et al., 1978). The typical household on the North Slope in 1973 consisted of five or six people (the average was 5.37) occupying drafty quarters averaging 630 square feet (Dupere and Associates, Inc., 1973). Eben Hopson, the first mayor of the NSB, made improved housing priority, and housing construction accelerated markedly under programs of the NSB (Eben Hopson Memorial Archives, 2004). Over the years the NSB Housing Department has endeavored to provide modern and affordable rental units to all residents of the North Slope (NSB School District, 2005). The high cost of construction in the Arctic and scarcity of available privately held or inexpensively developable land made this program a vital one for Borough residents.

During the 1970s, housing emerged as an issue not only for the potential effect it had on Iñupiat families, but also as a means to control community development (Smythe and Worl, 1985). In particular, housing for non-Iñupiat in-migrant workers became a significant criterion for community growth and diversification. The availability of new housing offered significant incentives to non-Iñupiat and their families to seek work and remain within the community (Worl et al., 1981). For example, while most of the low-income housing in Barrow was occupied by Iñupiat families, the majority of tenants in the NSB's multiple-family units were Caucasian NSB government employees who migrated to Barrow (Worl and Smythe, 1986).

In spite of the NSB housing program, a BIA Housing Improvement of Barrow conducted in 1985 found that 184 houses occupied by Natives were in substandard condition (these were private homes not built by the NSB) (Worl and Smythe, 1986). During the Resident Employment and Living Improvements Program, jobs were created adding improvements to residential housing in North Slope villages (Hess, 1993). In addition, a borough program assisted families to secure bank loans to build new homes. As discussed in Chapter 6, the NSB Housing Department has acted as the agent for the Tagiugmiullu Nunamiuulu Housing Authority through management of its low-income, HUD-subsidized housing programs.

The improvement in housing in North Slope communities is reflected in the U.S. Census housing statistics for the region (Table 7-4). In 1960, for example, Barrow had a total of 237 dwelling units. By 1985, the number had increased to 1,000, of which about 15 percent were low-income housing (Worl and Smythe, 1986).[53] The number of housing units in Barrow had increased to 1,620 by 2000. For the North Slope region as a whole, the number of housing units increased from 319 to 2,538 between 1960 and 2000. The increase in housing was largely due to the NSB Capital Improvements Program. However, in the private sector, individuals and businesses also took advantage of the housing shortage to construct rental units (Worl and Smythe, 1986). Some of this private sector housing was constructed to attract employees who tended to be non-Iñupiat (Smythe and Worl, 1985). The preponderance of both public and private rental housing is reflected in the low rate of private home ownership compared to the state or nation as a whole.

With the availability of new housing in the villages (and increased employment opportunities) larger family units separated into smaller household units.[54] The size of households in Barrow declined sharply from 6.1 in 1960 to 3.60 in 1980. In comparison to other North Slope villages, the average

[53] According to the U.S. Department of Housing and Urban Development, the cost of building low-income public housing units in the Arctic coastal region was about 2.3 times higher than in Anchorage (Underwood et al., 1978).

[54] Schwede (2003) notes that the Iñupiaq definition of "household" may not match that of the U.S. Census Bureau. For example, Iñupiaq respondents may not identify households in terms of shared physical structure, but rather on the basis of sharing of domestic functions such as earning and pooling income, cooperating in subsistence activities, cooking, child care, child rearing, and other domestic tasks.

size of households in Barrow was almost consistently lower over the time period for which data are available, probably as a result of the higher number of non-Iñupiat families in Barrow (Smythe and Worl, 1985). The division of extended family units into nuclear forms residing in separate domiciles raised concerns about the social impact of reduced intra-family contact. However, Smythe and Worl (1985) found no indication that traditional patterns of extended family relationships (visiting, sharing. cooperating) had changed significantly. As the researchers observed:

> While [the fragmentation of the extended family into smaller households] has been an ongoing process since the turn of the century, the recent construction of North Slope Borough housing accelerated the rate. However, both economic needs and political interests have facilitated a relatively high degree of social interaction and cohesiveness among extended kin members living in different households. Also, households continue to organize themselves to participate together in common subsistence activities which can be maximized through the cooperative efforts of extended family members. The cultural values of the Iñupiat place a strong emphasis on sharing among kin. This orientation persists even when kin members are living in different households, and thus encourages continued social interaction (Smythe and Worl, 1985:439).[55]

Although the average household size in North Slope communities has declined over the years as a result of economic development, new housing construction and changing Borough housing policies,[56] it has consistently remained higher that of Alaska or United States as a whole (Table 7-4).

[55] However, Smythe and Worl (1985) suggested that the high cost of new housing, including rent, utilities and taxes, may limit the ability, or the choice, of some extended family members to participate in subsistence activities or to financially support subsistence enterprises.

[56] The reduction in household size is consistent with the generalization that Alaska Native persons, couples, and families seek privacy and prefer living in separate houses when they can afford to maintain them (Jorgensen 1995).

Table 7-4. Housing Characteristics of North Slope Residents, 1960, 1970, 1980, 1990, and 2000[1]

	United States	Alaska	North Slope
1960			
Total housing units	-	-	319
Average household size	-	-	-
Homeownership rate	56%	41%	69%
Median value of owner-occupied housing units	$53,533	$40,937	$22,493
Median rent paid	$261	$495	
1970			
Total housing units	-	-	505
Average household size	3.14	-	-
Homeownership rate	58%	44%	68%
Median value of owner-occupied housing units	$64,195	$87,229	$40,405
Median rent paid	$336	$649	$434
1980			
Total housing units	-	-	1158
Average household size	2.76	-	4.22
Homeownership rate	59%	47%	39%
Median value of owner-occupied housing units	$85,678	$136,503	$83,318
Median rent paid	$359	$668	$661
1990			
Total housing units	-	-	2,153
Average household size	2.63	-	3.45
Homeownership rate	64%	58%	40%
Median value of owner-occupied housing units	$103,510	$123,532	$105,604
Median rent paid	$489	$658	$785
2000			
Total housing units	--	--	2,538
Average household size	2.59	2.74	3.54
Homeownership rate	66%	62%	49%
Median value of owner-occupied housing units	$123,008	$148,309	$116,529
Median rent paid	$619	$741	$928

[1] Adjusted to 2001 dollars using the U.S. Department of Labor, Bureau of Labor Statistics consumer price index for the Anchorage metropolitan statistical area.
- Data were inapplicable or unavailable for this report
Source: U.S Census Bureau.

Table 7-5. Housing Characteristics of North Slope Communities, 1960, 1970, 1980, 1990 and 2000[1]

	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Pt. Hope	Pt. Lay	Wainwright
1960								
Total housing units	-	-	237	-	-	-	-	-
Average household size	-	-	6.1	-	-	-	-	-
Homeownership rate	-	-	72%	-	-	-	-	-
Median value of owner-occupied housing units	-	-	-	-	-	-	-	-
Median rent paid	-	-	-	-	-	-	-	-
1970								
Total housing units	26	-	395	-	-	69	-	55
Average household size	-	-	-	-	-	-	-	-
Homeownership rate	-	-	-	-	-	-	-	-
Median value of owner-occupied housing units	-	-	-	-	-	-	-	-
Median rent paid	-	-	-	-	-	-	-	-
1980								
Total housing units	63		691	60	54	137	19	107
Average household size	3.71	4.52	3.60	4.50	4.00	4.45	5.33	4.19
Homeownership rate	-	-	-	-	-	-	-	-
Median value of owner-occupied housing units	-	-	-	-	-	-	-	-
Median rent paid	-	-	$679	-	-	-	-	-
1990								
Total housing units	81	64	1,184	82	102	174	48	160
Average household size	3.36	4.15	3.27	3.29	3.93	4.07	3.93	3.69
Homeownership rate	57%	56%	31%	47%	63%	40%	47%	71%
Median value of owner-occupied housing units	$130,860	$109,922	$93,303	$112,278	$108,876	$105,473	$114,503	$109,792
Median rent paid	$546	$378	$822	$378	$393	$255	$687	$533
2000								
Total housing units	101	60	1,620	95	126	215	67	179
Average household size	3.73	4.18	3.25	3.36	3.60	4.40	3.02	3.54
Homeownership rate	80%	80%	41%	51%	64%	67%	56%	57%
Median value of owner-occupied housing units	$115,706	$112,517	$149,852	$125,374	$92,565	$94,622	$118,894	$84,028
Median rent paid	$797	$977	$1,009	$779	$778	$716	$797	$709

[1] Adjusted to 2001 dollars using the U.S. Department of Labor, Bureau of Labor Statistics consumer price index for the Anchorage metropolitan statistical area.
- Data were inapplicable or unavailable for this report
Source: U.S Census Bureau.

7.1.1.5 Public Safety

Between 1966 and 1972, North Slope villages lost 30 lives to fire, meaning that 1 out of every 100 persons died in fires (Hess, 1993). The effort to improve fire protection in the villages began soon after the formation of the NSB. Fire stations were established in each of the villages, and the stations were

staffed with trained volunteer on-call firefighters. The NSB Fire Department also provides a wide variety of emergency medical training in the region (NSB Fire Department, 2004). As noted above, the NSB Search and Rescue provides rescue capabilities for all North Slope villages.

Prior to the organization of the NSB, police protection on the North Slope existed largely in the form of one Alaska State Trooper stationed in Barrow (Circumpolar Research Associates, 1999).[57] Today, police services within the Borough are provided by the NSB Police Department, the second largest municipal law enforcement agency in Alaska (after Anchorage). Each village has full-time law enforcement officers with training equivalent to the State Troopers, and Barrow has a twenty-seven member police force. The Department's Headquarters are in Barrow where it operates a nine-cell corrections facility and a 24 hour dispatch center (North Slope Borough Police Department, 2004). Barrow also has a superior court judge and full-time magistrate paid by the state.

7.1.1.6 Transportation

In North Slope communities, dog teams were the primary mode of transportation into the 1960s. In 1963, for example, the Barrow city council considered establishing a "dog park" for the 800 to 1,000 sled dogs in Barrow (Worl and Smythe (1986). Snow machines were introduced in 1967 and were the primary vehicle within the city limits of Barrow and other villages by the mid-1970s (Worl and Smythe, 1986). By 1979, only two organized dog teams were found in Barrow (Klausner and Foulks, 1982). Later, small all-terrain vehicles (ATVs) became a favorite means of transport for traveling within villages and to areas used for subsistence activities.

A similar rapid transformation occurred in automobile transportation in North Slope communities. For instance, very few passenger cars were present in Barrow in the early 1970s. Between 1979 and 1984, the number of registered vehicles in Barrow increased from 188 to 498 (Worl and Smythe 1986). In addition, public transportation systems were established in Barrow and some other North Slope villages. The bus transit system in Barrow, together with the increased number of private vehicles, allowed continued interaction among family members and friends who have been dispersed throughout the enlarging town (Worl and Smythe 1986). Smythe and Worl (1985 report that public transport in Wainwright also offset the potential effects of the dispersal of new households on intra-village interaction.

Where possible, inter-village overland travel on the North Slope is by snow machine in the winter and ATV in the summer.[58] However, most of the travel between North Slope communities is by air transport. In addition, most of the travel between North Slope communities and areas off the North Slope is by air.[59] Regularly scheduled passenger and air-cargo jet services provide Barrow's only year-

[57] According to Worl et al. (1981), prior to the formation of the NSB, Barrow had a small police force that was supported by tax revenues from the liquor store. There were, in addition, a number of village constables resident in the villages, supplemented by an often unpaid person, as necessary. Although official law enforcement agencies had little presence in North Slope communities, order was also maintained in the villages by means of traditional social sanctions. In the words of Samuel Simmonds, an elder in Barrow, a malefactor would be met with "the frowning of the village" (Anon., 2003:13). Moreover, village IRA councils had the authority to act as a judicial body (Smythe and Worl, 1985).

[58] Travel by vehicles within the region is possible on a temporary basis in winter in some areas by "ice roads" (Alaska Department of Transportation and Public Facilities, 2004). The NSB maintains approximately 43 miles of ice roads annually for winter use. Cat-trains, a form of roadless travel, are used in the North Slope area to transport freight from Barrow.

[59] The only road to the North Slope, the Dalton Highway, was built in the 1970s. It parallels the trans-Alaska pipeline from Fairbanks to Deadhorse/Prudhoe Bay, and serves mainly as a freight corridor to the oil fields and a summer excursion for tourists (Alaska Department of Transportation and Public Facilities, 2004). Historically, only the portion of the highway from Livengood to the Yukon River Bridge, and later Disaster Creek, was open

round access. Smaller commuter airlines travel between Barrow and the smaller communities in the Borough. All airports on the North Slope except those in Barrow and Deadhorse are owned and operated by the NSB (Alaska Department of Transportation and Public Facilities, 2004).[60] The state-owned Wiley Post-Will Rogers Memorial Airport at Barrow is the regional transportation center for the Borough, with jet service connections to the state's larger cities; however, air travel service to Point Hope is based in Kotzebue, and the main service for Anaktuvuk Pass is from Fairbanks. Weather still sometimes precludes flights into many North Slope villages, especially during the summer when fog can be heavy.

The only other major mode of transportation between the North Slope and areas outside the region are oceangoing freight barges that travel to Barrow and other coastal communities in late summer (National Research Council, 2003). Cars, school buses, heavy equipment, gasoline, modular house units, building supplies and other items are brought in aboard this barge. The Arctic coast has no deep water ports; consequently, smaller craft are used to move cargo from vessels anchored offshore.

The National Research Council (2003) noted that the North Slope's isolation from major transportation routes and the area's inability to produce construction materials and agricultural products mean that the prices of goods and the cost of transporting them to the North Slope are considerably higher than in the rest of Alaska or the continental United States (see Section 7.1.3). Moreover, North Slope residents pay the highest cost per mile to fly than just about anywhere else in Alaska (North Slope Borough, 2005c). Nevertheless, the changes in transportation that have occurred over the past four decades have had profound effects on North Slope households. One tangible outcome of the improvement in airports and establishment/expansion of scheduled air service is that the needs of North Slope residents for such things as visiting family and friends, business and health care are better met. These improvements have also supported growth in certain non-oil related industries such as tourism. Increased opportunities for air travel facilitated contact among North Slope communities that were formerly more isolated from each other. The increased inter-village contact and movement served to strengthen the Iñupiat identity as a member of a region-wide community known as the North Slope Iñupiat who share common interests, concerns and cultural values (Worl et al., 1981). Finally, as will be discussed in Section 7.1.5, changes in transportation have dramatically influenced the pursuit of subsistence activities.

7.1.1.7 Communication

When Eben Hopson was elected to be the first mayor of the NSB in 1972, he stated that the single greatest management problem of the Borough and of the Alaska Native corporations was lack of adequate communications technology (Eben Hopson Memorial Archives, 2004b). At that time even basic residential telephone service was poor or absent. Through the 1970s, Barrow was the only village with a telephone company (General Telephone of Alaska) providing local service to private subscribers (Underwood et al., 1978). Other villages typically only had a single public dial telephone or no telephone service at all (Smythe and Worl, 1985). Residents relied on citizens' band radios for inter-village communication and during trips to subsistence production areas (Underwood et al., 1978; Worl and McMillan, 1981). Hopson noted that modern communications technology was

to the public. In 1995, the highway was opened to public access as far as the security gate at Deadhorse. Beyond the security gate, the oil roads are privately owned and maintained.

[60] The airport at Deadhorse is not a community airport, but it serves an important function of transfer of passengers, mail, and freight in support of the oil exploration in the Prudhoe Bay area (Alaska Department of Transportation and Public Facilities, 2004). Its enplanements of oil workers and related personnel are largely from Anchorage on Alaska Airlines jet aircraft with workers entering and leaving the area every three or four weeks. Bypass mail destined for Nuiqsut or Kaktovik is brought to the Deadhorse airport on the Dalton Highway from Anchorage or Fairbanks and then flown out to these communities.

necessary for the improvement of health care and education, the development of local government and the facilitation of economic development (Eben Hopson Memorial Archives, 2004c). The Alaska Federation of Natives resolved to provide leadership in the development of a village-serving satellite communications network to be aimed at village health and education programs and improved village telephone and television service. And the newly-created NSB planned the development of a regional communications utility to begin with telephone service at Prudhoe Bay.

