OCS Study
MMS 92-0032

Technical Report No. 152

Contract No. 14-12-0001-30300

Social Indicators Study of Alaskan Coastal Villages

I. Key Informant Summaries

Volume 2: Schedule B Regions (Bristol Bay, Kodiak, Bering Straits)

Submitted to:

U.S. Department of the Interior
Minerals Management Service
Alaska OCS Region
Anchorage, Alaska

Human Relations Area Files

August, 1992

Alaska OCS Environmental Studies Program

Social Indicators Study of Alaskan Coastal Villages
I. Key Informant Summaries. Volume 2: Schedule B Regions

Human Relations Area Files
New Haven, Connecticut

Prepared by Joanna Endter-Wada, Jon Hofmeister, Rachel Mason, Steven McNabb, and Joanne Mulcahy, with contributions from Lynn Robbins. Joseph Jorgensen was the principal investigator and project manager. The authors appreciate the efforts of the Minerals Management Service technical editors in Anchorage who helped edit this report.

August 1992

Acronyms

AANHS	Alaska Area Native Health Service
ABE	Adult Basic Education
ACES	Alaska Community Engineering Services
ADCRA	Alaska Department of Community and Regional Affairs
ADF&G	Alaska Department of Fish and Game
ADH&SS	Alaska Department of Health and Social Services
ADOC	Alaska Department of Corrections
ADOT&PF	Alaska Department of Transportation and Public Facilities
ADOL	Alaska Department of Labor
AEWC	Alaska Eskimo Whaling Commission
AFN	Alaska Federation of Natives
AMSA's	Areas Meriting Special Attention
ANA	Administration for Native Americans
ANCSA	Alaska Native Claim Settlement Act
ANILCA	Alaska National Interest Lands Conservation Act
ANWR	Alaska National Wildlife Refuge
AOSIS	Alaska Outer Continental Shelf Social Indicators Study
ASHA	Alaska State Housing Authority
ASRC	Arctic Slope Regional Corporation
AVCP	Association of Village Council Presidents
AWIC	Arctic Women in Crisis
BBAHC	Bristol Bay Area Health Corporation
BBHA	Bristol Bay Housing Authority
BBNA	Bristol Bay Native Association
BBNC	Bristol Bay Native Corporation
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BSNA	Bering Straits Native Association
BSNC	Bering Straits Native Corporation
BSSD	Bering Strait School District
BVNC	Bethel Village Native Corporation
ca.	circa
CETA	Comprehensive Employment and Training Act
CHA	Community Health Aide
CIP	Capital Improvements Program
CIRT	Crisis Intervention Response Team
CMC	Coastal Management Corporation
CPI	Consumer Price Index
CRSA	Coastal Resource Service Area

DOL	U.S. Department of Labor
DWI	driving while intoxicated
EDA	Economic Development Administration
EIS	Environmental Impact Statement
EMS	Emergency Medical Services
F.I.R.E.	Finance, Insurance, and Real Estate
FAA	Federal Aviation Administration
FCZ	Fisheries Conservation Zone
FTE	Full-time equivalent
FWS	U.S. Fish and Wildlife Service
FY	Fiscal Year
HESS	Health, Education, and Social Services (Task Force)
HS	High School
HUD	Housing and Urban Development (U.S.)
ICAS	Inupiat Community of the Arctic Slope
ICWA	Indian Child Welfare Act
IHS	Indian Health Service
IRA	Indian Reorganization Act
ISER	Institute of Social and Economic Research
KANA	Kodiak Area Native Association
KCA	Kodiak Council on Alcoholism
KCC	Kuskokwim Community College
KDC	Kikiktagruk Development Corporation
KI	Key Informant
KIC	Kikiktagruk Inupiat Corporation
KTC	Kodiak Tribal Council
KVSN	Kodiak Village Services Network
MMS	Minerals Management Service
NAB	Northwest Arctic Borough
NANA	Northwest Alaska Native Association Corporation
NOL's	Net Operating Losses
NSB	North Slope Borough
NSHC	Norton Sound Health Corporation
NWASD	Northwest Arctic School District
NWTC	Northwest Tribal Council
OCS	Outer Continental Shelf
OED	Office of Economic Development (U.S.)
OEDP	Overall Economic Development Plan
P.L.	Public Law
PHS	Public Health Service
QI	Questionnaire Informant

REAA	Rural Education Attendance Area
RELI	Resident Employment and Living Improvements (program)
S.A.F.E.	Safe and Fear-Free Environment
SIC	Standard Industrial Classification
SOS	State-Operated School
SRC	Social Rehabilitation Center
SWAMC	Southwest Alaska Municipal Conference
U.S.	United States
U.S.S.R.	Union of Soviet Socialist Republics
UIC	Unemployment Insurance Compensation
UIC	Ukpeagvik Inupiat Corporation
USCG	U.S. Coast Guard
USDOI	United States Department of the Interior
VECO	VECO, Inc.
VPSO	Village Public Safety Officer
XCED	Cross-Cultural Education Development (program)
YKHC	Yukon-Kuskokwim Health Corporation

Glossary

Affines	Kin who are related through marriage; "in-laws" without a blood-relationship.
Avunculate	A privileged relationship with an uncle (often including residence in an uncle's home).
Bilateral	A non-lineal kinship system in which the families of the mother and father are not differentiated, nor are the children of brothers and sisters.
Cohort	In social science terminology, a group of persons who comprise a distinct sample defined by properties such as age.
Colaterals	Siblings of core members of a kinship group (such as a nuclear family) and children of one's own siblings.
Consanguines	Kin who are related by blood (in contrast to affines).
Deme	An intermarrying population that forms a sociopolitical unit.
Dendrogram	A "tree diagram" that depicts relative degrees of relatedness and distance.
Emic	Refers to facts that are defined in terms of their cultural classifications.
Endogamy	Intermarriage within one's own bounded social group.
Etic	Refers to objective facts whose reality is independent of cultural classifications.
Exogamy	Marriage outside one's own bounded social group.

Glottochronology	A technique for dating divergence of languages or dialects, based on rates of retention of common words.
Kashim	An Eskimo mens' house, usually used also for ceremonial purposes; this term is associated with Yupik societies (the Iñupiaq variant is usually rendered as qargi).
Kindred	A group of persons related to a common ego in a cognatic descent system; such persons are not all related to one another inasmuch as they are defined in terms of their relationship to a single person (i.e., such a system is ego-focused as opposed to ancestor-focused systems).
Matrilineal	A unilineal descent (kinship) system that defines relatedness and group membership by common descent through females.
Matrilocal	Post-marriage residence with or close to a woman's mother's kin.
Neolocal	Unrestricted post-marriage residence (i.e., spouses may reside where they choose).
Otitis media	Inflammation of the middle ear.
Patriclan	A corporate descent group, usually named, often consisting of several lineages and jointly controlling property and/or privileges, defined by common descent through males.
Patrideme	An intermarrying population that forms a sociopolitical unit organized around patrilineal kin groups.
Patrilineal	A unilineal descent (kinship) system that defines relatedness and group membership by common descent through males.

Patrilocal	Post-marriage residence with or close to a man's father's kin.
Sodality	An association or society (note: society in lay or generic terms, not society in social science terms).
Syncretic	Refers to the merging or fusion of differing concepts, principles, or philosophies.
Virilocal	Post-marriage residence with or close to husband's kin.

Schedule B Regions

The Bering Straits Region

Steven L. McNabb
with Lynn A. Robbins

BERING STRAITS

Table of Contents

BERING STRAITS REGION

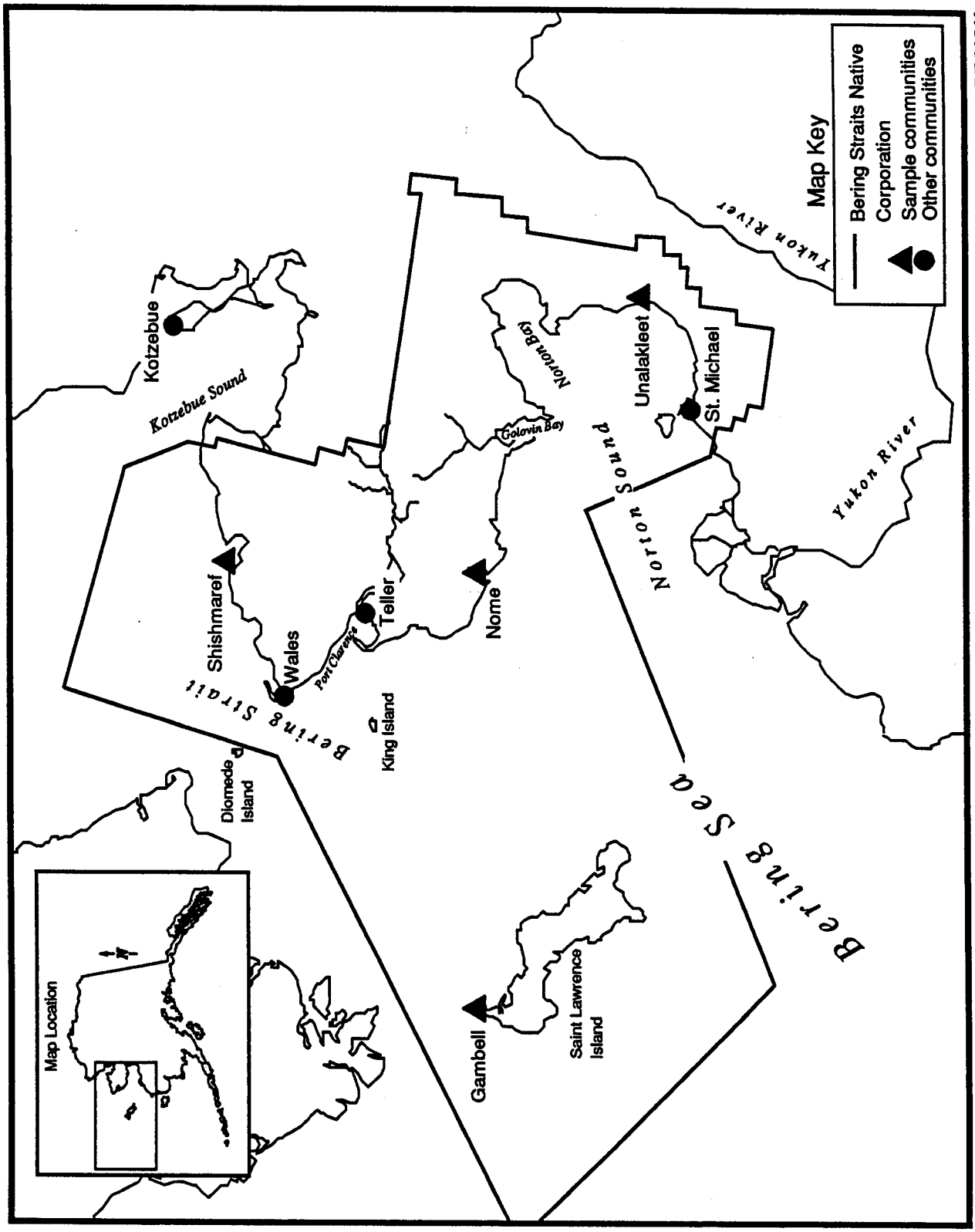
List of Tables

List of Tables (continued)

BERING STRAITS REGION

List of Figures

List of Maps


BERING STRAITS REGION
Map Key
Bering Straits Native Corporation
Sample communities
Other communities
Yukon River
Kotzebue
Kotzebue Sound
Norton Bay
Golovin Bay
Unalakleet
St. Michael
Norton Sound
Yukon River
Shishmaref
Wales
Port Clarence
Teller
Nome
Bering Strait
King Island
Diomede Island
Map Location
Bering Sea
Gambell
Saint Lawrence Island
SCHEDULE B COMMUNITIES

The Bering Straits Region[1]

PREFACE

Initially, the seven study regions of the Social Indicators study were divided into two groups, Schedules A and B, based on concerns related to research design and efficiency of project administration. As the term "schedules" suggests, these groups represent not only sample portions but sampling agendas. The composition of the groups is as follows:

- Schedule A--comprising Schedule A are the North Slope, NANA, Calista, and Aleutian-Pribilof regions.
- Schedule B--The Bering Straits Region is one part of Schedule B, which also includes the Bristol Bay and Kodiak regions.
- Schedule C--Subsequent to the Exxon Valdez oil spill in 1989, the scope of the Social Indicators study was expanded and a new sample of Cook Inlet, Prince William Sound, and Kodiak area villages was developed. This group then comprised Schedule C.

The terms used above and their meanings in the overall research design are introduced more fully in the Key Informant (KI) Summary Introduction and are explained fully in another project document entitled Social Indicators II: Research Methodology: Design, Sampling, Reliability, and Validity.

---

[1] The proper term is Bering Strait, but the plural form is a vernacular term commonly used in this region by agencies and residents alike. We will use the vernacular term.

This KI Summary was first drafted during 1988 subsequent to the first Schedule B field season. It was edited and revised during 1989, 1990, and 1991 to incorporate new data and discussions of changes. Field research was conducted by senior researchers in 1987 and 1989 in Schedule A sites and in 1988 and 1989 in Schedule B sites.

All of the information reported here that is based on discussions with institutional officials and residents was collected during two field excursions, but secondary data from other documents and archives may correspond to other years. Aside from some minor exceptions, the collection of new information ceased at the end of 1990, so this document can be considered accurate through 1990.

The Bering Straits region is well documented in the historical, ethnological, and socioeconomic literature; but the quality of that documentation is uneven. A brief summary of key references is a useful introduction to existing information on this study area.