Although the Borough eventually halted its telephone service project, major improvements in communication facilities occurred on the North Slope during the 1970s and 1980s. In the mid-1970s, RCA Alascom constructed telecommunications satellite earth stations in a number of North Slope communities (Underwood et al., 1978). In 1980, the Arctic Slope Telephone Association Cooperative (ASTAC) was certified by the Alaska Public Utilities Commission. By 1982, individual homes in the villages other than Barrow were receiving telephone service (even then they had party lines until private lines were established). There are still no land lines from village to village—telephone communication relies on satellite transmission. In 2000, ASTAC acquired the GTE/Alaska Barrow telephone system. Today, ASTAC provides long distance and local phone services (including cellular (wireless) service) across the North Slope and also sells dial up and DSL Internet access.[61] General Communication, Inc. also offers long-distance telephone and Internet service to North Slope residents.

The NSB operates a state-of-the-art video production facility, which produces cultural and informational programming (NSBSD, 2005c). Region-wide business meetings and educational classes are held through the Borough's teleconference network. Barrow residents are able to participate in state government hearings through Alaska's legislative audio-conference network. In addition, each North Slope village has a large, modern, state-of-the art school with advanced computer facilities and video-conferencing for interactive delivery of classes. A two-way videoconferencing program originating from a high school studio in Barrow transmits video, text, and graphics to the North Slope's remote schools via a full-time dedicated satellite link. Some residents believe that the access to the Internet increasingly will provide people with education without the cost of travel or absence from the village (National Research Council, 2003).

Barrow's AM/FM public radio station KBRW broadcasts a wide variety of music and information in English and Iñupiaq 24 hours a day, 7 days a week. Television first came to Barrow in 1967 (Hess, 1993). Early on the NSB recognized that television and other media could be a powerful tool for altering public perceptions outside the region in terms of more clearly stating the concerns of the region and soliciting support. Worl et al. (1981:129-30) stated:

> Both the NSB and ASRC knew the value of major public relations efforts aimed at larger audiences. Taking advantage of technical advances in regional and statewide television broadcast capabilities, of local media subsidiaries, and of joint ventures with nonlocal media enterprises, the region began to broadcast its message to the outside…The NSB wanted to improve the public image of the region by communicating directly to the world outside the region, to allow those unfamiliar with the local community to perceive the Iñupiat and their concerns the way the Iñupiat saw themselves.

In addition, it is likely that cable television, now common in North Slope households, accelerated cultural changes (National Research Council, 2003). According to some analysts, however, concerns

[61] ASTAC's current members include individuals in all eight North Slope villages, BP Exploration (Alaska) Inc., Conoco/Phillips Alaska Inc., Alyeska Pipeline Service Co., VECO, Schumberger, Arctic Slope Regional Corporation, and various state and federal agencies.

that television would contribute to significant changes in family interaction appear to be unfounded. For example, Smythe and Worl (1985) described the impacts of television in Kaktovik as follows:

> Television has become a prominent part of visiting interactions since it was introduced into Kaktovik three years ago. At first appearance it seems to dominate social behavior. An assumption which is commonly made is that social interaction decreases with the introduction of television. However, indications are that it, in fact, serves as a focal point of a high level of social interaction.
>
> Members of the family gather around the television for several hours an evening, and visitors remain until the station signs off in the early hours of the morning. Individuals do not necessarily focus their entire attention on the television but participate in continual conversation about the programs or other events. Adults play with young children as they watch. The following day, television often serves as a topic of conversation. While television is bringing the outside world into the Kaktovik homes, it does not appear to be decreasing social interaction.[62]

Nevertheless, the social impacts of the introduction of modern communication technology into North Slope communities may not be entirely positive. The National Research Council (1994), for instance, indicated that television has promoted the use of English among younger generations of Iñupiat.[63] While many adults and elders continue to speak Iñupiaq as a first language, there is concern about the younger generation's lack of knowledge of the language (National Research Council, 2003). Speaking Iñupiaq is still a strongly valued cultural characteristic. The language is particularly important because of its vocabulary for identifying environmental conditions of ice and snow as well as the characteristics of animals and their behavior (Nelson, 1982). It has been noted that one cannot attain the full benefit of Iñupiaq by simply incorporating individual words into English as technical jargon. The very structure of Iñupiaq helps deal with situations in a unique environment. What's more, the traditional language has a broader cultural value. As Worl at al. (1981:75) state, "In times of stress and indecision about certain changes, in times where rhetoric is used to reify values, in times when claims to leadership must be validated, the Iñupiat, particularly the older, more conservative members of the community turn to the use of Inupiaq as a central issue."

Over the years the North Slope Iñupiat have undertaken activities to preserve, foster and promote their traditional language. The NSB Assembly established the NSB Iñupiat Language Commission in 1977 to seek methods to perpetuate the language (Worl et al., 1981). This commission, which later became part of the Commission on Iñupiaq History, Language and Culture, played a pivotal role in the development of an Iñupiaq writing system and dictionary. In addition, since the 1970s North Slope schools have adopted bilingual programs in the hope of continuing the use of Iñupiaq. The NSB School District's Bilingual Department has currently developed an Iñupiaq immersion curriculum for preschool through upper grades to teach children how to speak and read Iñupiaq.[64]

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[62] Smythe and Worl (1985), however, reported that television may have reduced the participation of Wainwright residents in organized community activities, particularly in public meetings.

[63] The National Research Council (1994) stated that formal education has also contributed to the increased use of English among the Iñupiat. As discussed by Sampson (2002), the erosion of the Iñupiaq language began in the early 20th century when the BIA adopted a policy of repressing the Native language in its school system.

[64] According to the NSBSD (2005d), it currently employs two main approaches to bilingual education—"At the elementary level, children whose parents opt to have them in the Iñupiaq Language Program, are placed in an Iñupiaq as a Second Language setting with instruction occurring for a duration of anywhere from 20-30 minutes per day. Parents who live in Barrow also have the option of placing their children in the Iñupiaq Immersion Program where instruction is delivered in Iñupiaq from preschool through fourth grade and are transitioned into English with 90 minutes of instruction in the Iñupiaq language at fifth grade. Children who are in the middle

7.1.1.8 Other Community Services

Over the years, the NSB has also supported other activities and services that have enhanced the quality of life in North Slope villages. For example, the NSB has supported various programs and other activities that the Iñupiat felt would preserve and maintain their culture (Worl et al., 1981). The NSB Iñupiat History, Language and Culture Commission has documented and promoted Iñupiat life through activities, research and celebrations. The Commission currently maintains an archive for local oral histories, assists in the operation of the Iñupiat Heritage Center, and actively pursues the repatriation of cultural artifacts and remains under the Native American Graves Protection and Repatriation Act. In addition, the NSB has sponsored an annual or biennial Elders Conference since 1978 and a semi-regular winter cultural celebration called *Kivgiq* since 1988 (Hess, 1993).

Since the region's subsistence economy depends on the health of animal populations, the NSB has assumed management of its wildlife resources—the only local government in Alaska to do so. Through its Department of Wildlife Management (DWM) the NSB undertakes scientific research and monitoring of wildlife stocks. An on-going bowhead whale census off Point Barrow is carried out by the DWM on behalf of the Alaska Eskimo Whaling Commission and the National Oceanic and Atmospheric Administration.[65] The subsistence quota for Alaska Natives established by the International Whaling Commission is based in part upon these population estimates (Ahmaogak, 2000).

7.1.2 Employment and Income

This section provides an overview of the change in income-generating opportunities for North Slope households during the study period. A detailed analysis of shifts in employment by economic sectors or industries is provided in Chapter 3 of this report.

As discussed in Chapter 2, employment opportunities in North Slope communities during the 1950s and 1960s were limited. More wage jobs existed in larger villages such as Barrow, but even there employment tended to be intermittent. The inception of the NSB and ASRC in the 1970s led to the creation of hundreds of new jobs in North Slope villages. An extensive household survey conducted on the North Slope found that the NSB supplied half the jobs Iñupiat adults held in 1977, and ASRC supplied another one-quarter of all the jobs Iñupiat adults had that year (Kruse et al., 1981). Thus, two organizations that did not exist in 1970 supplied three out of four jobs for Iñupiat workers in 1977. NSB capital expenditures were the driving force behind local employment, and most of the jobs created were public works and construction jobs.

The number of jobs made available by the NSB government to North Slope residents increased even further in the early 1980s as the NSB expanded its capital improvements program. Total regional employment among the resident population increased from 1,677 in 1980 to 2,521 in 1988 (NSB Department of Planning and Community Services, 1995). The NSB accounted for 58 to 60 percent of all resident jobs in the region. In 1988, direct NSB government employment accounted for an average of 70 percent of total village employment in Kaktovik, Anaktuvuk Pass, Nuiqsut, Atqasuk, and Point Lay. During the 1980s, according to one observer, "Jobs were plentiful and high paying. Young people fresh out of high school earned as much as $70,000 a year. Anyone who desired could find work" (Hess, 1993). In addition, both the NSB and ASRC implemented generous "subsistence leave"

school in Barrow receive instruction in the Iñupiaq language for an uninterrupted duration of 80 minutes per session alternating classes every other day. Secondary school students receive instruction as an elective."

[65] In 1982, an agreement between the AEWC and the North Slope Borough was formalized whereby the NSB would be responsible for providing the AEWC with technical advice on scientific issues related to the bowhead whale (Freeman, 1989).

policies (Worl and Smythe, 1986).[66] The NSB accepted the high costs of liberal wages and hiring practices in order to channel employment and income to Iñupiat residents (Kruse at al., 1983).

The most recent census conducted by the NSB indicates that the Borough continues to be the largest employer in the region (Circumpolar Research Associates, 2004). The census report noted, however, that Borough government employment opportunities have declined from 41 percent of all working residents in 1998 to 33 percent in 2003. When the North Slope Borough School District and Ilisagvik College are included, Borough government employees accounted for 54 percent of the region's employed resident labor force in 2003, down from 56 percent in 1998.

Oil exploration at Prudhoe Bay during the late 1960s was followed by construction of the Trans-Alaska Pipeline System in the mid-1970s. Oil production began in 1977. While Alaska Native employment during pipeline construction was quite high overall, it was short-term. As noted in Chapter 3, the petroleum industry has had little direct effect on the employment and income of the North Slope Iñupiat. A 1977 household survey conducted on the North Slope found that employment with oil or pipeline companies accounted for only 14 percent of the jobs held by Iñupiat (Kruse et al., 1981). More recently, a 1993 study conducted by the Minerals Management Service indicated that less than one percent of more than 6,000 Prudhoe Bay jobs were held by Alaska Natives (ISER, 1993). There have been several reasons for the relatively low employment of Iñupiat by the oil producers and their contractors and sub-contractors. Most jobs required a high skill level, and whereas the development phase required high peak employment for a short time, production employment levels were substantially lower (Tuck and Huskey, 1986). The jobs that were offered to Iñupiat were viewed by many as unattractive—the jobs were menial and/or paid the same or less wages as jobs near home (Kruse et al., 1983). Moreover, many Iñupiat were unwilling to commit to a steady shift, especially if it conflicted with hunting opportunities or village activities. In contrast, the NSB and ASRC permitted Iñupiat employees to follow an intermittent work pattern.

The number of businesses in the local service sector has grown, primarily as a result of local government spending. This expansion of commercial enterprises has mostly occurred in Barrow, which now offers five hotels, seven restaurants, a dry cleaner and a large modern supermarket and merchandise store. Many of these businesses are owned by non-Iñupiat. The small size of the population and relatively numerous public sector opportunities (for example, in the ASRC and village corporations) to apply entrepreneurial skills may have limited the number of Iñupiat available to take advantage of business opportunities in the private sector (Tuck and Huskey, 1986; Worl and Smythe, 1986). Notwithstanding these potential limitations, Worl and Smythe (1986) reported that the expansion of the capital economy, the socialization of Iñupiat into the capital economy through their occupational experiences in the Native corporations and the NSB (rather than formal education in business), and an accumulation of surplus capital stimulated the development of a growing class of Iñupiat entrepreneurs on the North Slope.

Investments during the oil boom led to relatively little economic development or diversity in other North Slope communities. Most of the private sector jobs in the smaller villages are provided by the Alaska Native corporations and their affiliates. Tourism has existed as a minor primary industry on the North Slope for many years. Tours have been operating in Barrow since the early 1950s. Today, it is estimated that about 25,000 persons visit the North Slope annually, with most tourists traveling on packaged tours (DCCED, 2004b). Local officials report that the region's services, while adequate to support a limited expansion in local visitation, cannot accommodate large or sudden increases in

[66] Kleinfeld et al. (1983) reported that during the whaling season NSB operations virtually came to a halt as workers participated in whaling activities. The authors also noted that workers irregularly absent from work for subsistence or other reasons were usually rehired.

visitors at this time (DCCED, 2004b). A significant cottage industry in North Slope communities produces a wide array of arts and crafts (e.g., carved ivory, baleen baskets and fur parkas) for sale in local and outside tourist markets. Several strategies in use or under consideration to help capture a greater share of cultural tourist dollars include the formation of cooperatives for selling Native arts and crafts, and greater use of the Internet making it easier for local artists to reach domestic and international markets with their unique work (DCCED, 2004b).

The availability of local, high paying jobs adapted in some respects to Iñupiat life styles had different effects on North Slope men and women (Kleinfeld et al., 1983). As jobs became available, Iñupiat women surged into the labor force. The aforementioned 1977 household survey conducted by Kruse et al. (1981) showed that the percentage of Iñupiat women holding jobs doubled between 1970 and 1977, while the percentage of men in the work force apparently changed little during the same period. Under the NSB's local hire program Iñupiat men took the majority of construction-related jobs created by the CIP during the 1970s; these jobs were highly paid, seasonal, and offered enough flexibility to allow men to continue subsistence hunting (Kleinfeld et al., 1983; Worl and Smythe, 1986). Iñupiat women tended to hold lower-paying, but permanent, clerical jobs in the NSB administration (Worl and Smythe, 1986). Men filled the top positions in ASRC as well as in the NSB. By the late 1970s, however, women had begun to move from "pink collar" clerical jobs into managerial and administrative positions (Worl and Smythe, 1986).

The report for the 1998-1999 NSB census stated that an increasing proportion of North Slope jobs are short-term and/or part-time employment, and there is a high level of underemployment among the resident population (Circumpolar Research Associates, 1999). According to this report, most of the North Slope residents who are underemployed are Iñupiat. The most recent census report indicated that high unemployment and underemployment remain characteristics of the North Slope, although the population decline in some communities has mitigated these conditions to some extent (Circumpolar Research Associates, 2004).

7.1.2.1 Income

The most immediate and obvious accompaniment of the increased economic activity during the 1970s described above was the sudden enrichment of North Slope residents. The incomes of households on the North Slope increased sharply during this period. Median income (adjusted to 2001 dollars) increased from $16,919 per household in 1959, to $62,756 per household by 1979, an increase of 370 percent (Table 7-6).

Table 7-6. Median Household Income of North Slope Residents, 1959, 1969, 1979, 1989, and 1999[1]

Year	United States	Alaska	North Slope
Median Income of all Households (2001 Dollars)[1]			
1959[2]	25,461	32,861	16,919
1969	37,107	46,796	33,607
1979	39,209	50,828	62,756
1989	41,760	57,533	70,129
1999	43,918	53,934	66,068
Median Income of White Households (2001 Dollars)[1]			
1959[2,3]	26,509	36,258	30,453[4]
1979	35,360	54,588	88,766
1999	45,183	55,900	95,418
Median Income of Alaska Native Households (2001 Dollars)[1]			
1959[2]	14,219	15,020	15,511
1979	24,512	25,386	59,616
1999	30,599	33,140	54,034
Median Income of Alaska Native Households as a Percent of Median Income of White Households			
1959[2]	53.6	41.4	50.9
1979	69.3	46.5	67.2
1999	67.7	59.3	56.6

[1] Adjusted to 2001 dollars using the U.S. Department of Labor, Bureau of Labor Statistics consumer price index for the Anchorage metropolitan statistical area.

[2] Median family income.

[3] "Non-white" category.

[4] Estimated using a linear interpolation of the income range

- Data were unavailable for this report

Source: U.S. Census Bureau.

Table 7-7. Median Household Income in North Slope Communities, 1959, 1969, 1979, 1989, and 1999[1]

Year	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Pt. Hope	Pt. Lay	Wainwright
Median Income of all Households (2001 Dollars)[1]								
1959[2]	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-
1979	14,722	66,902	68,916	84,530	56,250	47,858	35,000	70,000
1989	51,815	78,297	78,764	64,261	44,723	66,398	68,892	46,314
1999	54,906	69,659	70,172	58,174	50,237	66,018	71,900	57,229
Median Income of White Households (2001 Dollars)[1]								
1959[2,3]	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-
1999	98,889	91,509	93,778	120,312	58,391	95,653	115,584	96,192
Median Income of Alaska Native Households (2001 Dollars)[1]								
1959[2]	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-
1999	53,162	68,166	53,087	55,559	46,501	62,313	63,403	55,342
Median Income of Alaska Native Households as a Percent of Median Income of White Households								
1959[2]	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-
1999	53.8	74.5	56.6	46.2	79.6	65.1	54.9	57.5

[1] Adjusted to 2001 dollars using the U.S. Department of Labor, Bureau of Labor Statistics consumer price index for the Anchorage metropolitan statistical area.

[2] Median family income.

[3] "Non-white" category.

[4] Estimated using a linear interpolation of the income range

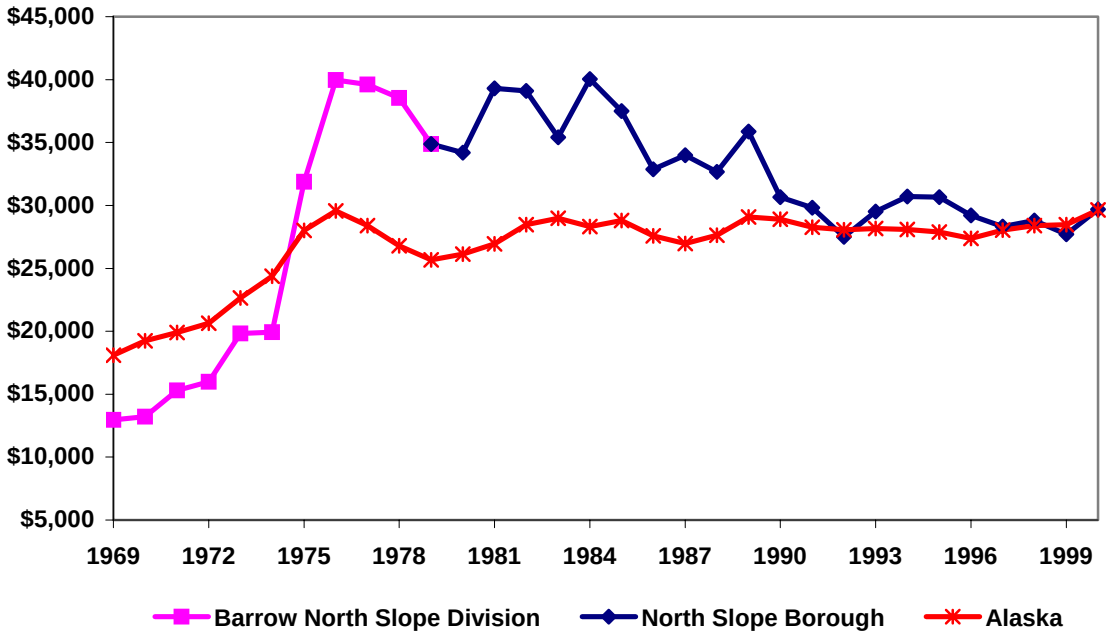
- Data were unavailable for this report

Source: U.S. Census Bureau.

Figure 7-1 illustrates the volatility of the per capita personal income of North Slope residents from 1979 to 2000.[67] Per capita income was at its highest during the early 1980s when public and private construction projects peaked. Starting in 1984, the real per capita income in the region has shown a general downward trend. Despite this overall decline, North Slope residents have generally enjoyed higher real personal per capita incomes than the statewide average.

[67] Personal income is calculated as the sum of wage and salary disbursements, other labor income, proprietors' income with inventory valuation and capital consumption adjustments, rental income of persons with capital consumption adjustment, personal dividend income, personal interest income, and transfer payments to persons, less personal contributions for social insurance.

Figure 7-1. Per Capita Personal Income of North Slope Residents, 1969-2000[1]

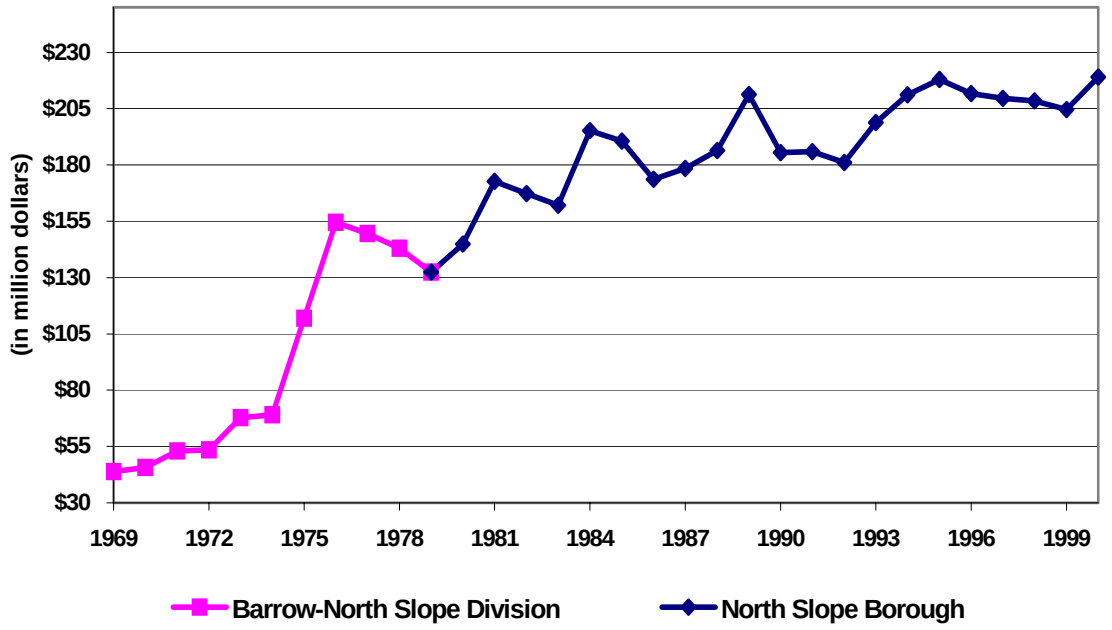


[1] Adjusted to 2000 dollars using the U.S. Department of Labor, Bureau of Labor Statistics consumer price index for the Anchorage metropolitan statistical area.

Source: Bureau of Economic Analysis.

The total personal income generated in the region generally followed an upward trend from 1969 to 2000 (Figure 7-2). However, Figure 7-3 shows that much of the growth in the last ten years has been due to increases in transfer payments and investment income (dividends, interests, and rents).

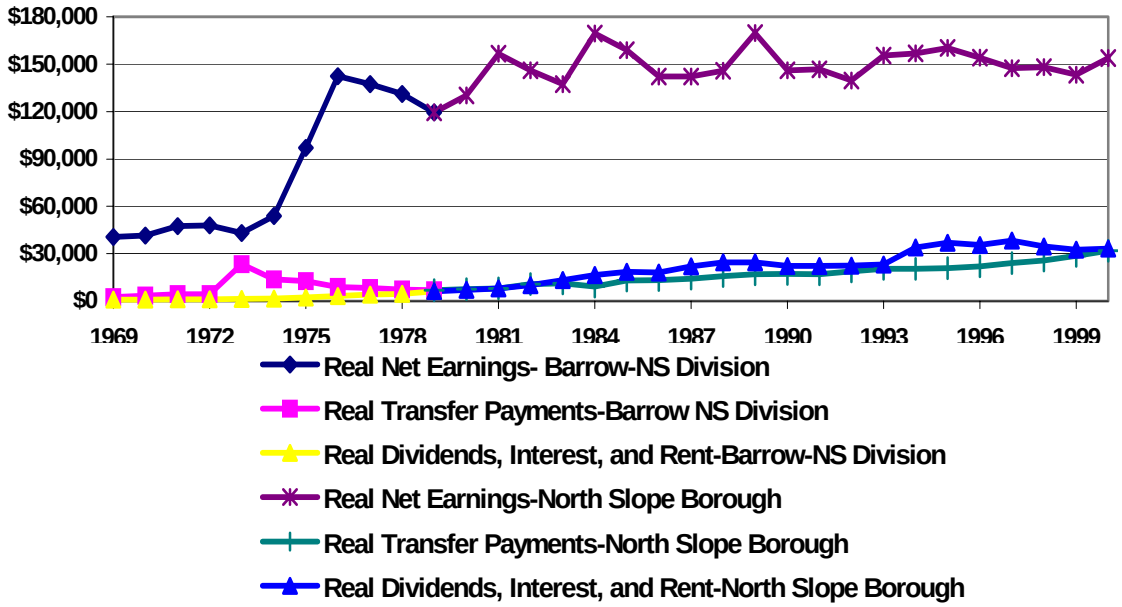
Figure 7-2. Total Personal Income of North Slope Residents, 1969-2000[1]



[1] Adjusted to 2000 dollars using the U.S. Department of Labor, Bureau of Labor Statistics consumer price index for the Anchorage metropolitan statistical area.

Source: Bureau of Economic Analysis.

Figure 7-3. Net Earnings, Transfer Payments, and Dividends, Interest, and Rent of North Slope Residents, 1969-2000[1]



[1] Adjusted to 2000 dollars using the U.S. Department of Labor, Bureau of Labor Statistics consumer price index for the Anchorage metropolitan statistical area.

Source: Bureau of Economic Analysis.

As shown in Table 7-8, the percent of families whose income was below the federal poverty level has declined substantially, although a slight increase occurred in 1999. This recent rise may be the result of the increasing proportion of North Slope jobs that are short-term and/or part-time employment. Of those families in the Borough whose incomes were below the poverty line in 1999, 86 percent were Alaska Natives.

Table 7-8. Percent of North Slope Residents Whose Income was Below the Poverty Level, 1959-1999

Year	National Average	Alaska State	NSB	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Pt. Hope	Pt. Lay	Wainwright
					Percent of Families with Income Below Poverty Level						
1959 [1]	18.5	14.6	43.1	-	-	-	-	-	-	-	-
1969	9.7	11.6	27.7	-	-	-	-	-	-	-	-
1979	9.1	9.4	10.8	-	-	-	-	-	-	-	-
1989	9.97	6.8	8.2	12.5	16.3	7.3	18.5	15.5	6.5	0.0	4.5
1999	9.2	6.7	8.6	3.2	25.0	7.7	9.9	3.2	13.9	11.4	8.5

[1] The percentage of families whose incomes are below the poverty level was not reported in the census. The percent presented is the proportion of families with incomes less than $3,000

- Data were unavailable for this report

Source: U.S. Census Bureau.

7.1.2.2 Employment Pattern

The U.S. Census Bureau reported that in 1970, 52 percent of the residents of the Barrow Census Division who were 16 years old and over were not employed or seeking work. The size of the labor force (i.e., the number of people who are employed or attempting to find work) likely rose and fell in the mid-1970s with the beginning and end of construction of the TAPS and Dalton Highway. During the 1980s, the labor force steadily increased as a result of employment opportunities created by the NSB; for example, the Borough's CIP expended many millions of dollars and employed a substantial number of North Slope residents. The unemployment rate was low in 1980, but many jobs, such as construction work, were short-term. As discussed above, in recent years the number of Iñupiat who are involuntarily underemployed or unemployed has increased due, at least in part, to a decline in Borough government employment opportunities. For example, the completion of water and sewer projects outside of Barrow led to a reduction of employment in the CIP (Circumpolar Research Associates, 2004).

Table 7-9. Unemployment and Underemployment Rate of North Slope Residents, 1980-2003

	1980	1989	1993	1998	2003
Size of labor force	2,360	2,955	3,510	3,866	3,085
Rate of unemployment	7.5%	14.7%	11.3%	15.5%	22.9%
Rate of underemployment (worked less than 40 weeks)	50.2%	-	24.1%	27.3%	29.7%

- Data were unavailable for this report

Source: Alaska Consultants, Inc., 1981; Circumpolar Research Associates, 1999, 2004; North Slope Borough Department of Planning and Community Services, 1989, 1995; U.S. Census Bureau.

The not-working rate is another measure calculated from census data to characterize the employment situation of North Slope residents (McDiarmid et al., 1998). It is the percentage of the working-age (16 years and over) population not employed for wages. In 1989, the not-working rate was 34 percent for Native residents and 5 percent for White residents. By 1999, the not-working rate for Native residents was 28 percent and 7 percent for White residents. McDiarmid et al. (1998) note that not working does not necessarily indicate the unavailability of suitable jobs:

> The drawback of the not working rate is that a certain portion of any group will not be interested in working for a variety of reasons. Some will be students or homemakers. Some will be disabled. Others will simply choose not to enter the labor market. Many Alaska Natives will choose to engage in subsistence activities for part of the year rather than work in the market economy. All are valid reasons to be without wage paying jobs.

According to McDiarmid et al. (1998) job opportunities are not a major limiting factor in finding work in the NSB. Rather, the lower average likely underscores the preference of many Iñupiat to devote a part of the year to subsistence activities rather than wage employment (Section 7.1.5).

Yet another way to characterize wage employment among North Slope residents is to calculate average weeks worked over the year. Census data show that for Native NSB residents who worked in 1989, the average weeks reported worked was about 33 (Table 7-10). The comparable figure for White residents was 43 weeks. The average weeks worked did not change appreciably in 1999. Including the non-working resident population in the calculation of average weeks worked increases the difference between Natives and Whites. In 1999, for example, the average weeks worked across the entire working-age resident population was 22 for Natives and 40 for Whites – a difference of 18 weeks (Table 7-11). Again, some of the difference is due to the desire among many Iñupiat to spend time in subsistence. However, the decrease in the average number of weeks worked by Natives between 1989 and 1999 suggests that a shortage of suitable employment may also have become a factor.

Table 7-10. Average Number of Weeks Worked by Employed Working-Age North Slope Residents, 1989 and 1999[1]

Year	United States	Alaska	NSB	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Pt. Hope	Pt. Lay	Wainwright
White Working-Age Residents											
1989	-	-	42.8	-	-	-	-	-	-	-	-
1999	44.2	41.9	43.5	42.3	45.9	44.4	38.0	39.4	36.3	44.1	40.1
Native Working-Age Residents											
1989	-	-	32.7	-	-	-	-	-	-	-	-
1999	40.6	32.5	31.1	27.2	30.6	31.6	30.7	31.8	28.0	32.6	32.2

[1] The average weeks worked was not reported in the 1990 or 2000 census. Estimates were calculated by interpolating census data.

- Data were unavailable for this report

Source: U.S. Census Bureau.

Table 7-11. Average Number of Weeks Worked by All Working-Age North Slope Residents, 1989 and 1999[1]

Year	United States	Alaska	NSB	Anaktuvuk Pass	Atqasuk	Barrow	Kaktovik	Nuiqsut	Pt. Hope	Pt. Lay	Wainwright
White Working-Age Residents											
1989	-	-	40.6	-	-	-	-	-	-	-	-
1999	31.0	33.8	40.4	42.3	45.9	41.3	36.1	35.1	30.5	44.1	37.5
Native Working-Age Residents											
1989	-	-	24.4	-	-	-	-	-	-	-	-
1999	27.4	22.5	22.3	17.5	20.0	22.7	23.8	24.1	18.8	28.0	23.9

[1] The average weeks worked was not reported in the 1990 or 2000 census. Estimates were calculated by interpolating census data.
- Data were unavailable for this report
Source: U.S. Census Bureau.

7.1.2.3 Income Distribution

Chance (1990) and Bodenhorn (2000) suggest that significant income inequalities have begun to emerge, both among the Iñupiat and between Iñupiat and non-Iñupiat. Median household income data presented in Table 7-6 confirm the notion that there are significant income differences between Iñupiat and non-Iñupiat households, but it is likely that these differences are long-standing. In 1959, the median income of Alaska Native households was only about half of that of white households. In 1979, Alaska Native median household income on the North Slope increased to 67 percent of white median household income, but in 1999, the median income of Alaska Native households in the region dropped back down to 57 percent of that of white households. The on-going income disparity reflects the fact that employment opportunities taken by non-Iñupiat are not a random cross-section of jobs in the community, as they must entail compensation sufficient to overcome the drawbacks of relocating to the North Slope.