For broad ethnographic purposes, particularly good references include Bogojavlensky (1969), Burch (1978), Ellanna (1983a; this technical report is an accessible version of her dissertation), Hughes (1960, 1975, 1984), Jorgensen (1990), Jorgensen and Maxwell (1984), Little and Robbins (1984), and Ray (1964, 1967, 1975, 1984). Hughes (1960) is a classic citation for Saint Lawrence Island. Important historic documents include Nelson (1899) and Zagoskin (1967) for the southern portion of the study area. Alaska Heritage Research Group (1986) summarizes material from secondary historical archives for much of the study area.

Ray and Hughes are leading senior figures in the ethnography of this region, and all of their material is generally considered "required reading." Ray and Burch are proponents of the view that traditional Iñupiaq societies were discrete socioterritorial units with strong senses of internal cohesion, and their work can be read in that context. Bogojavlensky's 1969 dissertation is excellent, and Ellanna's 1983 dissertation is a useful treatment of historic demography. Jorgensen's 1990 book integrates findings from three sites studied as part of a Minerals Management Service (MMS) project but goes beyond the scope of that project in developing an incisive political-economic analysis. Two sites analyzed in that book, Unalakleet and Gambell, are study sites for this project.

Government-sponsored, commissioned studies about the region are numerous; and better examples with general applications in the social sciences include Ellanna (1980a, 1980b, 1983b), Impact Assessment, Inc. (1987, 1988), Magdanz (1981a), Sheppard (1983), Sobelman (1985), Waring and Associates (1988, 1989), and Wolfe and Ellanna (1983).

Citations in this second group generally have a more narrow scope than those in the first group, but they are somewhat more cohesive as a group. Because they are recent and tend to cite one another, they create some continuity and similarities. Nonetheless, because data are treated differently by the authors, differences sometimes arise. For example, the economic analysis in Waring and Associates (1989) is more accurate than the material that appears in Impact Assessment, Inc. (1987).

I. HISTORICAL CONTEXT

The Bering Straits region may represent the most disparate study area among all Schedule A and B regions.[2] It comprises both mainland and island populations with very different histories and environmental adaptations; the residents represent three distinct indigenous language groups; and despite Nome's economic dominance in the region, the area is characterized by institutional cleavage that so far has inhibited regionwide political coordination. With this said, it is nonetheless possible to distinguish three general periods of historic change that have exerted substantial influences on an evolving social order over the last two centuries. These influences have been by no means uniform, and localized or exceptional circumstances that warrant attention are identified in the text.

The periods described here are:

Early Contacts and Dislocation (ca. 1800-1900);

Reorganization and Centralization (1900-1970); and

The Land Claims Period (1970-present).

Between 1800 and 1900, whaling vessels began making regular calls at Saint Lawrence Island, culminating late in the era with routine replenishment of food and water, active trade, and recruitment of labor. Similarly, the southern portion of the study

---

[2] Schedule C, which includes Valdez, Cordova, Kenai and other southcentral Alaskan communities, is clearly more diverse. Despite the fact that communities such as these (schedule C) represent very important population segments, they are unusual in terms of the main thrust of the Alaska Outer Continental Shelf Social Indicators Study (AOSIS) program. Schedule C communities added to the AOSIS roster subsequent to the Exxon Valdez spill are probably the most diverse communities in the overall AOSIS sample, in terms of economic opportunities, subsistence practices, ideologies, and other socioeconomic and sociocultural characteristics.

area was introduced to essentially identical sociocultural influences at about the time of the establishment of Mikhailovskiy Redoubt at modern Saint Michael in 1833.[3]

The influence of the Russian-American Company grew rapidly after the establishment of the Saint Michael base because it served as an ideal center of operations for the penetration of the Yukon River and adjacent territories. By the close of the first period in 1900, the major explorations of Zagoskin (1967), Whymper (1869), Dall (1870), Nelson (1899), Allen (1887), and others had taken place (see VanStone 1984 for a concise history of major explorations in western Alaska). Their records are truly the fundamental, primary resources on the "contact" period, hence the interval employed here is well motivated. In addition, by the close of this period, the first major dislocations (Saint Lawrence mass starvation, 1878), epidemics (measles, 1900), missionary activity (1894 at Saint Lawrence Island and 1880's elsewhere), migrations (to Nome, 1899-1900, and Malimiut migrations to Norton Sound, 1800-1860's), and gold rushes (1899-1900 at Nome and 1894 at inland locations, mainly up the Yukon River) had occurred or were under way (see Hughes 1984:264; Ray 1984:286-290; VanStone and Goddard 1981).

The second period (1900-1970) also forms a fairly coherent era of change throughout the region. The termination of the gold boom at Nome and a slower decline at inland locations coincided with a period of reorganization and incipient urbanization at Nome. The last major migrations that fixed the general ethnic distributions as we

---

[3] Russian contacts began earlier than 1833. Vasil'ev may have reached the Yukon delta as early as 1790.

know them today occurred during this period: the relocation of Hooper Bay residents to Stebbins in 1910 and the relocation of King Islanders to Nome in 1969 as this period closed. The last major lethal epidemic took place in 1918 (influenza). Finally, in the aftermath of World War II, both Nome and Unalakleet attained prominence as administrative centers, and so they remain.

The third period described here, the land claims period subsequent to 1970, is undoubtedly the most coherent phase in this historical review. During the last two decades, the key legislative events and the larger contour of political-economic change have been relatively uniform precisely because the key changes emanate from Juneau and Washington D.C. and are intended to yield common results. The ANCSA (Alaska Native Claims Settlement Act), ANILCA (Alaska National Interest Lands Conservation Act), numerous categorical revenue-transfer programs, important Indian legislation of the 1970's,[4] and massive capital-improvements programs funded by Prudhoe Bay oil revenues are cases in point.

I.A. Early Contacts and Dislocation

Burch (1978) and Ray (1975, 1984) recognize 22 autonomous societies in the Bering Straits-Norton Sound region at about the time of contact. The northern Seward Peninsula area is considered part of the NANA study region and one of the recognized groups falls into the Calista study region, so for present purposes 18 indigenous groups comprise the precontact Bering Straits region.

---

[4] The Indian Child Welfare Act (ICWA), the Indian Self-Determination and Education Assistance Act, and other legislation is pertinent in this connection.

Early settlement and subsistence patterns are described on a subregional basis, which permits a more cohesive review of general history that underscores main trends and uniformities rather than fine-grained details. Map 2 displays the subregions that are described in the text.

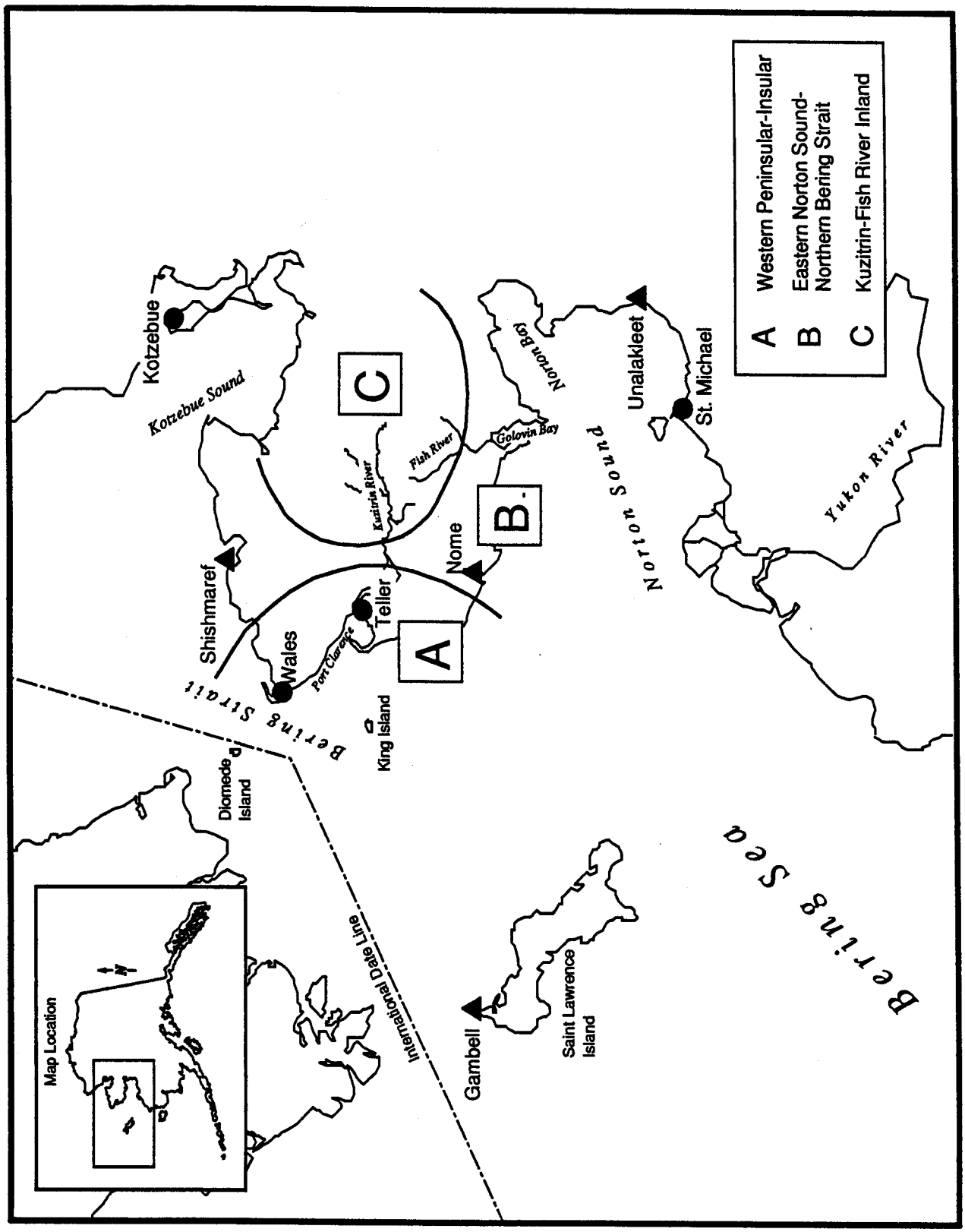
Western Peninsula-Insular Patterns: Nome is a convenient boundary between those indigenous Iñupiaq and Siberian Yupik[5] populations who focused their spring subsistence regime on bowhead whales and walruses, and those to the north and northwest (interior and Shishmaref area) and east (Norton Bay) who concentrated on inland and riverine harvests. This distinction is essentially the same as a conventional differentiation between "Large Sea Mammal Hunters" and others.[6]

The relevant areas and villages include Diomede, Saint Lawrence, and King Islands (and probably historic residents of Sledge Island) and coastal communities west of Nome (the Teller, Brevig, Wales area). Whereas indigenous populations in most coastal and riverine environments in western Alaska were dispersing in spring, the whaling and walrus communities maintained fairly dense populations during this time and dispersed to summer camps only after the spring hunts. These populations might

---

[5] We will use the term "Yupik" without diacritics to refer to all Yupik peoples and dialects, although we recognize that some conventions use diacritics, as in "Central Yup'ik."

[6] The "Large Sea Mammal," "Caribou Hunting," and "Small Sea Mammal" categories have been widely adopted since their popularization in the 1960's; but when conceived as exclusive categories, they classify populations very poorly. They are presumably tied to environmental and settlement zones with fairly uniform characteristics that yield coherent social "types" but, like any poor typology, they usually reveal more internal variance than variance across types. There are, however, several "signature" traits that in isolation do an adequate job of distinguishing between prevailing settlement and subsistence habits. The Large Sea Mammal pattern is most distinct by virtue of bowhead whaling and substantial walrus harvests. The other patterns are far less distinct.


A Western Peninsular-Insular
B Eastern Norton Sound-Northern Bering Strait
C Kuzitrin-Fish River Inland
Kotzebue
Kotzebue Sound
Shishmaref
Wales
Port Clarence
Teller
Nome
Golovin Bay
Norton Bay
Unalakleet
St. Michael
Norton Sound
Yukon River
Fish River
Kuzitrin River
Bering Strait
King Island
Diomede Island
International Date Line
Gambell
Saint Lawrence Island
Bering Sea
Map Location
BERING STRAITS SUBREGIONS

take part in trading fairs in the vicinity of Saint Michael or even Kotzebue during summer but would coalesce at permanent village sites before freezeup. Fishes and seals would be sought before freezeup. By midwinter, seals would comprise the main subsistence resource. By breakup, families would again prepare for large sea mammal hunting and might fish or hunt waterfowl or belukhas at about the same time (see Burch 1978; Ray 1975, 1984).

Eastern Norton Sound-Northern Bering Strait Patterns: The regional populations from Saint Michael north, through Norton Bay and west to Nome, and including the northwest portion of Seward Peninsula near Shishmaref, hunted walruses at modest levels when they were available in spring but did not hunt the bowhead whales. Fishes were far more abundant in this area than in the west, although Shishmaref is an exception because fish resources were and still are relatively scarce near there. Caribou generally were more accessible in this subregion than in the others. Nonetheless, Wales residents would occasionally venture to the east of their settlements to hunt caribou, and the Fish River-Kuzitrin drainage Iñupiat relied heavily on caribou (see below). Hence, access to caribou and use of that resource occasionally was different between subregions, but occasionally it was not.