However, a preliminary analysis of the available data does not support the suggestion that significant income inequalities have emerged among Iñupiat households. This analysis employed a commonly used measure, the Gini coefficient (also known as the index of income concentration), to measure the dispersion of household income. The Gini coefficient ranges from 0.0, when all households have equal shares of income, to 1.0, when only one household has any income. Because real economies have some, but not complete inequality, Gini coefficients are between zero and one.

Gini coefficients were calculated by the Northern Economics, Inc. and EDAW, Inc. study team using household income class interval data reported by the U.S. Census Bureau. Data were obtained for the years 1959, 1989, and 1999 in order to examine long term changes in income distribution among Iñupiat households, as well as short term changes during a period (1990s) when employment opportunities in North Slope communities were reportedly declining. The Gini coefficient for each time period was computed using the following equation, and the results are presented in Table 7-12:

$$G = 1 - \sum_{I=0}^{k-1} (Y_{i+1} + Y_i)(X_{i+1} - X_i)$$

where

G = Gini coefficient
X = Cumulated percentage of households
Y = Cumulated percentage of household income

Table 7-12. Income Distribution of Alaska Native Households on the North Slope, 1959, 1989, and 1999

1959 [1]			1989			1999		
	Percent of households	Percent of total income		Percent of households	Percent of total income		Percent of households	Percent of total income
Less than $1,000	7.6	1.0	Less than $5,000	4.8	0.3	Less than $10,000	9.8	0.8
$1,000 - $1,999	26.6	10.0	$5,000 to $9,999	6.2	1.0	$10,000 to $14,999	5.1	1.1
$2,000 - $2,999	11.4	7.1	$10,000 to $14,999	7.2	1.9	$15,000 to $19,999	5.6	1.7
$3,000 - $3,999	10.1	8.9	$15,000 to $24,999	11.0	4.6	$20,000 to $24,999	3.3	1.2
$4,000 - $4,999	9.7	11.0	$25,000 to $34,999	10.7	6.7	$25,000 to $29,999	3.1	1.5
$5,000 - $5,999	8.0	11.1	$35,000 to $49,999	19.1	16.9	$30,000 to $34,999	4.2	2.3
$6,000 - $6,999	9.7	15.8	$50,000 to $74,999	22.3	29.0	$35,000 to $39,999	5.8	3.7
$7,000 - $7,999	3.4	6.4	$75,000 to $99,999	12.8	23.4	$40,000 to $44,999	5.9	4.3
$8,000 - $8,999	13.5	28.8	$100,000 or more	5.9	16.3	$45,000 to $49,999	4.5	3.7
						$50,000 to $59,999	10.5	10.3
						$60,000 to $74,999	11.9	13.7
						$75,000 to $99,999	17.2	25.6
						$100,000 to $124,999	6.8	13.0
						$125,000 to $149,999	2.9	6.9
						$150,000 to $199,999	2.3	6.9
						$200,000 or more	1.1	3.4
Gini Coefficient[2]		0.37			0.37			0.38

[1] Includes only the communities of Anaktuvuk Pass, Barrow, and Wainwright.

[2] For a particular year, an estimate of the total income of each close-end income class interval was obtained by multiplying the number of households in each income interval by an assumed mean for that interval. In this analysis, the assumed mean was set at the midpoint of each income interval. Estimates of total income for the open-end intervals in 1989 and 1999 ($100,000 or more and $200,000 or more, respectively) were obtained by subtracting the sum of the total incomes for the close-end intervals from the aggregate household income for Alaska Natives in the North Slope Borough reported by the U.S. Census Bureau. The percentages of households and total income represented by each income class interval were then calculated.

Source: U.S. Census Bureau.

As shown in Table 7-12, this preliminary analysis of income distribution indicates that the level of income equality among Native Alaska households on the North Slope was remarkably stable over the years measured. This stability is in marked contrast to the growing income inequality among households in the U.S. as a whole that began in the early 1980s (Jones and Weinberg, 2000). In 1967, the Gini coefficient for U.S. households was 0.399. By 1990, the Gini coefficient was 0.428, and in 1999, it was 0.457.[68] It is uncertain why income distribution has been so stable among Iñupiat households, but a contributing factor may be a constant relative demand for unskilled and skilled labor in North Slope communities. For example, it is possible that changes in the regional economy, such as the decrease in full-time employment opportunities that occurred on the North Slope during the 1990s, affect the entire labor market. To more fully understand patterns of income distribution in North Slope communities, additional measures of income distribution need to be applied to existing census data, and a detailed analysis of possible factors that might explain observed patterns is required.

7.1.3 Cost of Living

While salaries of workers on the North Slope, in both the private and public sectors, are high, it is equally true that the cost of living in the region is among the highest in the nation, if not actually being the highest. In any discussion of the "economic well-being" of residents of the North Slope, one should take into consideration that the cost of living in Barrow is high. Both the 1993/1994 and 1998/1999 NSB census reports stated that the cost of living in Barrow and other North Slope communities was approximately 278 percent of the "Lower-48" average and 214 percent of the Anchorage average (Circumpolar Research Associates, 2004). In 2003, the cost of a "typical market basket" in Barrow was 93 percent higher than the cost in Anchorage (Circumpolar Research Associates, 2004). Similar proportionate increases occur for vehicles, construction materials, appliances, tools, and other consumer goods. For example, according to a 2004 construction cost survey, conducted for the Alaska Housing Finance Corporation, Barrow bears the highest material costs among eleven surveyed Alaska locations. A basic construction market basket that does not include doors or windows was quoted to cost $37,873, exceeding the Anchorage price by 114 percent (ADOLWD, Construction Cost Survey, 2005).

This exceptionally high cost of living more than offsets the higher income levels earned on the North Slope. In 1999, for example, the North Slope median household income was approximately 150 percent of the median household income for the United States and 122 percent of the median household income of the State of Alaska. Because North Slope residents do not have greater per capita incomes than some of their counterparts in the rest of Alaska or in the United States in general, North Slope residents must accept a lower standard of living, rely to a greater extent on subsistence harvest, or both (National Research Council, 2003).

The high cost of living on the North Slope is largely due to the absence of low cost transportation links to the outside world or between communities (NSB Department of Planning and Community Services, 1995). Air transportation and summer barge service represent the only transportation options for bringing goods to most residents. Few goods or services escape a substantial transportation premium. Moreover, the availability and selection of items is limited. For example, while Barrow has a

[68] Changes in the U.S. Census Bureau's data collection methodology between 1992 and 1993 affected the measurement of income inequality (Jones and Weinberg, 2000). As a result of these changes and an inability to accurately measure their effects, comparisons of income inequality that bridge the years 1992 and 1993 should be treated with caution. However, other measures also indicate that the household income distribution in the U.S. became increasingly unequal beginning in the early 1980s (Jones and Weinberg, 2000).

large and well-stocked food store, the other villages have only small grocery services. Many people resort to ordering their groceries from businesses in Anchorage, Fairbanks, or the "Lower-48."

The cost to households of public services also is high, especially in the outlying villages. For example, the 1998-1999 household census conducted by Circumpolar Research Associates (1999) for the NSB found that Barrow experienced the lowest heating fuel costs on the North Slope, averaging $57 per household per month (Circumpolar Research Associates, 1999). In contrast, average household heating fuel costs in the seven outlying communities ranged from a low of $142 in Anaktuvuk Pass to a high of $238 in Kaktovik. Average monthly electrical costs were also lower in Barrow. The overall average for Barrow was $54. In the outlying communities the overall average residential electrical costs ranged from a low of $75 in Anaktuvuk to a high of $133 in Point Lay. The differences in heating and electrical costs between Barrow and other villages is primarily due to the fact that Barrow has access to a nearby natural gas field for heating and electrical generation,[69] while the other communities must rely on diesel and heating fuel transported from Fairbanks, Cook Inlet, or even Puget Sound.

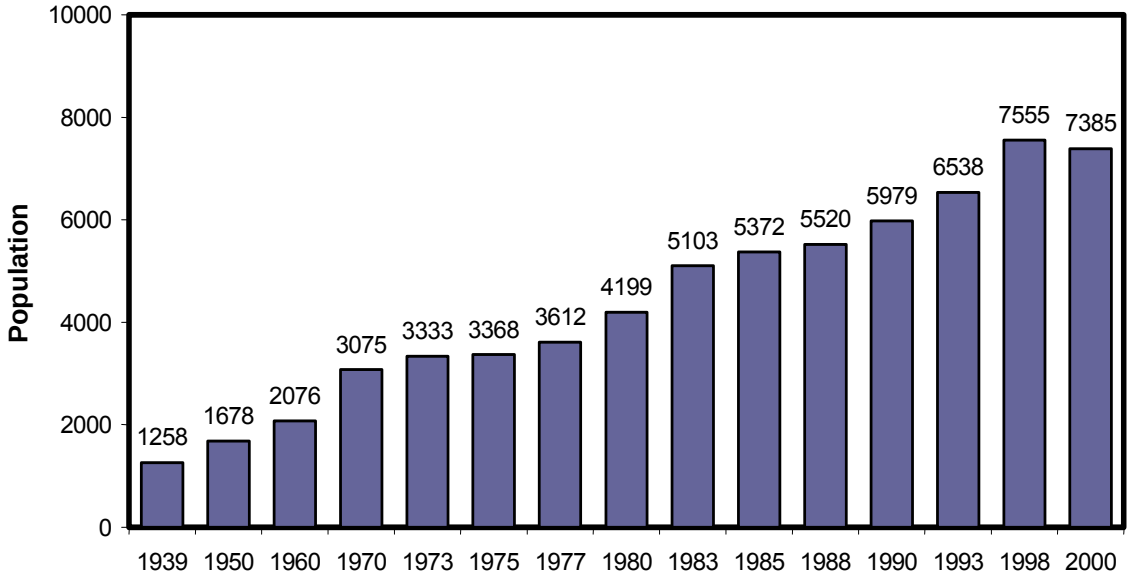
The only utility for which the average monthly cost is substantially higher in Barrow than in other North Slope communities is water. According to the 1993 census conducted by the NSB Department of Planning and Community Services (1995), the average monthly household water costs for households connected to the Barrow utilidor system was $163. In contrast, average monthly water costs in the seven outlying communities for families of all sizes currently ranged from a low of $16 to a high of $40, depending on the specific community. However, it is important to bear in mind that in the early 1990s there were no flush toilets in any of the residences in the outlying villages and many individuals bathed at the school or other community facility (NSB Department of Planning and Community Services, 1995). More recently, the North Slope Borough Assembly has established a flat water rate of $69 for Barrow households, and water costs are expected to increase substantially in outlying villages once water and sewer projects are completed (Circumpolar Research Associates, 1999).

7.1.4 Demographic Shift

The rapid improvement in economic well being experienced by North Slope communities during the 1970s was followed by a significant demographic shift. The North Slope Iñupiat reversed their trend of moving from smaller to larger population centers (Worl, 1980). The influx of money and employment opportunities in communities provided an incentive to lure people back to their villages (Jorgensen, 1990). Between 1970 and 1993, for instance, the resident population of the North Slope more than doubled (Figure 7-4). Moreover, many of the Iñupiat that lived in Barrow returned to their smaller home villages (Knapp and Nebesky, 1983). Three villages that had been largely abandoned—Nuiqsut, Point Lay and Atqasuk—were resettled in the 1970s. This return to small traditional villages reflected the preference of many Iñupiat for a rural lifestyle provided that modern public services and opportunities for employment and cash income were also available (Peat, Marwick, Mitchell & Company, 1978).

[69] The Walikpa natural gas field (less than 10 miles from Barrow) was discovered and developed in the 1950s by the Navy. In contrast, space heating and electric power generation in the outlying villages is largely fueled by No. 2 fuel oil, which has a high transportation component in its cost.

Figure 7-4. North Slope Resident Population, 1939-2000

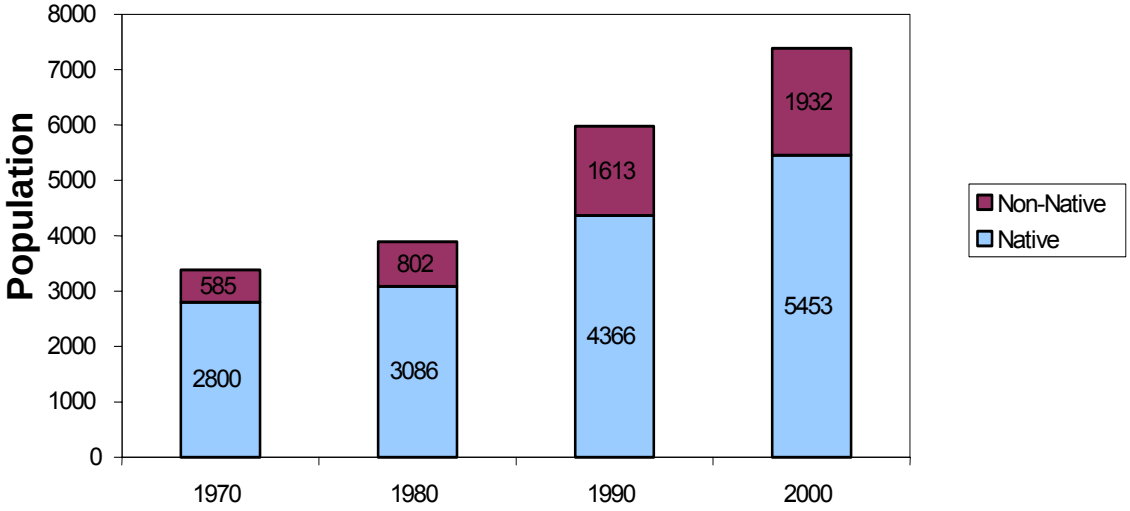


Source: Circumpolar Research Associates, 1999

Another factor that contributed to the population increase, especially the increase that occurred in Barrow, was the immigration of non-Iñupiat. In the Borough as a whole, the percentage of non-Natives in the resident population increased from 17 percent in 1970 to 27 percent in 1990 (Figure 7-5). Non-Iñupiat outnumber Iñupiat in Barrow in the age group between 25 and 64 due to the larger number of non-Iñupiat males in this age group.

More recently, there has been a decrease in the resident population of the North Slope. Declining operating revenues in both the NSB and North Slope Borough School District have translated into reduced employment opportunities, evidently resulting in out-migration (Circumpolar Research Associates, 2004).

Figure 7-5. Alaska Native and Non-Native Resident Population of the North Slope, 1970-2000[1]

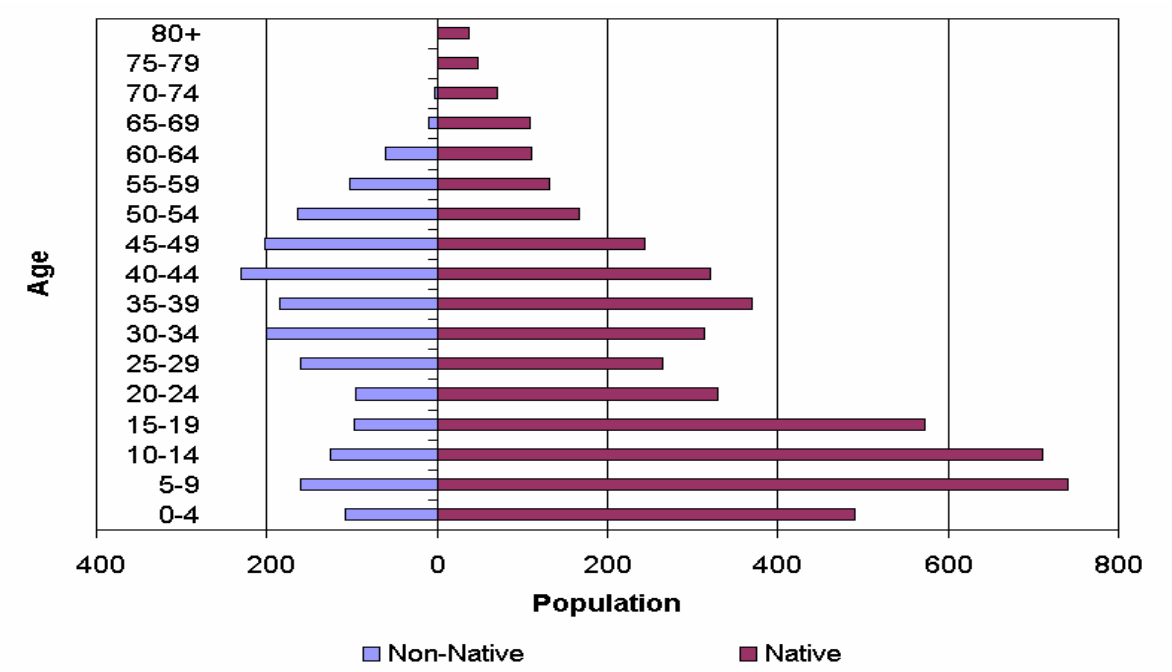


[1] Population totals may not equal those in Figure 7-5 because different data sources were used.