In spring, these populations generally would disperse to hunt waterfowl, belukha, and occasional walrus and to fish for herring. The settlement pattern apparently underwent a gradual dispersal as summer drew near; spring activities (above) might be conducted near relatively dense encampments, but by early summer families generally were camping at preferred fishing sites. Families would regroup before breakup, fish

and seal during the last phase of open water, and continue sealing through the ice through midwinter. Depending on location, caribou were sought during February or March migrations but could be hunted during midwinter when the herds were at the southern limit of the annual migrations (see Burch 1978; Ray 1975, 1984).

Kuzitrin-Fish River Inland Patterns: Inland populations residing to the northwest of Golovin Bay and along the drainages east and northeast of Port Clarence maintained permanent winter settlements in the interior, in contrast to the other Bering Straits groups. Caribou were frequently available here during the winter. These populations typically relocated to marine settings in the vicinity of Golovin Bay, Imuruk Lagoon, and Port Clarence to hunt sea mammals in the spring and to fish and engage in trade during the summer. Relatively little is known about these populations, who abandoned their inland homelands after the caribou crash of the 1880's and resettled along the coast. No study communities are in this area.

We must emphasize that during the 19th century, these indigenous patterns were virtually eliminated in many areas. Malimiut emigrants from southern Kotzebue Sound moved into Norton Bay and the eastern Norton Sound area between 1800 and the 1860's, displacing Yupik speakers and establishing new multilingual communities adjacent to lucrative trade opportunities near Saint Michael and the Yukon River delta.[7] Commercial trends that long preceded the later gold rushes also set economic changes in motion that permanently altered prevailing settlement and subsistence practices.

---

[7] Note that there was a reverse migration of Yupik speakers originating near Hooper Bay who settled at Stebbins in 1910. The border zone between Iñupiaq and Yupik populations was rarely volatile, but underwent considerable shift in settlement and political alliance after 1800.

Intensive whaling after 1848, the establishment of a Western Union Telegraph post at Port Clarence and a coal port (for whalers) in 1866 and 1884, respectively; mining in the vicinity of Golovin in 1880; and the establishment of mission posts in 1887 (Unalakleet), 1889 (Golovin), 1890 (Wales), and 1894 (Saint Lawrence Island) all preceded the Nome gold rush, which figures so prominently in popular history (see Hughes 1984:264; Ray 1984:300).

We must also stress that the most enduring commercial economic change penetrated the region from several directions. That is, mining booms occurred at intervals throughout this region and adjacent ones, establishing numerous "epicenters" whose effects mingled and only gradually culminated in the mosaic of features we now see in the Bering Straits region. The dominant role of Nome in this story should not be underplayed, nor should the unique contributions of changes that occurred mainly to the east.

In historic times, traditional Koyukon Athabaskan territory spanned an interior zone that stretched from the Unalakleet River-Blackburn Creek area in the southwest to the Koyukuk River tributaries in the north and nearly to the Toklat River in the southeast. Also in historic times, the Lower Yukon territory was inhabited by two subgroups, the Ulukagmyut (actually an Eskimo term that refers to band homelands to the west of the Yukon River in the vicinity of the Unalakleet River) and the Kaiyuhkhotana, a name that refers to lowlands to the east of the Yukon River, mainly between Nulato and Kaltag. The site of Kaltag is closest to Kaiyuhkhotana territory, but the present-day population of Kaltag is probably drawn from descendants of both

subgroups in addition to other ethnic groups, undoubtedly including descendants of Eskimos from the eastern Norton Sound area. An important overland trade route linked the Unalakleet area and these inland locales.

The Russian explorer Malakhov established a trading post at Nulato, just upriver from Kaltag, in 1839--1 year after his arrival and 2 years after the first direct contacts between Koyukon Athabaskans and Europeans. Economic, social, and cultural contacts accelerated after this time. By 1843, direct contacts with Athabaskans as far as the Kateel and the Nowitna Rivers had occurred, and the avenues for these contacts were riverine and overland routes along the Yukon River. Extensive contacts between Russian-American Company agents, Indians, and Eskimos therefore occurred in territory adjacent to modern Unalakleet.

The Western Union Telegraph Company explored this area at the time of the U.S. purchase of Alaska, and missionary activity increased after 1870. The Yukon and Koyukuk gold rush of 1884 accelerated these contacts. The Yukon River was the water route to the Canadian Klondike strike of 1896-1897, and Saint Michael was the marine port for inbound miners. Steamboat traffic through the area, which peaked in 1900 with 46 steamers in operation, dramatically influenced Yukon-area social and economic life and introduced trade and wage-labor opportunities that stretched to the perimeter of Norton Sound. Many of the miners who arrived in Nome took an overland route out of Saint Michael, thereby spreading indirect effects of the gold rush to the entire Norton Bay-southern Seward Peninsula area. Hence, by the onset of the Nome gold rush of 1899-1900, many Native inhabitants of the area were already thoroughly enmeshed in

market exchange (see ACES [Alaska Community Engineering Services] 1987a, 1987b; Alaska Heritage Research Group 1986; Andrews 1977; VanStone and Goddard 1981).[8]

Nearly all of the significant historic migrations were in motion or complete at the close of the Nome boom and, aside from minor strikes and ongoing operations at mines scattered throughout the central and east Seward peninsula area, the configuration of communities was essentially what we see today. Some settlements, especially those associated with mining operations (Haycock, Dime Landing, etc.), would cease to exist, but no new communities per se formed (although the Stebbins migration represents an influx of a new population; see footnote 7). The King Island population established new summer encampments in the Cape Nome-Cape Wooley area during the gold rush; and this pattern of summer relocation persisted until 1969, when the population was resettled in Nome.

I.B. Reorganization and Centralization

By 1900, over 40,000 new inhabitants spilled out of the Nome area and, according to Ray (1984:300), ". . . covered almost every mile of the Seward Peninsula . . . ." The population of Nome itself briefly reached 12,488, achieving the rank of the largest community in Alaska in 1900. Iñupiaq and Yupik "urban" settlement patterns did not emerge immediately, but gradually the seasonal encampments at Nome (and to a lesser

---

[8] The cross influences of mining opportunities stretched across the entire western portion of the State. As the immediate promise of the Nome strike waned, hundreds of prospectors soon bolted for the next major strike at Goodnews Bay. The earlier strike at Golovin Bay was already mentioned. The point we wish to make is that commercial opportunities did not blossom independently but rather were parts of a Statewide boom with considerable interregional implications that obscured regional boundaries. The story of Yukon explorations is part of the story of Nome, and vice versa.

extent, Unalakleet) became permanent. The collapse of the gold industry and the 1918 influenza epidemic halted the incipient urbanization and centralization in the Bering Straits region, and the Great Depression inhibited the processes of commercial growth and institutionalization that had accelerated at the time of the gold rushes. The fledgling reindeer industry, initiated in the late 1800's near Port Clarence, was virtually defunct during these decades of the 20th century.

But important institutional trends were set in motion very early in the Bering Straits region that should not be overshadowed by the rapid and spectacular demise of the mining booms. Nome was incorporated in 1901, giving it the status of the first incorporated rural "hub" city in Alaska. Even after the Nome boom, seasonal influxes of Natives from adjacent areas swelled the population and created population concentrations that gave it the status of the largest Native community in the State. For example, in 1906 Nome had only about 150 Native residents, but during summer they were joined by about 1,000 transients (Ray 1984:301). Native political institutions changed rapidly during this period; the first formal, elected village council formed on Saint Lawrence Island in 1927 (Hughes 1984:264).

The period after World War II witnessed renewed and accelerating social and economic transition and reorganization in the region. By World War II, Nome and Unalakleet had emerged as military and transportation hubs. Military bases were established at both sites, and Nome was a final mainland base for shipment of lend-lease aircraft to the Soviet Union during the war. The Unalakleet base was converted to a radar site that, though removed from the community per se, relied on the local airstrip

for transportation. Schools in both communities drew numerous students and their families from surrounding areas at a time when most villages lacked educational facilities. Although neither community boasted a decent port for marine traffic, both communities had superior airports and assumed increasing transshipment responsibilities during the 1950's. During the 1960's, the establishment of a modest commercial salmon-fishing industry at Unalakleet underscored its status as a subregional economic and administrative center. Among the study communities, Nome, Gambell, and Shishmaref had incorporated as municipalities under State law before 1970.

I.C. The Land Claims Period

By the 1970's, several economic trends that were reshaping the regional economy coincided with the passage of ANCSA, culminating in localized private-sector resource extraction industries and public-sector expenditures that dominate the regional economy today. Categorical Federal and State transfers, enormous discretionary capital improvement and economic development programs funded by Federal and State agencies, and the establishment of village high schools created a dramatic upsurge in public-sector funding, which in turn created an expansion of secondary support, government, and the trade industry.[9] Advanced mineral recovery techniques permitted the continuation and occasional growth of the mining industry at Nome. Commercial

[9] The public-sector funds derive mainly from municipal assistance provided by the State (in turn derived from Prudhoe Bay revenues); however, specific acts at the State and Federal levels warrant attention also: the Small Rural High Schools Act of 1975 (enabling the Molly Hootch decision of 1972) and the Federal Indian Child Welfare Act, the Indian Self-Determination and Education Assistance Act, and the Indian Health Care Improvement Act. These landmark acts are accompanied by numerous specific programs and regulations that direct Federal funds to Native organizations for Native services.

fisheries never provided opportunities as lucrative as those to the immediate south of the region (Yukon River), but eastern Norton Sound communities (such as Unalakleet and Golovin) obtained private-sector opportunities in the fishing industry after resource stocks recovered throughout western Alaska in the late 1970's and after herring fisheries were developed in the 1980's. The ANCSA also provided lands and capital that many shareholders saw as a means to foster private-sector growth. To date, however, private-sector development has been very modest and has occurred mainly in Nome.

The Bering Straits Native Association (BSNA) was formed in the 1960's to administer Office of Economic Development (OED) grants and to lobby for settlement of Native land claims. Subsequent to ANCSA, the BSNA existed briefly as an independent entity after the companion for-profit corporation, the Bering Straits Native Corporation (BSNC), splintered off to pursue private business activity. In 1973, Kawerak, Inc., was incorporated and assumed the duties previously administered by the BSNA. Representatives from regional IRA (Indian Reorganization Act) and traditional village councils comprise the governing authority of Kawerak.

The BSNC has had an unstable financial and administrative history and was reorganizing under Chapter 11 in U.S. Bankruptcy Court during both the Social Indicators field-research seasons. Its chief secured creditors are the village ANCSA for-profit corporations, to which BSNC owes about $20 million. The BSNC has pledged its subsurface-estate rights to the creditors, and after selling net operating losses (NOL's) to improve its cash position, the regional corporation will discharge its debts in the form of both cash and subsurface estate (see Waring and Associates 1989). Although the

BSNC's financial portrait now appears more stable, its future, and the future of the village corporations after debts are discharged, must be considered problematic at this time.

The Norton Sound Health Corporation (NSHC) administers health services from its headquarters and hospital based in Nome. Other key institutions that have emerged during this period are the two school districts. The Nome School District is restricted to the City of Nome and is administered by the city as one of its responsibilities as a first-class city. The Bering Strait School District is based in Unalakleet and serves the unorganized borough as an Rural Education Attendance Area, or REAA. Two coastal management service areas (one serving the City of Nome and the other serving the remainder of the region from its base in Unalakleet) were formed under the auspices of the Coastal Zone Management Act. The institutional cleavage noted in the introduction to this KI summary (see the Preface) is apparent in this organizational mosaic, with parallel and sometimes competing institutions occasionally situated in the same community but at other times isolated, one in Nome and the other in Unalakleet (see Waring and Associates 1989 for a discussion of institutional fissures in this region).

II. POPULATION AND DEMOGRAPHY

This section is divided into two parts. The first describes total village populations; the second examines the age, sex, and ethnicity characteristics of these populations. Population data for the early historic period are poor, so village estimates or censuses cannot be reported uniformly for all sample communities or years. Because cross-sectional characteristics of the populations are not reported on a yearly basis, coverage in

the second section does not extend past 1980.[10] Some population data are grouped into logical periods: 1900 to 1960 (i.e., through Statehood) in Table 1; 1970 and 1980 (i.e., the ANCSA period) in Tables 3 and 5.

II.A. Overall Population and Net Changes Through Time

Table 1 summarizes available population data from decennial censuses in the study area during the pre-ANCSA period up to the time of Statehood.[11]

Table 1

POPULATION ESTIMATES, 1900-1960

Community	1900	1920	1940	1960	% Change
Gambell	261	48	296	358	+37.2
Nome	12,488	852	1,559	2,316	-439.0
Shishmaref		131	257	217	+65.5
Unalakleet	241	285	329	574	+138.6

Source: U.S. Census (1900, 1920, 1940, 1960).

The Gambell population decrease by 1920 was due in large part to intraisland migration as Savoonga was established and grew during the first four decades of the century. Except for Shishmaref and Unalakleet, the sample communities generally show steady

[10] Results of the 1990 census were not available when final data for the report were being collected.

[11] This comparison focuses only on the pre-ANCSA period. More recent population data (1980-1986) appear in the following figures and tables. Tables 3 and 4 provide 1980 census figures and later estimates through 1986 for each of the study sites.

postwar growth. The Shishmaref population underwent chronic fluctuation after the turn of the century as reindeer herding ebbed, the trapping markets crashed, and new settlements were consolidated (see Sobelman 1985). However, the population stabilized after 1950.