Source: U.S. Census Bureau.

Another trend that started in the early 1980s was the increasing number of non-Iñupiat families who have established permanent residence in Barrow (Smythe and Worl, 1986). Some non-Iñupiat intermarried with local Iñupiat, while others decided to take advantage of the economic opportunities and become permanent residents (Smythe and Worl, 1985). However, the turnover of non-Iñupiat residents on the North Slope continues to be high, particularly in the smaller villages. Common reasons for the departure of non-Iñupiat residents include a perceived lack of educational opportunities for their children, loss of a specific employment opportunity, and the desire to retire in their place of origin. It is very uncommon for retirement age non-Iñupiat to remain on the North Slope, and it is unusual to have non-Iñupiat families present in the smaller villages that encompass more than a generational spread of working age adults and their offspring. This pattern is also influenced by the fact that there are few private sector jobs in the smaller communities. The residence pattern of non-Iñupiat on the North Slope results in a population with comparatively few members in younger or older age groups (Figure 7-6).

Figure 7-6. Age Distribution of the Alaska Native and Non-Native Resident Population of the North Slope, 1998



Source: Circumpolar Research Associates, 1999.

Prior to 1978, the non-Iñupiat population in Barrow was limited to Caucasians (Smythe and Worl, 1985). The non-Iñupiat population has remained primarily Caucasian, but a trend that developed by 1980 was an increase in the ethnicity among new migrants (Smythe and Worl, 1985). The non-Iñupiat population is now markedly multiethnic which has introduced a new Asian and Spanish-speaking element into the local population. According to the 1993 NSB census, the following ethnic groups were represented by residents of Barrow: Iñupiat, Caucasion, Athabaskan, Aleut, "Other Alaskan Native", Black, American Indian, Thai, Vietnamese, Chinese, Japanese, Asian Indian, Filipino, Korean, Samoan, Hispanic, Iranian, Macedonian, and Serbian (NSB Department of Planning and Community Services, 1995). While the quality of interethnic relationships has improved since the 1970s (Smythe and Worl, 1986), the influence of the non-Iñupiat group has increased as the number and range of the positions of authority held by non-Iñupiat expanded. Although the number of interethnic marriages increased, non-Iñupiat residents tended to limit their association with members of the Iñupiat community to employment and occasional social contact (Worl et al., 1981).

7.1.5 Harvest of Subsistence Resources

The use and importance of subsistence resources for households in North Slope communities has been a topic of ongoing discussion and research since explorers and researchers first encountered the Iñupiat (e.g., Lowenstein, 1986; Nelson, 1982; Rainey, 1947; Spencer, 1959). The rhythms and patterns of community life were traditionally structured by a seasonal round of harvesting different subsistence resources. By the beginning of the 20th century most of the indigenous hunting weapons had been replaced, converted to new material and form or relegated to roles of secondary importance. However, while hunting technology changed considerably, the game preferences have remained essentially the same to the present day.

As a result of expanded employment and education opportunities, the 1960s and 1970s saw an ever-narrowing gap between Alaska Native and Western cultures (Lee, 1998). Early post-war research had predicted a waning of subsistence activities and the full integration of Alaska Natives into a cash economy (Jorgensen, 1990). VanStone (1960), for example, noted that it seemed likely that as more young people left the villages to complete their education and became more oriented toward a money economy, they would become correspondingly disoriented from village subsistence activities and would seek economic opportunities away from the villages.

What actually occurred, however, was that higher levels of household cash income were directly correlated with peoples' commitment to, and their returns from, natural resource harvesting (National Research Council, 1999). Young men in Iñupiat communities, for example, chose to balance wage employment with seasonal subsistence activities despite large numbers of high paying job opportunities (Kleinfeld et al., 1983). Research showed that young men participated in major subsistence activities as much as the older generation, and those who had been exposed to Western influences through outside schooling tended to be *more* interested in subsistence (Kruse, 1986).

The 1993 NSB census found that 72 percent of Iñupiat households (but only 16 percent of the non-Iñupiat households) obtained half or more than half of such food staples as meat, fish and birds from subsistence activities (NSB Department of Planning and Community Services, 1995). The importance of sharing among the North Slope Iñupiat is reflected in the fact that 28 percent of Iñupiat households reported that half or more than half of their food came from the subsistence activities of other households. Many households do not have the financial resources to harvest their own food. Others consist of elderly individuals or have no subsistence hunters.

Wild foods and other products were traditionally traded among households within a community through extensive, non-commercial, kinship-based networks. Surveys of the harvest of subsistence resources in North Slope communities indicate that these resources continue to be important in household economies. Table 7-13 through Table 7-17 show information on subsistence fish and wildlife harvests in Barrow, Kaktovik, Nuiqsut, Point Lay and Wainwright. These data are from the Community Profile Database developed by the ADF&G Division of Subsistence. Data are available for only those North Slope villages and years shown. The percent of households harvesting the resources is the estimated percent of community households that successfully harvested subsistence resources based on sampled households for the study year. The percent of households receiving the resources is the estimated percentage of community households that reported receiving subsistence resources from one or more other households in the community based on sampled household responses for the study year. This figure is a measure of distribution and exchange of subsistence resources between households within the community. The percent of households giving the resources is the estimated percentage of community households that reported giving away subsistence resources to one or more other households in the community based on sampled household responses for the study year. This figure is another measure of distribution and exchange of subsistence resources between households.

Table 7-13. Harvest of Subsistence Resources, Barrow, 1987, 1988, and 1989

	1987	1988	1989
Percent of households harvesting resources	58.0	50.0	61.0
Percent of households receiving resources	-	-	-
Percent of households giving resources	-	-	-
Lower confidence limit for the estimated total pounds harvested by the community [1]	-	-	-
Estimated total pounds harvested by the community	621,067	614,669	872,092
Upper confidence limit for estimated total pounds harvested by the community [1]	-	-	-
Per capita pounds harvested [2]	205.9	203.8	289.2
Average pounds of the resources harvested per household [3]	662.8	656.0	930.7

[1] The confidence limit is two standard errors (approximate 95 percent confidence limit) from the estimated total.

[2] Computed by dividing estimated total pounds harvested by number of people in the community.

[3] Calculated as the average pounds harvested by the sample times the number of households in the community.

- Data were unavailable for this report

Sources: Alaska Department of Fish and Game; NSB Department of Planning and Community Services; Alaska Department of Revenue.

Table 7-14. Harvest of Subsistence Resources, Kaktovik, 1985, 1986, and 1992.

	1985	1986	1992
Percent of households harvesting resources	90.5	87.2	89.4
Percent of households receiving resources	100.0	100.0	91.5
Percent of households giving resources	83.3	83.0	83.0
Lower confidence limit for the estimated total pounds harvested by the community	51,267.0	76,126.0	107,274.0
Estimated total pounds harvested by the community	61,663.0	84,060.0	170,939.0
Upper confidence limit for estimated total pounds harvested by the community [1]	72,059.0	91,994.0	234,604.0
Per capita pounds harvested [2]	327.9	432.8	885.6
Average pounds of the resources harvested per household [3]	1163.4	1501.1	2713.3

[1] The confidence limit is two standard errors (approximate 95 percent confidence limit) from the estimated total.

[2] Computed by dividing estimated total pounds harvested by number of people in the community.

[3] Calculated as the average pounds harvested by the sample times the number of households in the community.

- Data were unavailable for this report

Sources: Alaska Department of Fish and Game; NSB Department of Planning and Community Services; Alaska Department of Revenue.

Table 7-15. Harvest of Subsistence Resources, Nuiqsut, 1985 and 1993.

	1985	1993
Percent of households harvesting resources	97.5	90.3
Percent of households receiving resources	100.0	98.4
Percent of households giving resources	95.0	91.9
Lower confidence limit for the estimated total pounds harvested by the community	135,601.0	199,188.0
Estimated total pounds harvested by the community	160,035.0	267,818.0
Upper confidence limit for estimated total pounds harvested by the community [1]	184,469.0	336,448.0
Per capita pounds harvested [2]	399.2	741.7
Average pounds of the resources harvested per household [3]	2105.7	2943.0

[1] The confidence limit is two standard errors (approximate 95 percent confidence limit) from the estimated total.

[2] Computed by dividing estimated total pounds harvested by number of people in the community.

[3] Calculated as the average pounds harvested by the sample times the number of households in the community.

Sources: Alaska Department of Fish and Game; NSB Department of Planning and Community Services; Alaska Department of Revenue.

Table 7-16. Harvest of Subsistence Resources, Point Lay, 1987

	1987
Percent of households harvesting resources	83.1
Percent of households receiving resources	100.0
Percent of households giving resources	88.7
Lower confidence limit for the estimated total pounds harvested by the community	-
Estimated total pounds harvested by the community	107,321.0
Upper confidence limit for estimated total pounds harvested by the community [1]	-
Per capita pounds harvested [2]	890.1
Average pounds of the resources harvested per household [3]	2495.8

[1] The confidence limit is two standard errors (approximate 95 percent confidence limit) from the estimated total.

[2] Computed by dividing estimated total pounds harvested by number of people in the community.

[3] Calculated as the average pounds harvested by the sample times the number of households in the community.

- Data were unavailable for this report

Sources: Alaska Department of Fish and Game; NSB Department of Planning and Community Services; Alaska Department of Revenue.

Table 7-17. Harvest of Subsistence Resources, Wainwright, 1988 and 1989

	1988	1989
Percent of households harvesting resources	-	-
Percent of households receiving resources	-	-
Percent of households giving resources	-	-
Lower confidence limit for the estimated total pounds harvested by the community	-	-
Estimated total pounds harvested by the community	256,492.0	351,581.0
Upper confidence limit for estimated total pounds harvested by the community [1]	-	-
Per capita pounds harvested [2]	507.9	751.2
Average pounds of the resources harvested per household [3]	2068.5	2954.5

[1] The confidence limit is two standard errors (approximate 95 percent confidence limit) from the estimated total.

[2] Computed by dividing estimated total pounds harvested by number of people in the community.

[3] Calculated as the average pounds harvested by the sample times the number of households in the community.

- Data were unavailable for this report

Sources: Alaska Department of Fish and Game; NSB Department of Planning and Community Services; Alaska Department of Revenue.

According to the ADF&G surveys, the total annual harvest of wild foods is about 3.2 million pounds or about 434 pounds per person. Subsistence activity is significantly higher in the smaller communities outside the regional hub community of Barrow. While the average annual wild food harvest was 434 pounds per person over the entire Borough, community by community it ranges from 203 to 890 pounds per person. The amount of resources harvested may vary significantly from year to year with changes in the availability of subsistence species. Weather and ice conditions may preclude harvesting of resources even when species are in the area.

The nutritional contribution of the annual wild food harvest is about 40 percent of the caloric requirements of the resident population. As a result of the high content of fish and meat in the traditional subsistence diet, residents consume on average almost three times the protein found in the typical American diet. Most of the subsistence wild food is composed of marine mammals (61 percent by weight), land mammals (23 percent), fish (13 percent) and birds and eggs (3 percent). Commonly harvested marine mammals include bowhead whale, beluga whale, walrus, bearded seal and ringed seal. Land mammals harvested include caribou, polar bear, moose, Dahl sheep and musk ox. Major fish varieties are whitefish, Arctic char, grayling and smelt. The type of food harvested varies considerably among communities based on the availability of wild species in a community's traditional-use area.

While the harvest and sharing of subsistence resources remains an integral part of community life on the North Slope, many jobs have been increasingly professionalized, and more individuals have had to forego part of the subsistence hunting and fishing cycle (Bodenhorn, 2000). As incomes have increased and time constraints have reduced the frequency and duration of trips to harvest resources, some residents have limited their subsistence harvests to the most desired species (Jorgensen, 1990). Increased income, moreover, led to the adoption of more efficient, reliable, useful, and less-demanding subsistence technology (Lonner, 1986). For example, those with financial resources frequently counterbalance limited "free time" by using motorized equipment (e.g., three-wheelers, snow machines and outboard motors for boats) to reduce travel time (Alaska Consultants, Inc., 1981). Some even charter small planes to fly out to fish camp (Bodenhorn, 1989). The widespread use of modern modes of transportation also makes it possible for large numbers of people to concentrate in

a single settlement and still hunt and fish over a large area (Burch, 1975). In short, cash derived from wage employment did not replace subsistence but underwrote it (Lonner, 1986).

As noted in Chapter 2, the adoption of modern technology raised the cost of participating in subsistence activities. The 1998-1999 NSB census found that 39 percent of the Iñupiat households (21 percent of the non-Iñupiat households) spent at least $4,000 a year on subsistence activities (NSB Department of Planning and Community Services, 1995). Thirteen percent of the Iñupiat households spent more than $10,000 a year in pursuit of food for their households and their community. The expense of participating in subsistence activities tends to be higher in the outlying villages. In Point Lay for example, more than 57 percent of the households spent at least $4,000 a year on subsistence activities.

Kerkvliet and Nebesky (1997) developed an empirical model to analyze how North Slope residents allocate time between labor and subsistence activities. Data were from the 1988-1989 census administered by the NSB Department of Planning and Community Services in all eight North Slope villages. The researchers found that Iñupiat tend to begin their time allocations with wage labor decisions and then divide the remaining time between subsistence and leisure. According to the researchers, this finding suggests that Iñupiat have adapted to labor market conditions and is consistent with cash dependency for subsistence inputs. Cash for inputs often comes from wages, and, once employed, the worker is subject to labor market rigidities that lock him/her into the wage-consumption cycle. However, the policies of local employers allowing for unpaid subsistence leave and their acceptance of job turn-over tend to lessen labor market rigidities. Further, Kerkvliet and Nebesky found that, since time is allocated among wage labor, subsistence participation and leisure, North Slope residents tend to allocate relatively less time to subsistence as they increase their employment time and vice versa. However, the discrete change of becoming employed appears to be complementary to subsistence participation. An explanation for these findings may rest in distinguishing the differing effects of time and income scarcity on subsistence participation. A marginal decrease in employment time, in the context of 6 to10 months average annual labor participation, lowers time scarcity and raises subsistence hunting effort. On the other hand, a discrete change in employment status, reflecting voluntary or involuntary joblessness, represents a major impact that may sharply reduce wage income. This reduction, in turn, diminishes the individual's ability to obtain subsistence inputs and to participate in subsistence. In other words, extended underemployment or complete job loss may produce income scarcity effects that overwhelm those associated with lower time scarcity.

Over the past three decades the Iñupiat have expressed concerns that regulatory barriers to subsistence hunting could significantly reduce the net supply of subsistence resources. Since 1977, the bowhead whale harvest of the North Slope Iñupiat and other whaling communities in Alaska has been limited by a "subsistence quota" established by the International Whaling Commission (IWC). The periodic increases in the quota that have occurred over the years have only partially allayed the concerns of the Iñupiat regarding their ability to meet their cultural and subsistence needs under the externally prescribed harvest regulations for bowhead whales. Incidents such as the vote at the May 2002 meeting of the IWC that denied the Alaska Natives a bowhead whale quota underscore the continuing vulnerability of the quota to the vagaries of international politics.[70] Furthermore, whales are not the only traditional food species being controlled by outside agencies. As Bodenhorn (2000) noted, every element of the traditional Iñupiaq diet is now under external regulations.

[70] The denial of the quota by the IWC was widely seen as a response to the opposition of the United States and other nations to the attempts by Japan to lift the IWC's commercial whaling ban (Kizzia 2002). The U.S. State Department pursued diplomatic measures to conduct another vote on the bowhead whale quota and were successful in getting the quota restored (Gay 2002).

The Iñupiat also perceive offshore oil and gas development as a potential threat to their subsistence resource base. The National Research Council (2003) reported that the concerns of the Iñupiat with this development fall into three categories. The first is that the Iñupiat do not believe anyone has demonstrated the ability to clean up oil spilled in a frozen sea or in broken ice. Along the coast, the first concern is that a spill during the migration of the bowhead will injure or kill significant numbers of whales. The Iñupiat believe this would be especially critical during the spring migration when both spilled oil and whales would be concentrated in leads. The second concern is that a spill would cause the IWC to judge the bowhead to be under greater threat than is currently perceived, causing that group to curtail or reduce quotas for the striking of whales. The final concern is that the day-to-day noise associated with offshore exploration and production would alter the migration routes of the bowhead.