Table 2 and Figures 1 and 2 tabulate detailed census data for the two largest sample communities, Nome and Unalakleet; Figure 1 depicts the components of recent population changes in the Nome census division, and Figure 2 provides an intraregional comparison (Nome vs. the balance of the region). As the figures demonstrate, Nome's demographic domination of the region was not achieved until after 1950, but the Nome population did not show appreciable growth over the two-decade period from 1960 to 1980 (note, however, that the 1980 census for the region undercounts the population). The outlying villages actually registered some decline between 1960 and 1970.

Table 3 illustrates population sizes, Native ethnic composition, and changes between 1970 and 1980. The slight rise in the non-Native proportions in Shishmaref over this interval corresponds to the general tendency for non-Native populations to increase as services (particularly education) are expanded. That explanation also accounts for the jump in the population in Unalakleet, where some government and private-sector transportation services were expanded between 1970 and 1980. Later, Unalakleet experienced more inmigration, due principally to centralization of some administrative services (between 1982 and 1983, the Bering Strait School District central office staff moved from Nome to Unalakleet when the district headquarters was relocated and, as a result, the Unalakleet population grew.

Table 2

UNALAKLEET POPULATION, 1910-1985

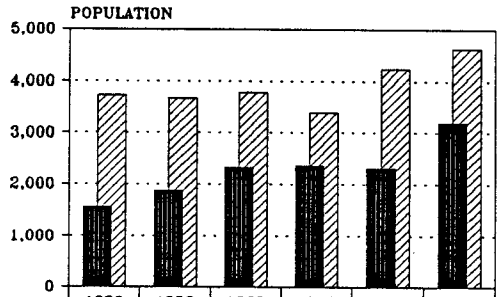
Year	Population	Percent Change	
		Decennial	Annual
1880	100		
1890	175	75.0	
1900	241	37.7	
1910	247	2.5	
1920	285	15.4	
1930	261	-8.4	
1939	329	26.1	
1950	469	42.6	
1960	574	22.4	
1970	434	-24.4	
1980	623	43.5	
1981	672		7.9
1982	604		-11.1
1983	763		26.3
1984	745		-2.4
1985	759		1.9

Sources: U.S. Census (1880-1980 figures) and Alaska Department of Labor (1981-1985 figures).

Table 4 lists population estimates for sample communities for the post-1980 period. The 1980 census population, though flawed (particularly in terms of an undercount for Nome), is included as a benchmark. The Alaska Department of Community and Regional Affairs estimates (1986-1988) are often inaccurate, and the 1988 estimate may be greatly inflated for Nome. The Alaska Department of Labor

Figure 1

POPULATION DISTRIBUTION
NOME AND REGION, 1939–1985

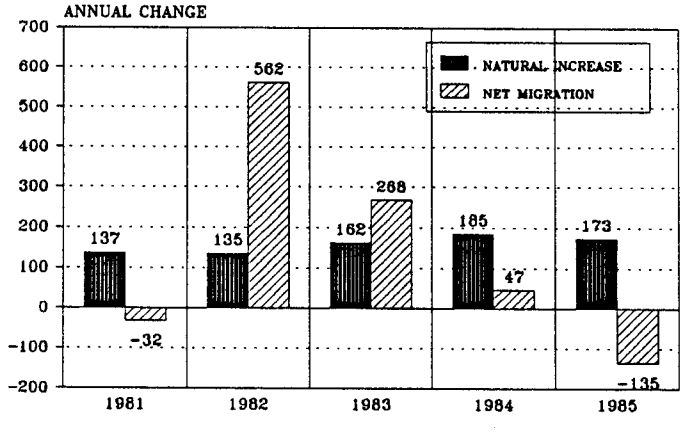


	1939	1950	1960	1970	1980	1985
City of Nome	1,559	1,676	2,316	2,357	2,301	3,191
Balance of Region	3,726	3,669	3,775	3,392	4,236	4,626

Source: U.S. Bureau of the Census; Alaska Department of Labor.

Figure 2

COMPONENTS OF POPULATION CHANGE
NOME CENSUS DIVISION, 1980–1985



Source: Alaska Department of Labor.

Table 3

SAMPLE VILLAGES: POPULATION, ETHNICITY, AND POPULATION CHANGE, 1970-1980

Village	1970		1980		Change (%)
	Total	Native	Total	Native	
Gambell	372	96.0%	445	95.5%	+19.6
Nome	2,488	62.5%	2,301	58.5%	-8.1
Shishmaref	267	93.3%	394	93.7%	+10.1
Unalakleet	434	93.8%	623	87.6%	+43.5

Source: U.S. Census (1970, 1980).

Table 4

YEARLY POPULATION ESTIMATES, 1980-1988

Village	1980	1981	1982	1983	1984	1985	1986	1987	1988
Gambell	445	480	432	484	500	500	500	500	522
Nome	2,301	3,039	3,430	3,102	3,146	3,191	3,876	3,876	4,303
Shishmaref	394	425	425	446	493	412	444	444	444
Unalakleet	623	672	604	763	745	759	787	787	802

Source: Alaska Department of Labor (1981-1985); Alaska Department of Community and Regional Affairs (1986-1988); U.S. Census (1980).

figures (1981-1985) should be considered most reliable. Because the figures must be used cautiously, they are rendered as frequencies rather than percentage changes, which grants the data more credibility.

These frequencies are useful only for illustrating the rough magnitude of certain population shifts: an increase in the Unalakleet population between 1982 and 1983 subsequent to relocation of school district headquarters, and some growth in the Nome population in the mid-1980's that is possibly due (in part) to mining activity.

For comparison, consider these permanent fund dividend reports for the years 1982-1985 for the three largest sample villages, respectively: Nome--3,189, 3,219, 3,167, 3403; Unalakleet--717, 739, 747, 748; and Gambell--450, 468, 480, 467 (Waring and Associates 1989; derived from annual reports of the Alaska Department of Revenue). The permanent fund data are likely most accurate--the substantial incentive for residents to submit accurate records should yield accurate population data.[12] The permanent fund data tend to show less abrupt shifts and, if examined jointly with the other estimates, the pooled figures probably reveal a more objective picture of population change.

---

[12] Note, however, that permanent fund recipients need not be year-round residents. Students, residents hospitalized in other communities, and others may justifiably consider themselves residents and receive dividends as residents but may not reside in the community for an entire year. Conventional estimates and censuses customarily would disregard such residents unless they were present during an enumeration.

II.B. Age and Gender[13] Profiles

The study area populations are "aging," as is true in most of rural Alaska. It is notable, however, that the communities showing the most pronounced shift in age characteristics are the largest cities, Nome and Unalakleet, where post-1970 inmigration has been more substantial (see Table 5). As administrative centers, those communities also have drawn a disproportionate share of transient non-Native technical staffs, who are disproportionately male and adult, thereby increasing both median age and male proportions of total population.

The prospects for community growth in the sample communities are good. Natural increase rates remain at modest to high levels and outmigration does not appear to offer any real counterbalance to the effects of relatively high birth rates. Figures 3 through 6 chart resident births and deaths in each of the Bering Straits region's sample communities. Deaths generally are stable or show some decline, but births in the post-1982 period show modest increases that keep pace with overall population increases. If these trends persist in the post-1986 period despite the abrupt declines in State revenues and the transfer and capital-improvements programs that these revenues underwrite (which is to say, in spite of declines in revenues and programs that support jobs and health services), growth through natural increase will be even more pronounced.

---

[13]At the request of the Minerals Management Service, the word "gender" is used in place of "sex," the more common term in demography. This convention will be used in all KI summaries.

Table 5

AGE AND GENDER FIGURES, BERING STRAITS SAMPLE COMMUNITIES, 1970-1980

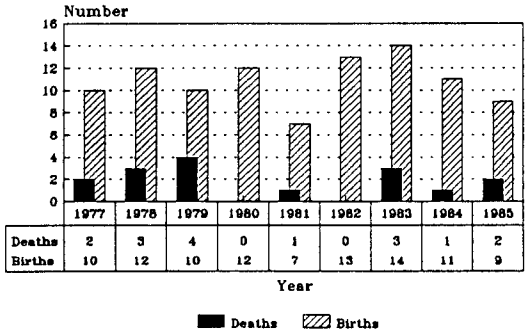
Village	1970				1980			
	Male	(%)	Female	(%)	Male	(%)	Female	(%)
Gambell	202	(54.3)	170	(45.7)	258	(58.0)	187	(42.0)
median age	18.7		21.3		22.2		20.6	
Nome	1,290	(51.8)	1,198	(48.2)	1,215	(52.8)	1,086	(47.8)
median age	21.5		19.5		26.3		25.6	
Shishmaref[a]	133	(49.8)	134	(50.2)	198	(53.7)	171	(46.3)
median age	16.4		14.5		19.1			
Unalakleet	220	(50.7)	214	(49.3)	333	(53.5)	290	(46.5)
median age	19.2		16.8		24.3		21.6	

Source: U.S. Census (1970, 1980).

[a] 1980 Shishmaref figures are Native only, and the median age for 1980 does not distinguish gender.

Figure 3

SCHEDULE B DEATHS AND BIRTHS
SHISHMAREF, 1977–1985

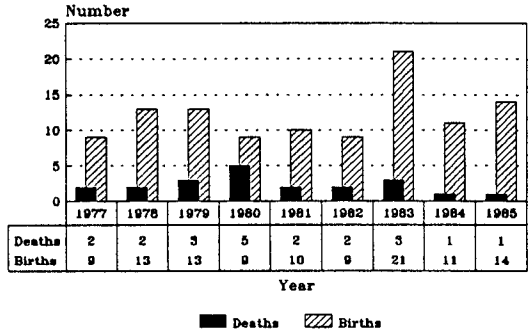


	1977	1978	1979	1980	1981	1982	1983	1984	1985
Deaths	2	3	4	0	1	0	3	1	2
Births	10	12	10	12	7	13	14	11	9

SOURCE: Vital Statistics.

Figure 4

SCHEDULE B DEATHS AND BIRTHS
GAMBELL, 1977–1985

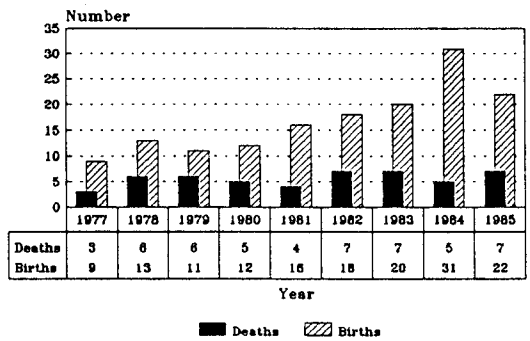


	1977	1978	1979	1980	1981	1982	1983	1984	1985
Deaths	2	2	3	5	2	2	3	1	1
Births	9	13	13	9	10	9	21	11	14

SOURCE: Vital Statistics.

Figure 5

SCHEDULE B DEATHS AND BIRTHS
UNALAKLEET, 1977–1985

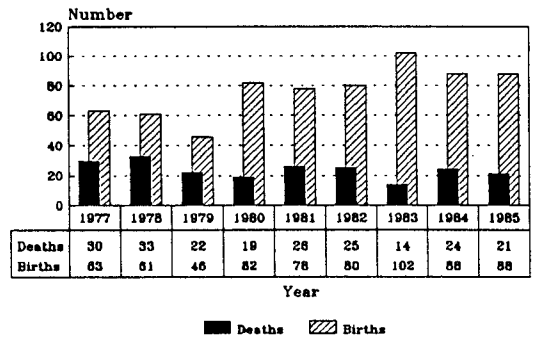


	1977	1978	1979	1980	1981	1982	1983	1984	1985
Deaths	3	6	6	5	4	7	7	5	7
Births	9	13	11	12	16	18	20	31	22

SOURCE: Vital Statistics.

Figure 6

SCHEDULE B DEATHS AND BIRTHS
NOME, 1977–1985



	1977	1978	1979	1980	1981	1982	1983	1984	1985
Deaths	30	33	22	19	26	25	14	24	21
Births	63	61	46	82	78	80	102	88	88

SOURCE: Vital Statistics.

III. COMMUNITY ORGANIZATION AND ECONOMY

This section addresses governance, commerce and industry, health and other social services, sodalities and voluntary associations, and important trends of sociopolitical change in the Bering Straits region and sample communities.

III.A. Governance.

IRA Governments: Each of the sample communities has very active IRA councils that to a greater or lesser extent coordinate community programs and resolve community problems jointly with the other key institutions. As the discussion below illustrates, the presence of prominent councils is a common denominator across the sample communities, but the modes of coordination and cooperation between community institutions vary.[14]

Available evidence suggests that the Gambell council was the first to establish a formal governance structure and an elected membership, well before the extension of IRA provisions to Alaska in 1939 (see Hughes 1984). The prominence of the Gambell IRA council in island affairs was, if anything, enhanced after ANCSA when Saint Lawrence Island Yupik residents declined to participate in regional ANCSA provisions, instead assuming fee-simple title to island lands. Because an additional layer of institutions did not extend to Gambell, the community IRA retained a level of persuasion and nonformal authority that was generally ceded to regional ANCSA organizations in most of rural Alaska. The balance of ethnographic research on Saint

[14] Coordinative arrangements and interinstitutional conflicts fall properly in the domain of ideology, which is examined in Section V of this chapter. Specific case examples of institutional ideologies related to economic development are presented there, and so some institutional coverage is deferred until later.

Lawrence Island underscores the continued importance of the council in community governance. Gambell's unique character of governance warrants an extended discussion.

There are in effect three governments in Gambell: the city council, the IRA council, and the Sivuqaq Native Corporation. Broad powers have been granted to the Sivuqaq Native Corporation under charter with the Alaska Department of Commerce. It is the prime land-management governing body in Gambell and has jurisdiction over about 50 percent of the land surface and subsurface resources of Saint Lawrence Island. The other 50 percent is governed by the Savoonga Native Corporation and the cooperative arrangement between these two organizations makes the Saint Lawrence Island people unique in governance among Native peoples. The close ties in kinship and economy between Gambell and Savoonga add to the unusual nature of the island communities.

The Sivuqaq Native Corporation also is empowered to initiate economic development plans. Its present strategy is to protect lands from despoliation from outsiders and to regulate Native conduct to protect the usufruct rights to land of the 10 well-established clans in Gambell. The corporation has a broad membership in the village, comprised of shareholders who received shares in 1971 and/or have inherited shares since 1971.

Gambell is unusual in that its Native corporation, the Sivuqaq Native Corporation, jointly governs the island with the Savoonga Native Corporation. Indeed, all of Gambell's governments--the City Council, the IRA Council, and the Sivuqaq Native Corporation--have their counterparts in Savoonga. The two villages are closely

related in kinship and strongly linked in mutual economic pursuits, especially in sharing subsistence goods.

The elected officials of the three Gambell governments are often boat captains, most of whom serve in all of the governments during their years of public service. Many of them also serve in one of the village's most important sodalities, the Whaling Captains Association.

The city, like the Sivuqaq Native Corporation, sells ivory by taking carvings on consignment and marketing them with brochures, exhibitions, and other contacts with prospective buyers. Sales were about $50,000 in 1983, the first year of city carving sales; in 1986 they had dropped to about $25,000, largely because of the slump in the Alaskan State economy (Gambell municipal governance is discussed below).

However, the Gambell case is unusual. The Unalakleet and Nome IRA councils are sophisticated, politically astute planning and advocacy institutions with considerable community visibility and high profiles throughout the Bering Straits region. A minor difference between these cases may lie in the intra-community institutional arrangements that the councils promote for joint purposes. In the Unalakleet case, the IRA council is virtually always consulted with its companion organizations--the municipal government and the village ANCSA corporation, respectively--by regional, State and Federal officials on matters of general importance to the community. The three organizations represent a

tightly linked coalition of institutions with different charters, objectives, and constraints that nonetheless represent basically the same constituencies.[15]

The Nome IRA council, Nome Eskimo Community, works in a very different institutional milieu. During the study, the City of Nome and the community ANCSA corporation, Sitnasuak, rarely sought to collaborate with Nome Eskimo Community because of ideological differences that many community residents will candidly identify. Nome Eskimo Community is seen as a Native institution pledged to cultural and environmental objectives that run counter to the expressed development goals of both the city and Sitnasuak (see Sec. V of this chapter). Sitnasuak and the city may frequently align themselves (sometimes against Nome Eskimo Community) in the promotion of business and private-sector expansion in Nome. Nome Eskimo Community has historically sought alliances with regional organizations such as Kawerak, Inc. Furthermore, its link to regional bodies is affirmed by the NSHC policy of recruiting governing authority members from IRA councils in the region.

The Shishmaref IRA council carries out business in close cooperation with the Shishmaref city government and Shishmaref Native Corporation, and in this sense it conforms to the model described for Unalakleet and Gambell. However, the Shishmaref council does not have the prominence and high visibility evident in these other villages. Instead, it fits the classic example of nonformal but nonetheless close and very sincere collaboration with other key entities that is quite common in rural Alaska. The council

---

[15] Obviously the corporation and the IRA represent shareholders and tribal enrollees, respectively, hence non-Natives are excluded from their constituencies. But generally these organizations conceive of their missions as "joint ventures" for the good of Unalakleet as a whole.

is by no means as dominant in community affairs as are the corporation and city, but the latter organizations include the IRA in consensual decisionmaking activities virtually without fail. In the Shishmaref case, as in other sample communities except Nome, the memberships of all key governing authorities tend to overlap.

Municipal Governments:

Nome: The City of Nome, which was incorporated in 1901, is a first-class city that conducts its affairs with a city manager form of government. The city levies a 3-percent sales tax and property taxes that underwrite some city services, but revenue sharing and municipal assistance grants, categorical formula funding for schools, and discretionary grants are essential for the support of most services and operations. As a first-class city, Nome is responsible for local education and has a school board for the establishment of educational policy. The city owns the water, sewer, electrical, and trucked-water utility services; is responsible for planning and zoning, public safety, and management of the port; and administers a local coastal zone management plan.

Gambell: Gambell, incorporated in 1963 as a second-class city, manages city affairs through a mayor and council alone. A 3-percent sales tax provides a fraction of the funds required for city services; revenues derived from municipal assistance, capital improvements, and discretionary funding provide the main base for city services and operations. City-sponsored ivory sales provide very little revenue for Gambell. The city oversees a Village Public Safety Officer (VPSO) but does not administer the program, which is through Kawerak. The city is responsible for water, employs a health officer, and manages the airport.

Shishmaref: Shishmaref, which was incorporated as a second-class city in 1969, manages municipal affairs through the office of the mayor and the city council. A modest 1-percent sales tax provides some locally derived revenues for the city, which otherwise depends on municipal assistance, capital-improvement grants, and occasional discretionary grants for operational support. Minor revenues are received from the Shishmaref Native Corporation for office space rental in the city building. The city is responsible for the water utility and public safety, manages the airport, and employs a health officer and planning director.

Unalakleet: Unalakleet has been incorporated as a second-class city since 1974. The city does not conduct business through a manager form of government, but oversight and expertise are distributed widely through the creation of a planning and zoning commission. A 3-percent sales tax provides limited local revenues for city operations. The city is responsible for the municipal utilities (water, sewer), the community center, airport management, public works, and public safety.

III.B. Commerce and Industry

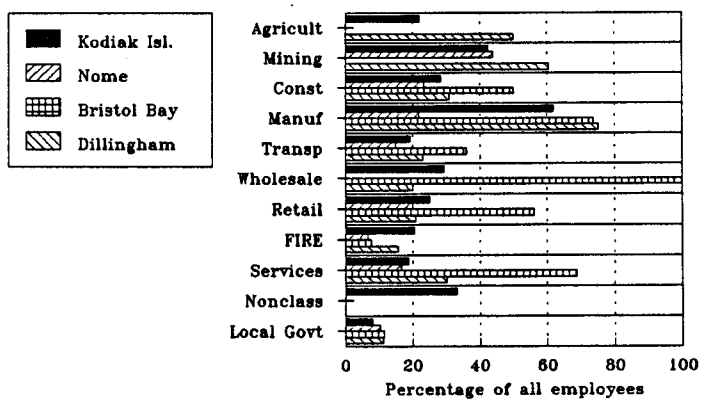
As is true in virtually all rural regions of the State, the economy of the Bering Straits region is characterized by substantial income centralization in the regional hub (Nome) as well as by leakage outside the region. Nonresident incomes are, however, generally lower proportions of total incomes in the Bering Straits region, compared to other Schedule B study areas (Kodiak and Bristol Bay; the Bristol Bay study area includes the Bristol Bay and Dillingham census areas). That is to say, despite income leakage and disproportionate sums of money that are earned in the hub, nonresidents do

not seem to capture a disproportionate share of locally generated incomes. Figures 7 and 8 document by standard industrial classification (SIC) category the proportions of nonresident employees and wages, respectively, in the Schedule B regions. These proportions do not exceed about 40 percent in any SIC category in the Nome census area, and they hover at that level only in the case of mining (centered in Nome). On balance, the Bering Straits region ranks lowest in terms of nonresident wages and employees in the Schedule B sample. (Note that the acronym F.I.R.E. used in Figures 7 and 8 means "Finance, Insurance, and Real Estate.")

Nome holds a disproportionate share of regional employment. Figure 9 is a composite graph that depicts the Nome city population, workforce, and employment compared with the balance of the Bering Straits region (with respect to numbers of employees in each major industrial category). Figure 10 is another composite graph that depicts economic comparisons for Nome between the years 1970 and 1980 and the years 1986, 1987, and 1988. The employment figures for F.I.R.E. show a near equivalence because of the presence of village ANCSA corporations with small staffs that, in the aggregate, vie with Nome in terms of total numbers. The preponderance of transportation, communications, and public utilities employment outside Nome is in large part an artifact of Ryan Air employment at Unalakleet (which, though accurate for 1986, had plummeted during fieldwork due to temporary termination of flight privileges by the Federal Aviation Administration [FAA] and the presence of part-time airline agents in most villages. Full-time equivalent (FTE) comparisons, which unfortunately are unavailable, might reveal that Nome holds an edge in this industrial category as well.

Figure 7

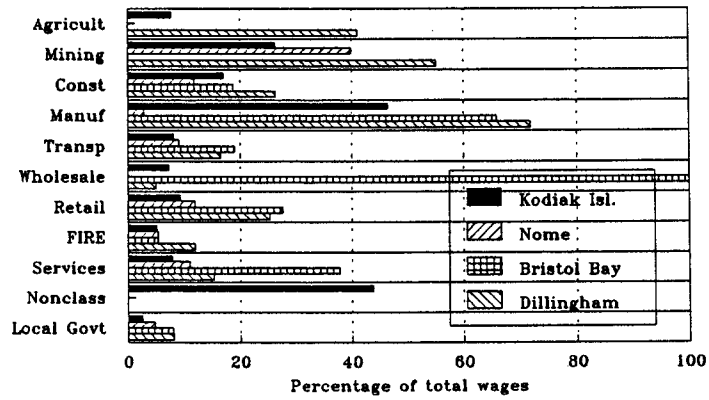
NONRESIDENT EMPLOYEES BY SIC CATEGORY
SCHEDULE B CENSUS AREAS, 1985
(expressed as percentages of totals)



SOURCE: Alaska Department of Labor (1987a:94–116).

Figure 8

NONRESIDENT WAGES BY SIC CATEGORY
SCHEDULE B CENSUS AREAS, 1985
(expressed as percentages of totals)



SOURCE: Alaska Department of Labor (1987a:94–116).

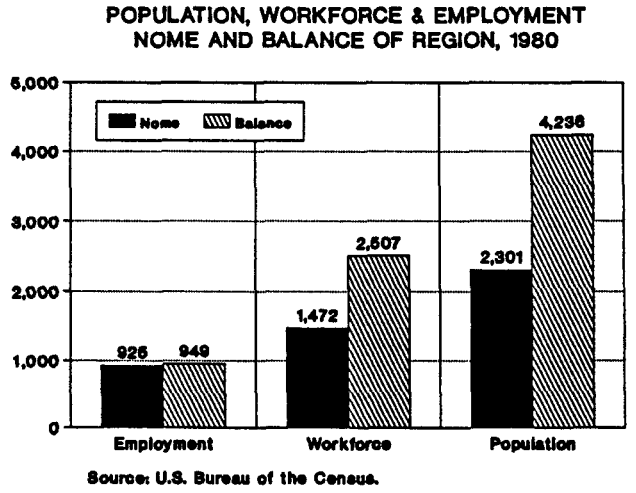
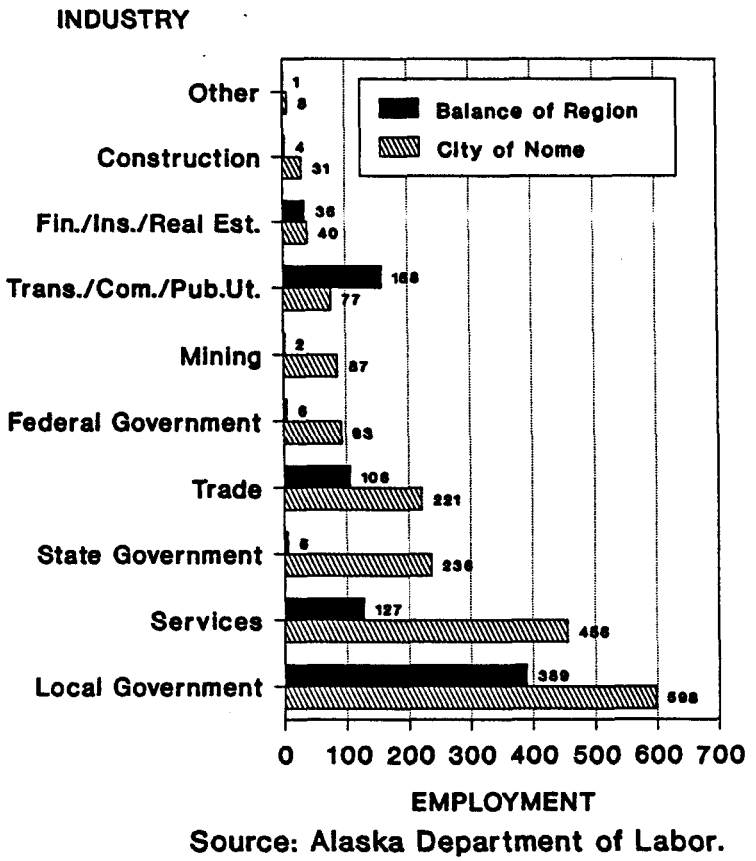