7.1.6 Quality of Life

As noted above, time constraints have caused some North Slope residents to limit their subsistence harvests to the most desired species. For the coastal villages on the North Slope, the single most important subsistence resource is the bowhead whale in terms of sustenance benefits, symbolic significance and the development and maintenance of social relationships within communities.[71] The late 1960s and early 1970s saw a resurgence of subsistence whaling in Alaska, especially within some North Slope Iñupiat communities (see Chapter 2). By the mid-1970s, the number of documented whaling crews had nearly doubled in three major North Slope communities, and the number of landed bowheads had increased considerably from the previous decade (Braham, 1995; Braund and Moorehead, 1995). Nearly half of Iñupiat men ages 18 and older went whaling in 1977 (Kruse et al., 1981). The economic growth in the region was a major factor in the resurgence, as the increased access to cash allowed more individuals to finance whaling crews (Nelson, 1982). Technological changes such as the introduction of snow machines and relaxation of prohibitions on comfort made whaling more attractive to young Iñupiat.[72] Moreover, active whaling consumed only a few weeks a year and could be fit among other activities (Kruse, 1986).

In addition, revitalized interest in Iñupiat traditions during the 1970s caused greater emphasis on whaling as an expression of cultural identity (Nelson, 1982). Because whaling continued to involve a large segment of the community, it remained the most visible tie to traditional Iñupiat activities (Kruse, 1986). Further, growing external pressures against subsistence whaling during the 1970s further heightened its prominent role as the symbol of cultural survival and intensified people's commitment to continue the hunt (Nelson, 1982). Worl et al. (1981) found that in spite of the limitations on subsistence harvests imposed by caribou and bowhead whale hunting restrictions, the annual round of community-wide traditional ceremonies (particularly those associated with the whaling complex and traditional celebrations which coincide with Thanksgiving and Christmas) continued and may, in fact, have increased participation and strengthened social ties within local communities. The researchers reported that Iñupiat extended families appeared to be healthy and function primarily through activities associated with the subsistence economy. In addition, cultural values, particularly those associated with sharing and cooperative activities and kinship obligations, continued to unify extended families and community-wide interrelated families. Although an increasing number of nuclear families were living in single-family dwellings, a significant number of houses contained more than one family. Worl et al. noted that, contrary to the assumption that nuclear family residency

[71] What the bowhead whale is to the coastal villages, the caribou is to the inland villages of the North Slope—a keystone of economic and social activity.

[72] In the past there were severe restrictions on comfort, both to make hunters worthy of their prey and to assure their readiness (Nelson, 1982).

patterns would weaken extended family bonds, indications were that nuclear families living in single-family dwellings continued to interact as members of extended families, particularly through cooperative subsistence activities. Kinship ties and the cultural values of sharing and cooperation continued to integrate the nuclear family into the extended family.

Worl et al. (1981) also reported that sharing patterns extended to neighboring communities as well. For example, when the people of Nuiqsut had an unsuccessful whale hunt, they received shares of whale meat from neighboring communities such as Barrow and Kaktovik. Opportunities for inter-village travel provided by the NSB and ASRC increased contact among Iñupiat communities and served to strengthen the regional identity of the North Slope Iñupiat and reinforce social bonds.

In terms of the overall quality of life in North Slope communities, most Iñupiat adults found their villages to be good places to live in 1977 (Kruse et al., 1981). A majority of Iñupiat adults believed that several aspects of village life had improved between 1970 and 1977. A majority stated that there were more jobs available in villages in 1977; that transportation to and from villages had improved; that local health care, already good in 1970, was better in 1977; and that the quality of local schools and of housing had improved. On the other hand, a majority of Iñupiat adults also believed that several aspects of village life had worsened between 1970 and 1977. A majority stated that fish and game stocks on the North Slope had declined; that the level of drinking, fighting, and drug use among villagers had increased;[73] that relations between whites and Iñupiat in villages had worsened; that food, housing, and clothing costs had risen sharply; and that helping and sharing among villagers, while still prevalent in North Slope villages in 1977, was not as widespread as it had been in 1970. Iñupiat in 1977 had mixed opinions about whether, on balance, petroleum development had been good or bad for their communities, and one-third of Iñupiat adults said they simply did not know whether the development had been good or bad for the North Slope.

There has been no comprehensive quality-of-life study conducted on the North Slope since the investigation by Kruse et al. (1981) in 1977. However, information collected in individual communities suggests that many of the socioeconomic advantages and disadvantages of living on the North Slope have not changed (e.g., see Impact Assessment, Inc., 1990; Smythe and Worl, 1986). For example, oil exploration and production activities continue to be a source of social tension and stress because these are activities over which the Iñupiat have little effective control, and because there is disagreement between and within Iñupiaq communities over the extent to which this development represents a threat or an opportunity. As noted by Impact Assessment, Inc. (1990), the degree to which the Iñupiat should compromise with the oil industry is a complex issue potentially pitting cultural values against economic interests, potentially dividing villages into opposing camps, and potentially creating conflicts between institutions in the region.

On the one hand, the North Slope Iñupiat recognize that their economic future and the modern lifestyle they have been accustomed to are closely intertwined with the petroleum industry.[74] This

[73] Kruse (1984:152-153) states that, contrary to community perceptions, "the traumatic death rate on the North Slope increased to an even greater degree during the period before oil development, 1960 to 1971, than it did between 1971 and 1977. The rate of increase in a neighboring Iñupiat region, which had had experienced much less impact from oil development and a much slower rate of economic change, was substantially higher during the late 1970s than it was on the North Slope. Moreover, the absolute level of traumatic death on the North Slope in the late 1970s was only slightly higher than in the neighboring Iñupiat region, and it has been somewhat higher since the 1960s."

[74] An economic dependence on the oil and gas industry is shared by the state as a whole. Berardi (1998) states that economic development in Alaska, including the availability of public sector funding for transfers, is closely tied to oil production and markets. She notes that eighty-five percent of Alaska state revenues are derived from one resource – oil, and about one of every three jobs in Alaska is supported by state spending. According to Berardi, no other state shows such a dramatic dependence on a single resource as Alaska.

dependence has become especially apparent in recent years with the decline in property tax revenue from petroleum installations (see Chapter 4). The resulting decline in tax revenues flowing to the NSB led to a sharp curtailment in capital improvement projects and employment opportunities. As discussed in Section 7.1.5, however, the Iñupiat are also acutely concerned about the potential adverse impact of oil and gas development on the subsistence resources essential to their economic and social well-being.

7.2 Overview of Trends and Issues Affecting Household Economies

The socioeconomic environments for the North Slope communities through the years show some notable trends, characteristics, and issues affecting household economies. The following sections provide a summary of such trends and issues for two periods: 1960 to 1971 and 1972 to present.

7.2.1 The Period from 1960 to 1971

- The resident population of the North Slope increased from 2,076 in 1960 to 3,075 in 1970 (about 48 percent). Some of this population increase was a result of movement from interior villages to larger communities such as Barrow and Point Hope, a long-term post-contact pattern among North Slope residents. Another demographic trend of this period is the out-migration of young adults (22-44) to urban areas such as Fairbanks and Anchorage. Generally, older adults (>45) remained in the villages. This shift appears to be related to multiple causes, including the desire for wage employment and the availability of services (medical, education, etc.) in the larger villages and towns. There was an increasing presence of non-Iñupiat in the North Slope population during this period, including more permanent residents in the larger communities.
- Employment opportunities were primarily with government (especially the Bureau of Indian Affairs), construction activities associated with development of the DEW line, and the Naval Arctic Research Laboratory. Fewer wage jobs existed in smaller villages such as Kaktovik (Barter Island) and Wainwright than in larger communities such as Barrow and Pt. Hope. Even in the larger villages employment opportunities tended to be intermittent.
- Between 1959 and 1969, the median household income was below the national and Alaska median household income, but there was a steady upward trend. Median incomes for non-Iñupiat households were significantly more than for Iñupiat households. Among the Iñupiat, transfer payments were an important source of household income.
- A preferred pattern in household economies was for some males to work for wages to capitalize the hunting and fishing activities of other male family members. However, there were insufficient employment opportunities in most communities for this preference to be realized. Consequently, wage earners worked part time, using cash resources to capitalize their subsistence pursuits. Snow machines, fuel, weapons, and ammunition were the most common items purchased.
- Educational attainment among the North Slope population was low in comparison to the rest of Alaska and national averages. In 1960, for example, 17.1 percent of the population had no formal education, as compared to 2.4 percent and 3.5 percent for the national and Alaska averages respectively; and17.6 percent of North Slope residents had a high school education, whereas the national average was 21.2 percent and the Alaska average was 32.3 percent.
- With the exception of Barrow, most North Slope households did not have piped in water, sewer services, or central electric power. “Honey buckets” were the primary means for handling sewage, water was hauled to individual homes, generators provided electricity, and oil-burning stoves

provided heat. Travel was most often by means of snow machine or dog sled. Some inter-village air service existed, but it was prohibitively expensive for many villagers.

7.2.2 The Period from 1972 to the Present

- From 1970 to 2000, the North Slope resident population more than doubled. Between 1970 and 1980, the population increased from 3,075 to 4,199 (36.5 percent); between 1980 and 1990, there was a 42.4 percent increase to 5,979, and a 23.5 percent increase occurred from 1990-2000. The non-Native resident population has steadily increased from 17 percent of the total in 1970 to 21 percent in 1980. This population increased to 27 percent in 1990 but decreased slightly to 26 percent in 2000. In general, non-Natives are under-represented in the less than 25 age group and over represented in the 30-50 age group. In 2000, the average household size in North Slope communities was 3.4 persons, compared with 2.74 persons for Alaska as a whole. In general, Iñupiat households have become smaller, with fewer extended family members than in the past. However, households continue to exhibit flexibility to accommodate the social responsibilities associated with Iñupiat kinship.
- Females joined the workforce in significant numbers in the post-1970 era, taking positions in the public and private sector. In some communities, especially the larger villages, females outnumbered males in the workforce.
- Unemployment in the post-1970 era remained relatively high through the mid-1980s. For example, Smythe and Worhl (1986) report that data from 1978, 1980, and 1985 indicate a 38 percent unemployment rate of which 80 percent was Native. However, the unemployment rate declined during the late 1980s; and, in the interval between 1990 and the present, the average annual unemployment rate has ranged from a low of 3.5 percent in 1990 to a high of 11.9 percent in 2002. Unemployment rates were higher in the outlying villages, and some sources argue that underemployment and discouraged workers characterized the work force in most communities (Circumpolar Research Associates, 1999).
- Wage employment continued as a means to capitalize and otherwise fund hunting, fishing, and gathering activities. Average costs to pursue subsistence activities ranged from $4,000 to more than $10,000 per year. Data presented in this report indicate subsistence resources continued to be important foods for Native households, and harvesting was an activity practiced by more than 60 percent of Barrow households and more than 80 percent of households in smaller villages such as Kaktovik, Nuiqsut, and Point Lay. Similarly, the majority of households in North Slope communities received subsistence resources from others, suggesting the continued importance of the cultural value of sharing, especially with regard to Native foods. Economically, socially, and culturally, "subsistence" remained an organizing concept in North Slope lifestyles.
- Prudhoe Bay oil production facilities generated property tax revenues for the NSB that became an important source for funding capital improvement projects and the provision of new services for North Slope residents. These services included new schools, libraries, and health facilities. Flush toilets and public sewer systems replaced honey buckets in some North Slope communities. Travel between villages was most often by air, although in the summer boats continued to be used in the coastal villages and snow machines remained a common means of winter travel. Satellite and cable systems were common in most North Slope households, and telephones were common in larger communities such as Barrow and Point Hope. The Iñupiat Heritage Commission provided for enrichment of local culture. The various NSB-sponsored programs and services also resulted in many new wage employment opportunities for residents. However, the

downturn in tax revenues and NSB budgets that began in the late-1990s became a source of concern for those who relied on this employment to support their families and lifestyles.

7.3 Changes in Household Characteristics

By the mid-1960s, most residents of the North Slope had transitioned from dog sleds and seal nets to snow-machine and rifle technology. Whale bone or wood and turf dwellings had been replaced by more modern homes, which in some cases included concrete foundations and painted sheetrock walls; and, although muktak and ugruk continued to be important foods, vegetables and beef were becoming common in family diets. Similarly, Iñupiat households were most likely to be composed of primary family members rather than larger extended families. Kinship ties and the cultural values of sharing and cooperation continued to integrate the nuclear family into the extended family. Yet, households on the North Slope were to continue to be exposed to different demands for adaptation. In particular, events of the 1970s, such as ANCSA, the formation of the NSB, and industrial activity at Prudhoe Bay, had a dramatic effect on household economies. As a result, 1960 through the early 1970s and post-1971 to the present are two distinct historical periods in terms of demography, employment, and subsistence participation, and characteristics of village households.

This summary constructs an "ideal type" household for these two historic periods. The ideal type construct is an alternative to description of typical households, which is problematic because of the variation among North Slope communities. Households in larger communities such as Barrow have access to more services and a wider range of employment opportunities. Villages such as Kaktovik and Nuiqsut do not yet have the public works infrastructure of Barrow, nor do they have the same housing availability. Similarly, the demography of North Slope communities shows differences in variables such as total population, the proportion of non-Natives in the total population, and household size. Because of these and other demographic and socioeconomic differences noted in previous sections, it is difficult to "typify" North Slope households.

The "ideal type" is a construct used to examine the dimensions of variability within North Slope households. The sociologist Max Weber described the "ideal type" construct as follows: "(it) is arrived at through the one-sided intensification of one or several aspects and through integration into an immanently consistent conceptual representation of a multiplicity of scattered and discrete individual phenomena, present here in greater number, there in less, and occasionally not at all, which are in congruity with these one-sidedly intensified aspects" (Coser, 1977: 224). That is, the ideal type can be used to organize the dimensions of variability without necessarily representing any actual household. In using this construct, the effort is to organize some of the important features of household without misrepresenting the importance of household variability.

The "ideal type" household of the period from 1960 to 1971 was likely to contain multiple generations, a pattern consistent with traditional household composition. The early 1960s household contained parents and several children and often either the grandparents or the married siblings of the male head of household. The household children might include a child "offered" and adopted from another family with a large number of children. As more housing became available, the grandparents or married siblings often moved into their own houses nearby. The houses were typically built by family members from scrap wood, and contained two to four rooms, including one or two bedrooms. The kitchen was a small area off the main living area.

Most of the adults and children in the household spoke Iñupiaq, although English was quickly replacing Iñupiaq as the language of everyday business and interpersonal communication. Within the household, television, radio, and newspapers were the primary means that members received news

and information; and, increasingly, winter story telling was giving way to "Little House on the Prairie" and other television programming as family entertainment.

Living in the smaller villages was relatively expensive—four to five times the average household costs in other areas of the United States. Consequently, cash income was important to purchase goods and pay for the medical and other services that were important for the household. Male householders may have been employed in one of the DEW line construction projects or in other wage work at the Arctic Research Lab. These jobs generally paid around $6,000 per year (1960 dollars), although the household was also likely to receive income from Social Security and other sources of state and federal transfer payments. The jobs available included working as a heavy equipment operator and various types of light and heavy manual labor. A few permanent jobs existed with the BIA or other federal entities operating in local communities, but much of the work was seasonal or temporary. Nonetheless, any job, whether it was seasonal, part-time, or permanent, was highly valued. For example, household income was required to buy the gas, snow machines, rifles, and boats necessary for hunting. Ideally, one or two male household members provided the income for another male to hunt nearly full-time and provide the household and other family members with the wild foods that were an integral part of Iñupiat life. Increasingly, however, elders expressed concern that the younger people in the villages were loosing the values, beliefs, and skills that characterized a good hunter, and they questioned the viability of a subsistence lifestyle in the face of the socioeconomic changes that were occurring on the North Slope.

Given the importance of hunting and the necessity of cash income to support it, household males balanced the needs for cash with the time available to hunt. This balance was difficult, as the availability of cash-earning opportunities and the availability of game sometimes conflicted. Those householders who had part-time work were likely to hunt in the spring and summer months when game is more readily available. Balancing cash needs with the economic, social, and cultural need for subsistence activities structured many of the issues that concerned households.