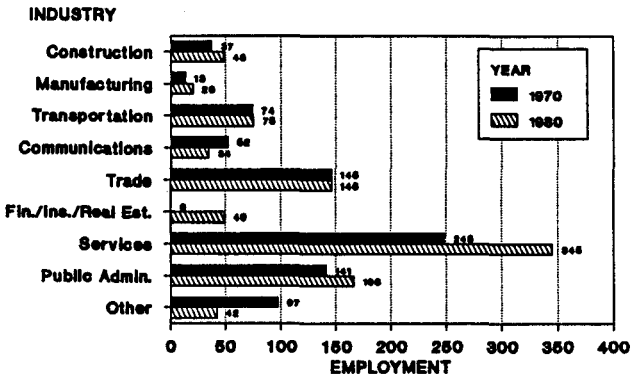
Figure 9

EMPLOYMENT BY INDUSTRY NOME AND BALANCE OF REGION, 1986



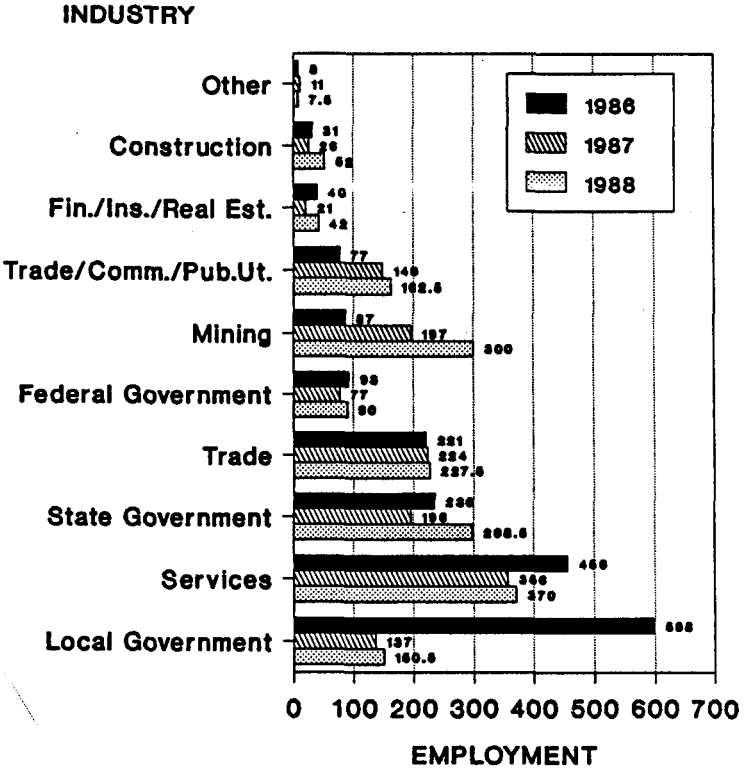
Source: Alaska Department of Labor.

COMPOSITION OF EMPLOYMENT
NOME, 1970 AND 1980



Source: U.S. Bureau of the Census.

Figure 10
ANNUAL EMPLOYMENT BY INDUSTRY
CITY OF NOME, 1986, 1987 & 1988



Sources: Alaska Dept. of Labor (1986);
Impact Assessment Inc. (1987);
Kevin Waring Associates (1989).

Figure 9 shows that regional employment is nearly balanced, but both the outlying workforce and the population are disproportionate compared to Nome. In blunt terms, Nome dominates regional economic opportunities.

Nome's economic dominance is clearly demonstrated; and because it is another case--Unalakleet--will be instructive. In Unalakleet, shifts in private- and public-sector employment are more easily disentangled. Table 6 compares employment by industry in Unalakleet for 2 years, 1970 and 1980. The growth of commercial fishing during this interval is easily identified in the increases in manufacturing and (in turn) the construction and services sectors; both of the latter industries typically show growth as a consequence of either private- or public-sector growth. In addition, the finance and real estate category unfolded as Unalakleet Native Corporation commenced its activities subsequent to ANCSA.

Table 6

EMPLOYMENT, BY INDUSTRY, 1970 AND 1980, UNALAKLEET

	1970	1980
Construction	0	9
Manufacturing	0	18
Transportation	19	22
Communications	5	0
Trade	13	8
F.I.R.E.	0	6
Services	28	77
Public Administration	37	20
TOTAL	110	165

Source: U.S. Census (1980).

Table 7, which examines the most recent period, reveals substantial growth in aggregate employment despite a very uneven pattern of employment on a year-by-year basis. Yet the composition of employment is easily explained: the rapid growth of local government from 1982 is due largely to the relocation of the Bering Strait School District facility to Unalakleet (education is classed under "local" government here), and other increases that are hidden in the "undisclosed" categories are obviously due to the expansion of Ryan Air operations after 1983. The slump in employment after 1985 is due to the first contractions in State revenues to schools and municipalities. Table 8 provides the most accurate employer breakdown for Unalakleet in recent years, and shows FTE employment by employer for 1982.

Since 1980, the total payroll for the study area has risen only slightly in constant dollars. Average monthly wages in constant dollars in the Bering Straits region have risen slightly since 1980 and have fallen from the 1982-1985 highs. So despite some evidence of economic expansion in some industries and in some areas (Nome and Unalakleet, but chiefly the latter in per capita terms), the 1986 economy is best described as "stagnant."

These observations immediately raise the question of the extent and severity of economic dependencies in the region at the household level. Figures 11 and 12 address this issue for Nome.

■ Figure 11 charts adult public assistance payments by month for 1987. The period of greatest demand is in the midwinter interval when alternative opportunities are most scarce.

Table 7

COVERED INDUSTRY EMPLOYMENT, UNALAKLEET AREA, 1980-1986[a]

Industry Classification	1980	1981	1982	1983	1984	1985	1986
Mining	*	*	*	*	*	*	*
Construction	*	*	*	*	*	*	*
Manufacturing	*	*	*	*	0	*	*
Transportation, Communication, and Public Utilities	20	26	32	39	*	*	*
Trade	45	58	57	41	48	43	40
Finance, Insurance, and Real Estate	*	*	*	*	*	*	*
Services	13	15	19	23	31	36	28
Government	60	68	76	83	93	124	81
Federal	24	22	12	4	5	5	5
State	0	0	0	0	0	0	0
Local	36	46	64	79	88	119	76
Miscellaneous	0	0	0	0	0	0	0
TOTAL	228	206	206	199	260	336	297

Source: Alaska Department of Labor (1980ff).

[a] Figures include Egavik, Saint Michael, and Stebbins.

■ Figure 12 illustrates trends of household transfers only for Nome from 1984 to 1987 (focusing on average monthly payments in the form of food stamps, and Aid to Families with Dependent Children, or AFDC). Although transfer data may contain administrative artifacts (i.e., changing reporting procedures may cause the fluctuations that may otherwise reflect real poverty), the intuitive interpretation that emerges from

Table 8

FULL-TIME EMPLOYMENT, UNALAKLEET, 1982[a]

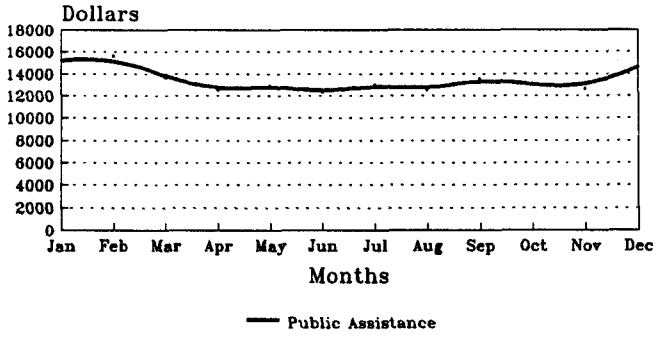
Employer	Native Employees	Non-Native Employees	Total Employees
PRIVATE			
Unalakleet Village Corporation	21	1	22
Wien Air Alaska	6	1	7
Ryan Air Alaska	7	6	13
Alaska Commercial Company	8	0	8
Rendezvous Club	2	2	4
Musk Ox Farm	0	2	2
Subtotal	44	12	56
PUBLIC			
IRA Council	3	0	3
City	10	6	16
Unalakleet Village Elec. Coop.	3	2	5
Bering Straits School District	13	20	33
Degnan School	16	14	30
Covenant School	0	16	16
Headstart	4	0	4
Bering Straits CRSA	1	0	1
State of Alaska			
Dept. of Transportation & Public Facilities	2	1	3
Dept. of Health and Social Services	5	1	6
Other	4	1	5
Euksavik Clinic	2	1	3
Post Office	3	0	3
Subtotal	66	62	128
TOTAL	110	74	184

Source: Jorgensen and Maxwell (1984).

[a]Table includes only full-time wage employment.

Figure 11

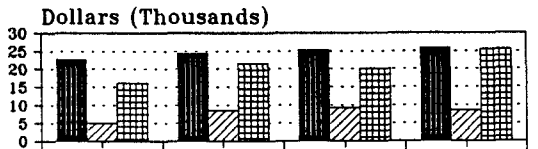
ADULT PUBLIC ASSISTANCE PAYMENTS
NOME, 1987
(Fitted Curve Method)



SOURCE: Alaska Dept. of Health and Social Services, Division of Public Assistance.

Figure 12

SCHEDULE B HOUSEHOLD TRANSFERS
NOME, MONTHLY AVERAGE PAYMENTS
(AFDC, Food Stamps, Combined Cases)



	1984	1985	1986	1987
AFDC	22.843	24.468	25.228	25.852
Food Stamps	5.037	8.591	9.279	8.541
Combined Cases	16.147	21.444	20.133	25.451

Year

AFDC Food Stamps Combined Cases

SOURCE: Alaska Dept. of Health and Social Services. Division of Public Assistance

the data is that dependency levels are generally stable--on a per capita basis assuming modest population increases--or slightly rising.

The cost of living in the Bering Straits region is high, hence these economic conditions discussed above are exacerbated by cost constants that are subject to virtually no control unless residents have access to sufficient cash to make bulk purchases and arrange for barge delivery. The poorest residents, of course, are least able to make such an investment. Nome prices for food register approximately 170 percent of the U.S. average, but Nome per capita incomes are only slightly higher (less than 10%) than the U.S. average (Alaska Department of Labor 1987b:5, 11).

As part of the field investigations undertaken for this research project, a market-basket survey was completed in each community. These data for both 1988 and 1989 (the first and second Schedule B field seasons) provide the most recent intraregional comparative base for examining cost of living. The Bering Straits comparisons, expressed as percentage shifts over the 1-year interval, are provided here in Table 9. The text highlights absolute cost differentials between study sites, whereas the table and accompanying comments describe stable and unstable cost patterns.

Freight costs for transshipment of goods to Gambell are the key factor that boosts the Gambell cost of living; however, Gambell prices are only marginally higher than other villages. Nome and Unalakleet achieve relatively lower costs through a combination of local competition, warehousing space permitting large purchases and long storage, a transportation edge over other communities, and a large consumer base that establishes a fairly rapid turnaround on some goods (particularly perishables, such as

Table 9

RETAIL PRICE COMPARISONS, BERING STRAITS SAMPLE COMMUNITIES, 1988 TO 1989[a]

Commodity	Nome		Gambell	Shishmaref	Unalakleet	
	Store 1	Store 2			Store 1	Store 2
10 lb flour	11.0%	-5.1%	41.1%	-13.1%	123.4%	-1.8%
12 oz evap milk	0.0%	0.0%	4.2%	0.0%	52.3%	na
1 lb onions	2.0%	33.9%	-44.1%	0.0%	-12.7%	0.0%
48 oz oil	-43.6%	-55.7%	2.0%	-32.6%	21.5%	13.4%
6-pack cola	-3.8%	-1.5%	0.0%	0.0%	2.6%	-6.0%
10 lb sugar	16.7%	-27.6%	16.8%	0.0%	11.8%	9.2%
18 oz corn fl.	-42.2%	11.7%	47.4%	6.0%	7.9%	12.4%
18 oz bread	5.0%	-26.1%	22.6%	-23.8%	49.2%	-43.4%
1 lb bacon	57.7%	-52.8%	-29.6%	-34.4%	-46.3%	-1.7%
3 lb coffee	0.0%	11.5%	-9.6%	-24.8%	67.7%	8.6%
1 lb butter	48.2%	122.3%	-13.2%	140.1%	-9.5%	-12.2%
12 qt powd milk	-7.7%	73.3%	-10.7%	0.0%	1.1%	12.8%
22 oz punch mix	-4.6%	20.3%	-26.9%	-17.1%	3.9%	2.7%
2-D batteries	7.5%	7.7%	12.9%	119%	0.0%	2.4%
1 gal Blazo	na	0.6%	477%	1.3%	12.6%	na
35-hp. Evinrude	na	na	9.3%	na	6.4%	na
ax handle	na	3.7%	-4.6%	12.8%	na	na
1 gal gasoline	na	0.0%	0.0%	-16.8%	na	3.9%
1 qt motor oil	na	0.0%	58%	3.1%	3.8%	na
16-ft skiff	na	na	20.5%	na	4.0%[b]	na
Coleman lantern	na	14.9%	na	na	na	na
28 ct diapers	-15.2%	-27.3%	30%	-15.5%	-45.0%	-33.1%

Source: Authors' field notes for the Social Indicators Study.

[a]Expressed as percentage shifts over this 1-year interval.
[b]Estimated; catalog rates for 1989 were incomplete during fieldwork.

produce) whose appearance and freshness are key concerns. The large outlets in Nome are also better able to secure credit at the best rates.