The socioeconomic environment for North Slope households changed with events that began in the late 1960s, especially the discovery of oil at Prudhoe Bay in 1967. This discovery accelerated a national need to settle land claims between the United States and Alaska Natives, resulting in the passage of ANCSA in 1971. One outcome of that Act was the development of one regional corporation and several village corporations that became new sources of cash resources and employment opportunities for Iñupiat households. Equally, if not more important was the formation of the NSB in 1972 and its ability to tax oil development at Prudhoe Bay and related industrial facilities. This tax income provided revenue for the NSB that funded new services, schools, and other capital improvement projects in the villages. These programs not only led to a marked improvement in many aspects of village life but also brought employment and wage earning opportunities to a wider range of village households than was available before formation of the NSB.

Post-1971 households in most North Slope communities had access to new services and facilities, new wage employment and educational opportunities, and cash resources that were significantly different than in the pre-1971 and especially pre-1960 periods.

The "ideal type household" for the time period after 1971 was one in which a primary kin group (mother, father, children) resided in a modern modular house or, less commonly, in an older wooden structure hand-built by previous generations. A neighbor's household may have included a close relative or two of either spouse and some households may have contained both elder parents as well as siblings. Larger kin groups were most common in households where housing was limited. Iñupiaq and English were both spoken within the household, although in some households only Iñupiaq or English was spoken. The adults in the household had more than likely completed high school.

The male household member was likely to be employed full time in the larger villages or part-time in the outlying communities. However, some adult males were working in jobs that do not match their skills, were unemployed or had dropped out of the workforce altogether. Increasingly, females also provided income for the household, especially from employment in clerical and administrative positions. There were some private sector employment opportunities for village residents in the construction industry or with service industry employers. However, many people worked for the NSB, municipal governments or the NSB School District, and these positions were vulnerable to downturns in tax revenues and other sources of government funding.

Household income from wages and other sources was between $50,000 and $60,000, but non-Iñupiat neighbors typically had higher incomes. It was also probable that some neighbors had household incomes in the range of $15,000 to $40,000. Store bought foods were costly; the prices of beef, chicken, and fruit were often two or three times those of the same goods in Anchorage. Utility costs also consumed a modest amount of household income: heating, electricity, and water costs totaled in the range of $250 to $450 per month depending on the season. Transportation costs also were major items in family budgets, especially the costs for air travel to other villages and destinations within and outside Alaska. The household engaged in part-time subsistence activities and offered financial support for family members in other households who had more time to hunt and fish. The cost of ammunition, weapons, boats, gas, nets, and fuel was substantial, but the products from subsistence activities and the activities themselves continued to be of fundamental importance to householders.

The household's residence was mostly likely built after 1970. The residence had four or five rooms and a value of around $140,000. The house was heated by oil, although households in Barrow benefited from a supply of cheaper natural gas. Although some households had piped water, the water used by most households was stored in tanks filled by NSB trucks that retrieved the water from a well, lake, or other source. The majority of households had access to a municipal sewage system. Many households were likely to have telephones. Television was omnipresent, and watching rented videocassettes was a household pastime. Householders attentively listened to the local radio station (KBRW) to hear the latest national and local news. Newspapers—often a few days old—from Fairbanks and Anchorage were also important information sources.

The seasonal availability of game and other "county foods" continued to organize the cycle of activity in households. However, wage employment increasingly limited the investment of time in the pursuit of subsistence activities. In some years, the hunters in a number of households had little food to share with neighbors and friends. Individuals had to make decisions about the amount of time they could invest in hunting and continue to earn the wages that supported their subsistence activities and allowed them meet their sharing obligations. Many jobs offered household hunters extended subsistence leave, which eased the burden of making choices about the time to invest in wage work and hunting. Nonetheless, the uncertainty of Arctic hunting and fishing activities forced the wage working hunter to evaluate the conditions for earning money and harvesting game that provided sustenance for the family, resources to share with relatives and neighbors, and a sense of meaningful connection with the social and cultural values that reinforced individual, family, and community identity.

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Appendix A. Projects Funded by Outside Sources in North Slope Communities

The purpose of this appendix is to provide an overview of the capital improvement projects that have been funded (or proposed for funding) in North Slope communities. The time frame covered by this list is from the late-1980s to 2003. Project information was obtained from the Rural Alaska Project Identification and Delivery System (RAPIDS) Database maintained by the Research & Analysis Section of the Alaska Department of Commerce, Community and Economic Development— http://www.commerce.state.ak.us/dca/commdb/CF_RAPIDS.htm

Table A-1. Anaktuvuk Pass Projects Funded by Outside Sources

Agency	Year	Project Description	Agency Cost	Total Cost
DCCED	2003	Capital Matching, community projects & improvements	$25,114	$26,436
ANTHC	2002	Water/sewer holding tanks	$0	$300,000
HUD	2002	Indian Housing Block Grant	$173,928	$173,928
DCCED	2002	Capital Matching, CPI/multi-purpose building	$25,000	$26,316
DCCED	2001	Capital Matching, community hall upgrade	$25,000	$26,316
DCCED	2001	Capital Matching, city maintenance shop upgrade	$25,000	$26,316
HUD	2000	Indian Housing Block Grant	$168,206	$168,206
DCCED	2000	Leg. Grant, community facilities	$55,241	$55,241
DCCED	2000	Capital Matching, community facilities and equipment	$36,809	$38,747
HUD	1999	Indian Housing Block Grants	$168,206	$168,206
DCCED	1999	Capital Matching, community hall upgrade	$25,000	$26,316
DCCED	1999	Capital Matching, bed and breakfast	$25,000	$26,316
FAA	1998	Airport, rehabilitate runway	$3,922,000	$4,183,467
DEC/MGL	1998	Water/Sewer, EPA continued construction service connections to homes	$1,000,000	$2,000,000
HUD	1998	Indian Housing Block Grant	$179,863	$179,863
DCCED	1998	Capital Matching, local priority, survey of villages bed & breakfast	$25,000	$26,316
DEC/MGL	1997	Water/Sewer Phase III	$0	$750,000
HUD/CGP	1997	Housing Modernization, electrical, mechanical, structural, interiors & exteriors, water & sewer	$281,118	$281,118
DCCED	1996	Capital Matching, bed & breakfast	$25,000	$26,316
DEC/MGL	1996	Piped Water/Sewer Phase II, construct service connections to homes	$375,000	$750,000
HUD/CGP	1996	Housing Modernization, seal second floor air leaks, mechanical, bath, kitchen renovations	$30,000	$30,000
DEC/MGL	1995	NSB Water/Sewer System Construction Design, piped water and sewer system to service home in the community	$750,000	$750,000
DCCED	1995	Capital Matching bed & breakfast	$25,000	$26,316
HUD/CGP	1995	Housing Modernization	$8,400	$8,400
DCCED	1994	Combined Senior/Teen Center construction	$75,000	$500,000

Agency	Year	Project Description	Agency Cost	Total Cost
DOT & PF	1994	Chandalar Lake Airport improvements	$4,500	$450,000
DCCED	1994	RDA bed & breakfast design	$25,000	$65,7000
HUD/CGP	1994	Boilers Housing Modernization	$150,000	$150,000
DCCED	1994	Capital Matching bed & breakfast	$25,000	$26,316
DCCED	1993	Leg. Grant, water delivery truck, school water improvements	$150,000	$150,000
HUD/CGP	1993	Housing Modernization, LBP testing, smoke detectors, 504 conversions	$16,625	$16,625
DCCED	1992	Leg. Grant, road & airport safety projects	$381,264	$381,264
DCCED	1991	Leg. Grant, public safety facility upgrade	$75,000	$75,000
DEC/MGL	1989	December 1987 Septic System Demonstration Project, construct septic tank demonstration project, consisting of water supply and sewage disposal for the community building; completed	$48,726	$48,726
DEC/MGL	1989	Septic System Feasibility Study, study the feasibility of septic systems in the community	$1,274	$1,274
DEC/MGL	1987	Landfill construction	$300,000	$300,000

Table A-2. Atqasuk Projects Funded by Outside Sources

Agency	Year	Project Description	Agency Cost	Total Cost
DCCED	2003	Capital Matching, community projects & improvements	$181,953	$191,530
DEC/MGL	2002	New infrastructure to individual homes and facilities	$100,000	$400,000
HUD	2002	Indian Housing Block Grant	$120,974	$120.974
DCCED	2002	Community Center renovation	$31,298	$32,946
FAA	2001	Airport snow removal equipment (grader)	$200,000	$213,333
FAA	2000	Install runway visual guidance for Airport	$166,346	$177,436
HUD	2000	Indian Housing Block Grant	$120,974	$120,974
DCCED	2000	Local Government Operations	$109,000	$109,000
DCCED	2000	Community Center maintenance & operations	$90,000	$90,000
FAA	1999	Construct airport snow removal equipment storage building	$600,000	$640,000
HUD	1999	Indian Housing Block Grant	$117,056	$117,056
HUD	1998	Indian Housing Block Grant	$125,127	$125,127
DCCED	1997	Capital Matching, Community Center structural repairs and improvements/acquisition	$75,000	$78,947
HUD/CGP	1997	Housing Modernization, electrical, mechanical, structural, interior	$30,000	$30,000
HUD/CGP	1996	Housing Modernization, electrical, mechanical, structural, interior	$50,200	$50,200
HUD/CGP	1995	Housing Modernization, electrical, mechanical, boilers, insulation, plumbing,	$50,200	$50,200
DCCED	1995	Local Government Assistance	$8,172	$8,172
DCCED	1994	NSB trash collection truck	$60,000	$60,000
HUD/CGP	1994	Housing Modernization, boilers	$50,000	$50,000
DCCED	1993	Leg. Grant, public safety facility upgrade	$100,000	$100,00
DCCED	1993	NPR-A Grant, Local Government Assistance	$50,000	

Agency	Year	Project Description	Agency Cost	Total Cost
HUD/CGP	1993	Housing Modernization, LBP testing, smoke detectors, 504 conversions	$25,473	$25,473
DCCED	1992	Leg. Grant, water tank upgrade	$75,000	$75,000
DCCED	1990	Leg. Grant, purchase and maintenance of a vehicle for community center and repairs, maintenance, and operations vehicle for the community center	$112,500	$112,500

Table A-3. Barrow Projects Funded by Outside Sources

Agency	Year	Project Description	Agency Cost	Total Cost
COE	2003	Coast Storm Damage Reduction/Construction	$50,000,000	$50,000,000
DCCED	2002	Capital Matching NSB- Area-wide Hazardous Materials Disposal	$253,961	$362,801
DCCED	2003	Capital Matching, Browerville Teen Center	$109,761	$129,131
DCCED	2003	Capital Grant 4850 Ilisagvik College- Equipment	$20,795	$24,901
HUD	2002	Indian Housing Block Grant for communities in the Region	$3,692,925	$3,692,925
ANTHC	2002	HIS funding water/Sewer holding tanks	$0	$2,575,000
COE	2002	Coast Storm Damage, reduction/pre-construction	$2,500,000	$2,500,000
HUD	2002	Indian Housing Block Grant	$983,569	$983,569
DCCED	2002	Capital Matching, Goat Harbor upgrade	$109,000	$128,236
COE	2002	Coastal Storm Damage Reduction/Feasibility & Design, Feasibility to be completed Feb. 2005; Design in March 2007	$100,000	$100,000
HUD/AHFC	2001	Construct low rent units in 7 North Slope Villages	$183,863	$6,841,782
HUD	2001	Indian Housing Block Grant for communities in Region	$4,506,411	$4,506,411
DOT & PF	2001	Airport apron expansion and Taxilane extension and security fencing	$277,500	$277,500
HUD	2001	Indian Housing Block Grant	$998,368	$998,368
Denali	2001	Greist Health Center safety repairs	$852,000	$852,000
DCCED	2001	NPT-A grant NSB-Waterfowl Surveys in NPRA	$150,000	$150,000
DCCED	2001	NPR-A Grant NSB-tracking & analysis of Teshekpuk Lake Caribou herd	$150,000	$150,000
DCCED	2001	Capital Matching Upgrade Playgrounds & Outdoor City Recreational Facilities	$108,285	$127,394
DCCED	2001	NPR- A grant NSB- subsistence documentation, harvest monitoring	$100,000	$100,000
DCCED	2001	Compliance at Roller Rink	$10,596	$10,596
DCCED	2000	NPR- A grant NSB- Village Power Plant & electrical distribution/waste, heat distribution	$10,069,367	$10,069,367
HUD/AHFC	2000	Construct low rent units in 7 North Slope Villages	$183,863	$6,841,782
HUD	2000	Indian Housing Block Grant- Arctic Slope Regional Corporation	$3,293,624	$3,293624
DCCED	2000	Mini-Grant, Bowling Alley Feasibility Study	$14,5000	$2,116,385
DCCED	2000	NPR- A grant NSB- Fire Depart. Equipment & Training for Atqasuk, Barrow, Nuiqsut,, and Wainwright	$1,114,150	$1,114,150
DCCED	2000	NPT- A grant Design, Construction & Purchase of Retractable Boat Ramp	$1,000,000	$1,000,000

Agency	Year	Project Description	Agency Cost	Total Cost
DCCED	2000	NPR-A Grant Design, Construction & Purchase of Tractable Boat Ramp	$1,000,000	$1,000,000
HUD	2000	Indian Housing Block Grant	$909,947	$909,947
DCCED	2000	NPR-A Grant, public facilities maintenance & operations	$650,000	$650,000
DCCED	2000	NPR-A Grant, maintenance, building construction	$630,000	$630,000
DCCED	2000	NPR-A Grant, NSB- Survey & Inventory of Fish Resources in Lake & Streams of Eastern NPRA	$150,000	$150,000
DCCED	2000	NPR-A Grant, NSB-Waterfowl Survey in NPRA	$150,000	$150,000
DCCED	2000	Capital Matching New Playground/Indoor & Outdoor Recreation	$109,670	$109,670
DCCED	2000	NPR-A grant NSB- Harvest Monitoring: Subsistence	$100,000	$100,000
HUD/AHFC	1999	Construct Low Rent units in 7 North Slope Villages	$205,292	$6,841,782
AIDEA	1999	Loan participation with National Bank of Alaska for retail building owned by the Ukpeagvik Inupiat Corporation and to be leased to the Alaska Commercial Company Retail Building	$5,160,000	$6,450,000
HUD	1999	Indian Housing Block Grant- Arctic Slope Regional Corporation	$3,293,624	$3,293,624
HUD	1999	Housing Improvements	$972,597	$972,597
HUD	1999	Indian Housing Block Grant	$972,597	$972,597
HUD	1999	Housing Improvement	$443,808	$443,808
DCCED	1999	Capital Matching, New playground and indoor/ outdoor recreation	$107,176	$126,089
DCCED	1999	Leg. Grant NSB- Education, efforts to open the coastal plain of Arctic Wildlife Refuge for oil and gas exploration and development	$25,000	$25,000
HUD/AHFC	1998	Construct low Rent Units in 7 North Slope Village	$678,429	$678,429
HUD	1998	Indian Housing Block Grant, Arctic Slope Regional Corporation	$2,997,418,	$2,997,418
FAA	1998	Wiley Post Will Rogers Memorial Airport: construct SRE Building	$1,500,000	$1,600,000
DOT & PF	1998	Airport snow removal equipment building	$1,205,000	$1,500,000
DOT & PF	1998	Airport Snow Removal Equipment Building	$93,750	$1,500,000
HUD	1998	Indian Housing Block Grant	$1,038,462	$1,038,462
DOT & PF	1998	Replace 3 buses	$36,100	$800,000
EED	1998	School Bulk Fuel Systems Upgrade	$7,750	$492,500
FAA	1998	Wiley Post Will Rogers Memorial Airport: Master Planning Study	$375,000	$400,000
DOT & PF	1998	Airport Master Plan Update	$23,438	$375,000
DCCED	1998	Capital Matching, Local priority =, from 1997 USDA/RD survey of villages, new Playground/Indoor & Outdoor Recreation	$156,664	$184,311
DCCED	1998	Capital Matching NSB- Area-Wide Fire Station Renovation	$88,307	$126,153
DCCED	1997	Capital Matching, new playground/indoor & outdoor recreation	$106,123	$124,851
DCCED	1997	Compliance for Parks	$22,623	$120,164