The Nome costs are not uniformly lower, however--in fact, in some categories Nome stores are poor choices for comparison shoppers who might have access to stores in Unalakleet and even Shishmaref. Shishmaref and Unalakleet outlets have relied very heavily on bypass-mail arrangements that permit wholesale-freight deliveries directly to the village, avoiding transshipment through Nome entirely. Since 1988, bypass mail in rural Alaska has been discouraged by new Federal policies that penalize shippers who do not route through hubs; and, consequently, study-team members were concerned that post-1988 retail prices at Unalakleet and Shishmaref would rise dramatically once their commodities were shipped through Nome middlemen on a regular basis. However, the data for 1989 indicated that the benefits of bypass mail still were evident. According to this data, retail prices at one Unalakleet store generally rose, but prices at another store remained relatively stable and in fact dropped in many instances. Additionally, retail prices at Shishmaref declined dramatically, and some prices at one Nome outlet in particular dropped. Key informants in these communities have explained that extremely aggressive cost-cutting measures and efforts to keep stock at optimal (and low) levels have contributed to low prices. Vendors indicate that they believe that the only way to stay in business and maintain customer loyalty is to trim costs (and their profits).

Nonetheless, grave economic pressures that have accompanied the general Statewide economic downturn do not seem to act uniformly on retailers, nor have those pressures acted in concert so as to stabilize prices. Price shifts appear to be erratic and

inconsistent, and we detect no clear pattern that could be linked to characteristics of particular classes of commodities. Our field observations suggest, rather, that individual vendors seek to slash prices in some product lines but then attempt to recover profits from other items that are priced upwards. Brand loyalties also may play a role in the erratic shifts documented here; we suspect that preferred brands with high customer loyalty may be subject to price changes that are disproportionately low. Loss leaders with high turnover may be treated as promotions to draw customers who will then subsidize the loss with other purchases. However, because we have no data on brand loyalty, we cannot take this analysis any further than observations from vendors.

Costs of living and levels of commercial activity as measured by conventional records document only a portion of the local economy because subsistence harvests of renewable resources provide important sources of food for many inhabitants. Furthermore, as the main body of ethnographic research in this and other rural regions has amply demonstrated, economic contribution is only one facet of the complex social and cultural role of subsistence harvests.

In the remainder of this section, the discussion of subsistence describes and compares regional characteristics of harvest practices. This discussion concentrates on study sites and begins with Nome because a substantial body of data pertinent to Nome already are assembled in published MMS documents. Much of the following discussion is based on McNabb's contributions to Waring and Associates (1989:327-334).

Subsistence (defined here as the harvest of renewable resources for household consumption and noncommercial distribution) is a common feature of both economic

and recreational pursuits for most regional households, and this activity varies tremdendously across population segments. In some important respects, this variance is a customary aspect of subsistence. Under traditional subsistence regimes, practices varied by age and gender: the young were more apt to conduct certain activities, often in support capacities as they were socialized; the elders were trusted leaders and organizers, but often delegated arduous tasks to younger kin; and the responsibilities of women and men tended to be different. Moreover, subsistence pursuits were shaped by the local availability of resources that varied in their abundance, annual or seasonal cycles, and range of distribution. In turn, local villages tended to have different repertoires of subsistence skills, preferences, and harvest habits, though those repertoires might vary only in minor nuances when the resources and their characteristics were similar. These factors operate today (though perhaps with less dominance due to economic and technological changes that reduce historical constraints on mobility, for example), but it is likely that the major contrasts that are responsible for stratification or variance in subsistence activity are ethnic and economic in origin. Whereas the primary contrasts in most communities are between Native and non-Native residents and among cross-sections based on income and wealth, in larger heterogenous cities contrasts among distinct Native social groups are evident. In the Bering Straits study area, Nome is such an example.

These contrasts are well documented (see Ellanna 1980a and b, 1983a and b). Saint Lawrence Islanders (Savoonga, Gambell), King Islanders, and other Nome Natives who orginally came from other villages display different subsistence habits, and they may

identify themselves as different ethnic groups (for example, some Nome residents born on King Island still list their residence as "King Island;" Norton Sound Health Corporation [NSHC] 1986). Some residents originally from outlying villages tend to follow customary patterns based on the environments of their homelands and may prefer familiar practices (and hence foods) imported from other areas (see Ellanna 1980a:240 for a general statement).[16] These "imported" patterns undoubtedly contribute to the heterogenous quality of rural cities such as Nome.

Ellanna (1980a) describes the range of variation in subsistence consumption habits that characterize Nome and draws attention to this "import" phenomenon: residents originally from island environments where sea mammals dominate the protein diet rely heavily on sea mammals, whereas villagers who were born and raised in mainland villages rely more heavily on customary foods from those locations, such as fish and caribou. It is unclear to what extent these consumption differences are based on exchanged foods that arrive in Nome from other villages, as opposed to empirical differences in harvest patterns on the part of Nome residents. It is likely that both factors are relevant. But the Nome-village contrast also is evident in sheer volume of subsistence consumption: Nome villagers in the aggregate consume less harvested food and villagers consume more. Table 10 lists proportions of harvested food in five categories (with a sixth nonresponse category) for Nome and outlying villages, based on a

[16] Ellanna (1980a:240) does not say that Natives from surrounding villages follow familiar regimes less intensively than do St. Lawrence and King Islanders; we infer that this is the case. We do not mean to imply that Natives rigorously and uniformly follow the familiar regime but only that the tendency exists. Ellanna (1980a:276) points out that the King Island diet has changed to accommodate the new environment.

survey conducted by the NSHC. (These figures must be interpreted with some caution because the Nome sample is comprised of 324 surveys--about 31% of Nome households--using a sampling method that may yield biased results.)

Table 10

PROPORTION OF HARVESTED FOOD BY COMMUNITY, 1984 NSHC GENERAL SURVEY[a]

Proportion of Food	Nome %	Village %
All of it	3	14
Most of it	9	31
About half	20	22
Some of it	45	24
None of it	14	3
No response	9	5

Source: NSHC 1986:26; author's private files.

[a]Figures may not tally to 100 percent due to rounding.

Ellanna's subsistence data for 1980 indicate higher levels of consumption for both Nome and the outlying villages, so assuming that both these and Ellanna's (1980) data are valid, reliable, and comparable, volumes of subsistence harvests (at least the portion that is consumed) have declined since the late 1970's. Because some documents claim that subsistence harvests in Nome are on the upswing (see Impact Assessment 1987:101), it is difficult to state with confidence that a decline or increase can be detected. The NSHC survey data support the suggestion of declining harvests, although the decline

shown in the data is very slight (see Table 11). Table 11 returns to the issue of variance in the composition of harvests, which to some extent is governed by natural (biological, climatic) factors as well as personal preference and custom. The composition of harvests appears to have shifted slightly away from sea mammals and toward moose and, to a lesser extent, fishes. Although it is possible that these differences indicate a gradual accommodation of village populations to the Nome environment as well as long-term changes in game availability and resource concentrations, that inference cannot be evaluated properly with these data.

Table 11

MAIN SOURCES OF MEAT, NOME HOUSEHOLDS, 1984 NSHC GENERAL SURVEY

Main Source	10 Yrs Ago	Today
Store	25.00%	27.47%
Hunting	6.17%	5.25%
Moose	12.04%	21.30%
Reindeer	5.86%	3.09%
Sea mammals	3.40%	1.23%
Fish	4.94%	5.25%
Birds	0	0
Other	22.53%	22.22%
No response	20.06%	14.20%

Source: Author's private files, including unpublished survey results.

The issue of harvest variance across populations is partially addressed by a Department of Fish and Game, Subsistence Division, survey in Nome during 1982. The survey analysis tabulated the proportions of sample households harvesting foods from several resource categories. Resources harvested by many households are, by definition, least subject to great variance; and, in turn, resources harvested by few households are precisely those that are subject to greater variance. (The survey did not report level of effort or volume of harvests, however, so some important sources of variance are not addressed altogether.) Table 12 lists these proportions. In the source document for these figures, the author states that between 1974 and 1982, harvest levels for salmon, all bears (black, brown, and polar), and moose have increased (Ellanna 1983b:112). This observation is consistent with the other data cited above.

Other information suggests that variance in subsistence activity can be related to differences in kinship and other avenues for mobilization of teams for harvesting, and also to differences in wealth within a population (because capital investments are necessary to conduct harvests). These factors may operate in tandem. For example, one characteristic feature of Nome is fragmentation of kin groups: here, as in other heterogenous rural hub cities, some kinship networks may be relatively barren or skeletal, due to the fact that inmigrants often do not arrive with intact kinship groups, do not move them to Nome wholesale, or do not move into existing and established kinship networks. We emphasize that this is merely an issue of degree, because some Nome networks are extensive and some networks in outlying villages are sparse. The absence of large and intact kinship groups among some Nome residents may prompt innovative

Table 12

RESOURCE USE BY CATEGORY (PROPORTIONS), NOME, 1982

Resource Category	Percentage of Households (N=104)
Salmon	84
Herring	8
Tomcod	47
Whitefish	28
Capelin	32
Ling Cod	15
Char	47
Trout, grayling	68
Halibut, flounder	11
Pike	23
Duck, goose, crane	50
Ptarmigan	66
Egg gathering	17
Greens, roots	43
Berries	80
Crab	55
Clam	9
Arctic hare, rabbit	38
Bear	8
Caribou	12
Moose	63
Walrus[a]	26
Bearded seal[a]	30
Spotted seal[a]	22
Ringed seal[a]	10
Ribbon seal[a]	3
Belukha whale[a]	8
Bowhead whale[a]	3
Polar bear[a]	5

Sources: Ellanna (1983b:106-110) and Wolfe and Ellanna (1983).

[a] For these resources, the N=55. The total sample includes Nome residents prohibited from harvesting marine mammals. The figures are rounded estimates.

organizational solutions to team or crewmemberships that previously were (largely) kinbased. But the mobilization of personnel is one part of a more general problem of mobilization of resources. Because money is required to finance subsistence activity and the mere existence of a local network of kin or friends does not insure that those finances will be available, variance in income or wealth offers a means to satisfy harvest requirements that cannot be met with personnel alone. Some persons and families have greater incomes and wealth, permitting some persons with sparse local kindred and mutual support groups to nonetheless conduct solitary subsistence pursuits.

Saint Lawrence and King Islanders customarily outfit and man crews following relatively rigid kin-based criteria (see Bogojavlensky 1969; Ellanna 1983a and b; Little and Robbins 1984). Natives from other outlying villages did not (and do not) adhere to the same extensive, formal principles, but the social organization of harvests and later distribution still is heavily influenced by kinship. Today, there is considerable diversity in harvest organization because of the factors outlined above, and unrelated friends and neighbors may hunt and fish together on a regular basis. Marriage may provide a simple solution to the recruitment dilemma, inasmuch as spouses with minimal networks of local kin and other resources may inherit a new network from his or her spouse upon marriage. Interethnic marriage, which draws non-Native spouses without local kindred into existing or emergent harvest organizations, is one variation on this theme. Regional subsistence organizations represent persistent traditional patterns as well as innovations (Ellanna and Sherrod 1984; Magdanz 1981a, 1981b, 1983; Sheppard 1983; Sherrod 1982; Thomas 1980, 1981).

Although the practices described for Nome generally are valid in the other regional study communities, a kin-based orientation is more pronounced outside Nome. This is because the urban trends that have dissolved many highly coherent kin-based harvesting organizations in Nome are less conspicuous in the outlying villages. Little and Robbins (1984) and Jorgensen (1990) amply demonstrate the persistence and complexity of kin-based mutual assistance, harvest-team organization, and distribution networks in Gambell and Unalakleet. Although the deme-like bilateral kindreds in Unalakleet and the patriclans in Gambell are organized differently and entail different cultural views of affinity, the functions of kin networks are similar. Specifically, these similar functions include recruitment of personnel for subsistence pursuits, avenues for collection of capital for those pursuits, and networks for distribution of raw and prepared foods.

Although harvests of food and sharing of food are so commonplace and ubiquitous as to defy consistent recollection by residents, gross comparisons of consumed foods for these two communities can be assembled based on recall data. Household consumption (foods harvested as well as food received as gifts) for 1982 is displayed in Table 13 in order to underscore the issue of variance (due to both natural as well as cultural and individual factors) that integrates this discussion. Here we see substantial differences across the sample communities, but that variance is probably best interpreted as the consequence, subtly different in every village and every year, of common principles that operate much the same in all Native villages. These are: (1) variance (and uniformity) is concrete evidence of differences in habitats, species distributions, climatic cycles, and other natural and physical properties; (2) variance reflects different

social and cultural patterns tied to historical and ideological factors, such as customary uses of specific environments, technology and means of harvests, and human and other resources mobilized to conduct the harvest; and (3) individual skills and preferences in foods, tastes, and even locations of harvests.

Table 13

ESTIMATE OF ANNUAL HOUSEHOLD SUBSISTENCE CONSUMPTION (PARTIAL), GAMBELL AND UNALAKLEET, 1982

Item	Gambell	Unalakleet
Birds	440	50
Bird eggs	20 gal	4 gal
Fishes	550	2,515
Invertebrates	40 gal	20 gal
Walruses	9	1/7
Bearded seals	3	1
Seals	30	10
Whales, tons/village	70-150	20-40
Caribou	na	4
Hares	na	50
Berries	120 lb	180 lb

Source: Jorgensen 1990:132.

For comparison, Table 14 presents data from a Subsistence Division study at Shishmaref that was staged at the same time as the Nome subsistence study cited above (1982). The Shishmaref data turn the reader's attention yet again to the issue of variance and uniformity: those resources harvested by many persons exhibit little

variance, and those harvested by few exhibit more variance. In Shishmaref, sea mammals and birds seem to dominate the aggregated subsistence pattern, fitting a maritime orientation more similar to the Gambell case than Unalakleet, and similar perhaps to the Saint Lawrence and King Islanders in Nome.