Agency	Year	Project Description	Agency Cost	Total Cost
DCCED	1997	Capital Matching, NSB- Thermal Oxidation System	$64,423	$92,033
HUD/CGP	1997	Housing Modernization, electrical, mechanical, structural, interiors & exteriors	$30,000	$30,000
HUD/AHFC	1996	Construct 20 Low Rent Units	$3,523,815	$4,145,327
HUD/CGP	1996	Electrical, mechanical, structural, interiors & exteriors Housing Modernization	$350,000	$350,000
DCCED	1996	Capital Matching, new playground indoor/outdoor recreation	$148,034	$174,158
DCCED	1996	Capital Matching NSB- purchase communications equipment/software	$91,806	$131,151
DPT & PF	1995	Airport snow blower	$52,200	$520,000
COE	1995	Debris Removal- Eison Lagoon	$500,000	$500,000
HUD/CGP	1995	Housing Modernization, trash facilities, bathroom renovations, electric, mechanical, insulation	$279,007	$279,007
DCCED	1995	Capital Matching, playgrounds, upgrade city softball fields	$149,613	$176,015
DCCED	1995	Capital Matching, NSB- Search & Rescue equipment	$87,192	$124,560
DCCED	1995	Compliance for Parks	$7,661	$7,661
DCCED	1995	Construct 20 Low Rent Units	$3,262,943,	$3,262,943
HUD/AHFC	1994	Housing Modernization, handicapped ramp, bathroom renovations, boilers, security station	$480,000	$480,000
DOT & PF	1994	Airport Runway & Taxiway	$18,000	$180,000
DCCED	1994	Capital Matching Upgrade City Softball Fields & Playground Equipment	$143,486	$168,807
DCCED	1994	Capital Matching NSB- Search & Rescue Equipment	$100,076	$142,966
DCCED	1994	Leg. Grant NSB- Bowhead Whale Census	$84,000	$84,000
DHSS	1994	Hospital Inpatient Facilities Upgrade	$25,000	$25,000
HUD/CGP	1993	Housing Modernization, LBP testing, smoke detectors, 504 conversions, bathroom renovations, entrances, laundry facilities, weatherization	$1,187,487	$1,187,487
DCCED	1993	Leg. Grant, NSB- Barrow Cultural Center	$200,000	$200,000
DCCED	1993	NPR-A Grant, local Government assistance	$200,000	$200,000
DOT & PF	1993	Leg. Grant NSB- Coal Project	$150,000	$150,000
DOT & PF	1993	Airport Apron Expansion Phase II	$11,100	$111,000
DHSS	1993	Alcohol Treatment Center upgrades	$80,000	$80,000
DOT & PF	1992	Airport Apron Expansion Phase I	$278,245	$2,782,446
DOT & PF	1992	Airport Rescue & Fire Fighting Building	$251,986	$2,519,862
DCCED	1992	Leg. Grant NSB- Coal Project, Mine Site Development Power Plant Design	$1,200,000	$1,200,000
DCCED	1987	NPR-A grant NSB- Children/Youth Service Facility	$3,000,000	$3,000,000

Table A-4. Kaktovik Projects Funded by Outside Agencies

Agency	Year	Project Description	Agency Cost	Total Cost
DCCED	2003	Capital Matching, community building upgrade	$15,000	$15,790
DCCED	2003	Capital Matching, Old Cemetery Fencing	$10,000	$10,527

Agency	Year	Project Description	Agency Cost	Total Cost
HUD	2002	Indian Housing Block Grant	$179,613	$179,613
DCCED	2002	Capital Matching, community building upgrade	$15,000	$15,789
DCCED	2002	Capital Matching, boat dock construction	$10,000	$10,000
BIA	2002	Upgrade community roads	$450,000	$450,000
FAA	2001	Barter Island LRRS Airport: conduct Master Plan	$250,000	$266,667
DCCED	2001	Capital Matching, playground Equipment	$25,000	$26,316
HUD	2000	Indian Housing Block Grant	$173,600	$173,000
DCCED	2000	Capital Matching, community building upgrade	$15,000	$15,000
DCCED	2000	Capital Matching, boat dock construction	$10,000	$10,546
HUD	1999	Indian Housing Block Grant	$173,600	$173,600
DCCED	1999	Leg. Grant NSB-Education efforts to open the coastal plain of the Arctic Wildlife Refuge for oil and gas exploration and development	$25,000	$25,000
DCCED	1999	Capital Matching, community building upgrade	$15,000	$15,789
DCCED	1999	Capital Matching, cemetery fencing	$10,000	$10,526
HUD	1998	Indian Housing Block Grant	$186,168	$186,168
DCCED	1998	Capital Matching, community building upgrade	$25,000	$26,316
FAA	1197	Barter Island LRRS Airport: Mater Plan Study	$108,280	$115,499
HUD/CGP	1997	Housing Modernization: electrical, mechanical, structural, interiors	$57,000	$57,000
DCCED	1996	Capital Matching, summer campground for children	$25,000	$26,316
HUD/CGP	1995	Housing Modernization, electrical, mechanical	$39,162	$39,162
DCCED	1995	Capital Matching, community facility improvements	$25,000	$26,316
DCCED	1994	Visitor Center design & construction	$75,000	$75,000
HUD/CGP	1994	Housing Modernization, boilers	$70,000	$70,000
DCCED	1994	Capital Matching, utility vehicle purchase & delivery	$25,000	$26,316
DCCED	1993	Leg. Grant, public safety facility upgrade	$100,000	$100,000
HUD/CGP	1993	Housing Modernization: lead-based paint testing, 4 access ramps, hardwire smoke detectors in 4 subdivisions	$15,200	$15,200
DCCED	1992	Leg. Grant, water delivery vehicle	$155,000	$155,000
DEC/MGL	1988	Sewage disposal system	$500,000	$500,000

Table A-5. Nuiqsut Capital Improvement Projects Funded by Outside Sources

Agency	Year	Project Description	Agency Cost	Total Cost
DCCED	2003	Capital Matching, community projects & improvements	$25,000	$26,316
HUD	2002	Indian Housing Block Grant	$230,080	$230,080
FAA	2001	Airport Apron expansion	$1,000,000	$1,066,667
DEC/VSW	2001	Closure Feasibility Study, sewage lagoon	$25,000	$100,000
DCCED	2001	NPR-A grant NSB- natural gas piping distribution	$3,800,000	$3,800,000
DCCED	2000	NPR-A grant NSB- natural gas conversion	$2,200,000	$2,200,000
FAA	2000	Runway Safety Area construction	$2,057,737	$2,194,919
DCCED	2000	NPR-A grant NSB- above ground service connection	$2,100,000	$2,100,000

Agency	Year	Project Description	Agency Cost	Total Cost
DCCED	2000	NPR-A grant NSB- Cultural Center construction	$939,800	$939,800
DCCED	2000	NPR-A grant Day Care construction, operation and maintenance	$765,000	$765,000
DCCED	2000	NPR-A Day Care construction, operation & maintenance	$495,400	$495,400
DCCED	2000	NPR-A grant City Hall expansion, Kisik Center renovation	$340,000	$340,000
HUD	2000	Indian Housing Block Grant	$217,284	$217,284
DCCED	2000	NPR-A grant, local government operation	$200,000	$200,000
DCCED	2000	NPR-A grant, graveyard fending	$156,000	$156,000
DCCED	2000	Capital Matching, Youth Center renovation	$135,851	$141,949
DCCED	2000	NPR-A grant NSB- Police Officer for 3 years	$100,000	$100,000
HUD	1999	Indian Housing Block Grant	$217,284	$217,284
BIA	1998	5.0 km Colville River Road grand & drain	$2,900,000	$2,900,000
HUD	1998	Indian Housing Block Grant	$233,455	$233,455
HUD/CGP	1997	Housing Modernization, electrical, mechanical, structural, interiors	$30,000	$30,000
BIA	1997	4.8 km Colver River Road design	$10,000	$10,000
HUD/CGP	1996	Housing Modernization, electrical, mechanical, structural, interiors and exteriors	$105,000	$105,000
HUD/CGP	1995	Housing Modernization, electrical, mechanical, & plumbing	$167,000	$167,000
DCCED	1995	Capital Hatching, ball field & park development	$25,000	$26,316
DCCED	1995	NPR-A grant, local government operations	$3,320	$3,320
HUD/CGP	1994	Housing Modernization, flues, boilers	$60,000	$60,000
DCCED	1994	Leg. Grant, Day Care Center Phase I	$60,000	$60,000
DCCED	1994	Capital Matching, ball field & park development	$25,000	$25,000
DCCED	1994	NPR-A grant, local government operations	$4,167	$4,167
DCCED	1993	NPR-A grant, local government assistance	$90,000	$90,000
DCCED	1993	Leg. Grant, water supply upgrades and equipment	$81,900	$81,900
HUD/CGP	1993	Housing Modernization, lead-based paint testing, 4 access ramps, retro bath & kitchen in 1, hard wire smoke detectors in 4 subdivision	$22,625	$22,625
DEC/MGL	1987	Sewage Disposal Lagoon	$250,000	$250,000

Table A-6. Point Hope Capital Project Expenditures Funded by Outside Sources

Agency	Year	Project Description	Agency Cost	Total Cost
DCCED	2003	Capital Matching, community facilities and equipment	$25,000	$26,316
HUD	2002	Indian Housing Block Grant	$384,030	$384,030
DCCED/MGL	2002	NSB Sever System Improvements, housing, plumbing	$48,700	$194,500
DCCED	2002	Capital Matching, Day Care expansion	$25,000	$26,317
HUD	2001	Indian Housing Block Grant	$387,665	$387,665
DCCED	2001	Capital matching, community facilities and equipment	$25,000	$26,316
FAA	2000	Airport Snow Removal Building construction	$932,156	$994,300

Agency	Year	Project Description	Agency Cost	Total Cost
DOT & PF	2000	Airport Snow Removal Equipment Building replacement	$65,000	$650,000
HUD	2000	Indian Housing Block Grant	$353,514	$353.514
DCCED	2000	Capital Matching, community facilities and equipment	$25,000	$25,000
HUD	1999	Housing Improvements	$371,333	$371,333
HUD	1999	Indian Housing Block Grant	$371,333	$371,333
DCCED	1999	Capital Matching, community facilities renovation and water and sewer project	$25,000	$26,316
HUD	1998	Indian Housing Block Grant	$396,766	$396,766
DCCED	1998	Mini-Grant, Native Arts and Crafts cooperative start-up	$21,000	$148,500
DCCED	1998	Capital Matching, city equipment	$30,175	$31,763
HUD/CGP	1997	Housing Modernization, electrical, mechanical, structural, interiors and exteriors	$90,000	$90,000
DCCED	1997	Capital matching, Recreation Center	$26,705	$28,111
HUD/CGP	1996	Housing Modernization, seal air leaks, electrical, mechanical, structural interiors & exteriors	$170,000	$170,000
DCCED	1996	Capital Matching, Day-Care mini van	$26,538	$27,935
HUD/CGP	1995	Housing Modernization, electrical, mechanical, boilers and plumbing	$272,600	$272,600
DCCED	1995	Capital Matching, winter storage and maintenance of City Garage Building	$27,838	$29,303
HUD/CGP	1994	Housing Modernization, boilers	$75,020	$75,020
DCCED	1994	Capital Matching, City Arcade upgrade	$15,000	$15,789
DCCED	1994	Capital matching, City Office upgrade and equipment	$13,366	$13,366
DOT & PF	1993	Airport Road	$25,000	$250,000
DCCED	1993	Leg. Grant Senior Center expansion	$150,000	$150,000
HUD/CGP	1993	Housing Modernization, LBP testing, smoke detectors, 504 conversions	$51,385	$51,385
DOT & PF	1992	Airport runway resurfacing	$271,338	$2,713,381
DOT & PF	1990	Airport lighting	$41,138	$411,376

Table A-7. Point Lay Capital Projects Funded by Outside Sources

Agency	Year	Project Description	Agency Cost	Total Cost
HUD	2002	Indian Housing Block Grant	$112,298	$112,298
HUD	2000	Indian Housing Block Grant	$108,439	$108,439
HUD	1998	Indian Housing Block Grant	$115,842	$115,842
ANTHC	1997	Landfill Study	$0	$125,450
FAA	1997	Point Lay Dew Station Airport Master Planning Study	$108,280	$115,499
DCCED	1996	Community Facilities Renovation	$42,041	$42,041
HUD/CGP	1995	Housing Modernization	$17,931	$17,931
DCCED	1994	Community Facilities	$100,000	$100,000
HUC/CGP	1994	Housing Modernization	$20,000	$20,000
EED	1994	Cully School Drinking Water	$133,100	$158,828
HUD/CGP	1993	Housing Modernization	$33,800	$33,800
DCCED	1992	Utility Vehicle	$75,000	$75,000
DCCED	1991	Electric project	$75,000	$75,000

Table A-8. Wainwright Capital Projects Funded by Outside Sources

Agency	Year	Project Description	Agency Cost	Total Cost
DCCED	2003	Capital Matching, Boat Dock design	$25,000	$26,316
HUD	2002	Indian Housing Block Grant	$374,653	$374,653
ANTH	2002	Water & Sewer Holding tanks	$0	$100,000
ANTH	2002	Plumbing, 4 homes	$0	$100,000
DCCED	2002	Capital Matching, Community Center renovation	$25,000	$26,316
DCCED	2001	NPR-A grant, NSB- local government operations	$250,000	$250,000
DCCED	2001	Capital Matching, TV Cable upgrade	$25,000	$26,316
HUD	2000	Indian Housing Block Grant	$355,599	$355,599
DCCED	2000	NPR-A grant NSB- Community Center & City Hall renovation	$191,283	$191,283
DCCED	2000	Capital Matching, Robert James Community Center furnace	$25,007	$25,007
HUD	1999	Indian Housing Block Grant	$355,599	$355,599
DCCED	1999	Capital Matching, Robert James Community Center Renovation	$25,101	$26,422
DEC/MGL	1998	Piped Water & Sewer, community system household plumbing to provide running water, flush toilets, showers	$440,000	$1,230,000
DEC/VSW	1998	Water/Sewer, purchase pipe for water distribution	$40,000	$880,000
HUD	1998	Indian Housing Block Grant	$379,830	$379,830
DCCED	1998	Capital Matching, Robert James Community Center renovation	$26,891	$28,306
FAA	1997	Wainwright Airport, rehabilitate runway	$1,267,000	$1,351,467
USDA/RD	1997	Grant administered through the NSB Water & Sewer Project/ Above Ground & Interior Service Connections 2001	$440,000	$880,000

Agency	Year	Project Description	Agency Cost	Total Cost
HUD/CGP	1997	Housing Modernization, water/sewer system renovations	$570,000	$570,000
ANTHC	1997	Landfill Study	$0	$125,450
DCCED	1997	Robert James Community Center Bathroom Upgrade	$25,000	$26,316
USDA/RD	1996	Planned Washeteria Improvements funded by NSB	$1,375,000	$2,750,000
HUD/CGP	1996	Housing Modernization, electrical, mechanical, structural, interiors & exteriors, water/ sewer renovation	$120,000	$120,000
DCCED	1996	Capital Matching, Robert James Community Center Renovation	$50,917	$53,597
DOT & PF	1995	Airport runway and apron resurfacing	$473,804	$1,473,804
HUD/CGP	1995	Housing Modernization, electrical, mechanical, boilers, insulation	$147,600	$147,600
DCCED	1995	Leg. Grant, Robert James Community Center renovation	$24,992	$31,240
DCCED	1995	Leg. Grant, Robert James Community Center renovation	$25,000	$26,316
DCCED	1995	NPR-A grant, local government assistance	$6,385	$6,385
DCCED	1994	Leg. Grant, Search & Rescue equipment	$75,000	$75,000
HUD/CGP	1994	Housing Modernization, boilers, flues	$65,010	$65,010
DCCED	1994	NPR-A grant, local government assistance	$4,167	$4,167
DCCED	1993	NPR-A grant, local government assistance	$107,126	$107,126
DCCED	1993	Leg. Grant, Garbage Truck	$65,000	$65,000
HUD/CGP	1993	Housing Modernization, lead-based paint testing, smoke detectors, 504 conversions	$37,478	$37,478
DCCED	1990	Leg. Grant, Washeteria relocation	$117,971	$117,971
DCCED	1989	Leg. Grant, furniture, fixtures & equipment, senior citizens van & senior center	$50,000	$50,000

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally-owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. Administration.