Table 14

NUMBER OF RESPONDENTS HARVESTING NAMED SPECIES SHISHMAREF, 1982 (N=46)

Species[a]	Number Harvesting Species
Bearded seals	34
Ringed seals	22
Spotted seals	26
Ribbon seals	2
Walruses	13
Polar bears	2
Moose	27
Foxes	11
Wolverines	2
Arctic hares	23
Caribou	5
Ducks/geese	35
Ptarmigan	29
Eggs	15
Greens/berries	39

Source: Sobelman (1985).

[a] Fish species are deleted from this tabulation because of very small frequencies.

To conclude this discussion, it will be useful to characterize the human dimension of subsistence in order to draw concrete attention to how these principles underlying variance seem to work. Taking two specific cases, one respondent household in Unalakleet encountered financial difficulties during the second wave of research and sought to reduce harvest expenditures by employing labor-intensive techniques for cheaper resources. This household consequently showed a drop in large mammal harvests, which are expensive, with an increase in overall diversity of harvests (small game and fish). Another household incurred a financial windfall and targeted large mammals, leading to greater expenditures and reduced diversity. Judging by our observations, because of sharing, their respective consumption patterns apparently were not affected. Despite differences in actual harvests over a 1-year period, their subsistence intake remained fairly uniform because they (and many households) draw on other households. Taken in the aggregate, these domestic shifts may yield only minute changes at a village level that, due to the opportunistic nature of subsistence activity, are predictable despite the unpredictable characteristics of resource availability per se.

III.C. Health, Education, and Social Services

The major institution frameworks for the provision of services already have been described (see Sec. I.C). This section addresses caseloads, perceived needs, and program delivery in the Bering Straits region.

Between 1980 and 1984, the mortality profile of the region changed substantially. For the 1973-1977 and 1980-1984 periods--excluding the Unalakleet subregional reporting district for vital statistics data--malignancies were the third-ranked cause of

death in the region (yielding 12.5% and 14% of the deaths, respectively) (Alaska Area Native Health Service 1987). Accidents were the first-ranked cause of death. Between 1982 and 1984, malignant neoplasms were the first-ranked cause of death in the region. Table 15 provides a breakdown of total deaths and leading causes of death for the 1982-1984 period with the 3-year rate per 100,000 population. Hence, a shift that was set in motion after 1977 rapidly displaced accidents as the first-ranked cause of death and placed malignancies in that position for the 1982-1984 interval.

Key informants suggest that one reason for this shift lies in the fact that the population is growing older and medical care is prolonging lives, permitting chronic degenerative diseases to assume a greater importance in the mortality profile. The overall mortality rate in 1980 was 826 per 100,000, but 1980 was a year marked by accidental death outliers (several plane crashes alone account for a mortality rate of over 90 per 100,000). According to the author's unpublished records, if those outliers are removed, the 1980 rate falls to 673 per 100,000, or substantially less than the most recent 3-year-average rate.

Patient-encounter data (numbers of visits) are not presented here because they illustrate workloads far more often than substantive health status indicators. This general observation is valid for all encounter data, but these problems may be especially pronounced in the Bering Straits area. The author's files of record investigations over a 6-month period in 1984 at NSHC show that the ratio of encounters to patients may vary from as much as 100/13 to as low as 6/5, and furthermore the ratios vary across ethnic groups as well as seasons. In other words, for some diagnostic categories each patient

Table 15

LEADING CAUSES OF NATIVE MORTALITY AND TOTAL DEATHS, BERING STRAITS, 1982-1984[a]

	1982	1983	1984	3-Yr Rate
Total Deaths	48	46	43	825.9
Age at Death				
Under 5	8	4	4	
5-9	0	0	0	
10-14	1	0	2	
15-24	4	3	3	
25-44	6	7	8	
45-64	9	17	10	
65+	20	15	16	
Leading Causes of Death				
1. Malignancies	9	12	8	174.8
2. Accidents	9	8	10	162.8
- Motor vehicle	0	1	0	6.0
- Water/drowning	2	1	2	30.1
3. Heart disease	9	8	8	150.7
4. Suicide	na	6	5	98.4
5. Homicide	2	4	3	54.3
6. Cerebrovascular	2	2	1	30.1
7. Influenza/pneumonia	2	2	1	30.1
8. Infant diseases	3	0	2	30.1

Source: Alaska Area Native Health Service (1987).

[a] Rate is 3-year average crude rate. Suicide rate is based on 2 years. The data are for the Norton Sound Service Unit, which comprises all regional villages.

may account for seven or eight visits over a year; in other categories the ratio is closer to one-to-one. Workloads measure patient contacts but not numbers of patients.

Because objective records are scarce, subjective data-reporting perceptions are the only available information for inferring health status. As one part of the NSHC General Survey cited above, community health aides were asked to report on a variety of issues. Most of these results were never published. It is useful to note that perceived service dependencies are conspicuous in the region: about 60 percent of the health aide responses indicated that residents consider the health aides to be ultimately responsible for resident health, as opposed to the residents themselves. Health aide responses also ranked NSHC mental health and alcoholism programs as the poorest, whereas the itinerant physician (visiting doctor) programs received the best recommendations. Nonetheless, the expressed priorities of the health aides placed alcohol and mental health needs in the lowest priority category (yet the alternative health aides placed alcohol and mental health education in the highest priority category).

These data suggest that there is little consensus among key service providers, and that inference is supported by key informant and observational data in the region. Moreover, objective health conditions (such as absolute frequencies and emerging trends) apparently play only a modest role in shaping health provision plans. To date, the authors are unaware of any concerted action plans to address comprehensive needs of an aging population, degenerative diseases, or high violent-death rates.[17] Some

[17] Note that resident respondents to the General Survey indicated by a clear majority that they would rather be treated in Anchorage than in Nome (twice as many respondents indicated Anchorage). In addition, 47.53 (continued...)

preventive and health promotion efforts, such as dental hygiene programs, do receive strong support from health corporation decisionmakers, notably the board of directors.

On the other hand, the Bering Strait School District (BSSD) is establishing a record for public education that targets current and emergent community needs that embrace academic, vocational, and behavioral objectives. In 1987, several new vocational programs, including one based in Unalakleet that focuses on commercial fishing, were approved for Fiscal Year (FY) 1988. Other ongoing and new vocational programs target life-skills training (including home skills, such as sewing, for males) and standard industrial arts. At least one public education program addresses drug and alcohol awareness, and brochures that alert the community to health issues such as Reye's syndrome are circulated by district headquarters. A strong "positive reinforcement" policy designed to foster learning in meaningful, local contexts is evident in local current event and history writing contests, among other programs (see BSSD 1987, 1988). Field observations during 1989 suggest that these efforts are continuing, with modest to substantial resident support.

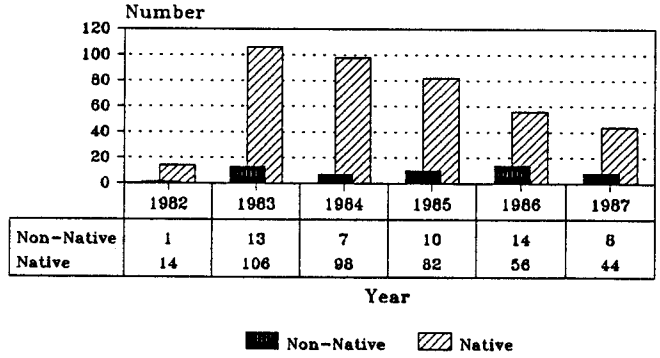
Figures 13 and 14 report alcohol program admissions in Nome and in the Bering Straits region, respectively. The decreasing alcohol program caseloads are due in part to budgetary restrictions, but it is likely that limited (and declining) community support and confidence in services is shrinking the pool of service consumers. Note, however, that

---

[17](...continued)
percent of the respondents indicated that alcoholism is an increasing problem for which new or improved programs are needed (this was the single highest frequency response among all options; the second-ranked problem--child abuse--elicited a response rate of 38.27%). But as of 1989, NSHC had not initiated major behavioral health/substance abuse programs.

Figure 13

ALCOHOL PROGRAM ADMISSIONS
NOME RESIDENTS, 1982–1987
(Native and Non-Native Frequencies)

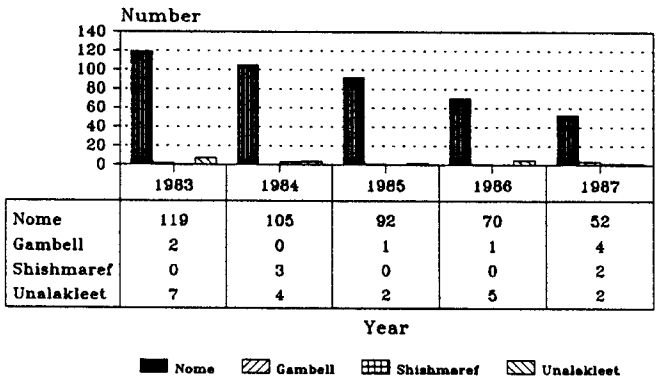


	1982	1983	1984	1985	1986	1987
Non-Native	1	13	7	10	14	8
Native	14	106	98	82	56	44

SOURCE: Alaska Dept. of Health and Social Services, Office of Alcoholism and Drug Abuse

Figure 14

SCHEDULE B ALCOHOL PROGRAM ADMISSIONS
BERING STRAITS, 1982–1987



	1983	1984	1985	1986	1987
Nome	119	105	92	70	52
Gambell	2	0	1	1	4
Shishmaref	0	3	0	0	2
Unalakleet	7	4	2	5	2

SOURCE: Alaska Dept. of Health and Social Services, Office of Alcoholism and Drug Abuse

the proportion of non-Native consumers (as a percentage of all clients) generally increases over the reporting period. Key informants in Nome offered no conclusions about this fact.

III.D. Sodalities and Voluntary Associations

In Section V, the authors argue that work, school, and other secular associations aside from kinship have become increasingly salient in the region, and especially in Nome, as bases for the establishment of numerous solidary relationships. In Section V, the argument concentrates on sharing and mutual support, but it is useful to underline the broad significance of secular associations in general here. In Section III moreso than most study communities in both Schedules A and B, Nome is an urbanizing community with prominent blue- and white-collar values characterized by residents who seek civic and economic development on the mainstream Western model.

Because Nome is so thoroughly heterogeneous, it is not surprising that formal facilities for recreation and civic gatherings form a nexus for voluntary associations. The Senior Citizen, Teen, and Recreation Centers are frequented by "regulars" who carry out a substantial share of visiting, informal support, and joint recreational activities at these sites. They function in many respects as clubs, lacking only formal charters, titles, officers, and memberships. Similar facilities elsewhere in the region tend to support more fluid memberships,[18] so this pattern in Nome stands out. The bars in Nome

[18] It is possible that memberships are more fluid elsewhere because much socialization takes place outside the bounds of the sodality in more remote villages, or because sodalities are seen in more instrumental terms (as a means to a specific and temporary end) in remote villages, either of which could lead to less stable membership. These possibilities are only speculative.

arguably carry out a similar function, although the memberships overlap substantially. Yet the bars clearly recognize "regular" patrons, and each fosters a unique ambience: pool competitions at "The Breakers," dancing at "The Board of Trade," etc. Specialization and stratification of this order is generally rare in other regional study sites, although the specialized functions of sodalities like the Dog Mushers' Association (Unalakleet), business organizations such as the Bering Sea Fishermen's Association, and kinship-based patriclans and clan segments (Gambell) have similar characteristics.

The sodalities in the study area are tabulated below:

- Dog Mushers' Associations (most villages)
- Whale and walrus crews
- Search and Rescue
- American Legion (Post 19)
- Anvil Lodge No. 2
- Arctic Native Brotherhood
- Bering Sea Lion's Club
- Beta Sigma Phi
- Beta Sigma Phi-Xi Kappa
- Kawerak Reindeer Herders Association
- Bering Sea Fishermen's Association
- Nome Bar Owner's Association
- Nome Chamber of Commerce
- Nome Kennel Club

- Nome Shrine Club
- Nome Volunteer Ambulance Service
- Volunteer Fire Departments (most villages)
- Order of the Eastern Star
- Pioneer Auxiliary No. 1
- Pioneer Igloo No. 1
- Rotary Club of Nome
- Veterans of Foreign Wars, Bering Sea Post 9569
- Women's Auxiliary to the American Legion

In addition, all of the churches support sodalities, some of which are extremely fluid, general, or of short duration (committees formed to organize bake sales or charitable activities serve as examples here). Sects with strong hierarchical organization at the local or regional level, such as the Latter Day Saints, naturally support sodalities with blended secular and sectarian objectives.

In Gambell, the broad roles of structured harvest crews warrant additional attention because these organizations penetrate other key institutions and groups. The major voluntary group in Gambell is the Whaling Captains Association, which is made up of the 22 bowhead whaling captains and performs many important functions. Among these function is the organization's contribution to the Fourth of July celebration, which features a community dinner of largely traditional foods, contests, games, a 6-mile run, and prizes awarded by the IRA Council. The boat captains also play an important

advisory role to the International Whaling Commission and the Eskimo Walrus Commission.

III.E The Main Trends of Sociopolitical Change

This section summarizes the major directions of sociopolitical change that have been discussed thus far in Sections I, II, and III.

Institutional Cleavage: Although the three key sociopolitical institutions--the IRA, municipal government, and ANCSA corporations--operate jointly in the outlying villages, joint operations and consensual decisionmaking in Nome are rare. With the discharge of debts by the BSNC in the form of subsurface rights and cash payments to village corporations, the role of the regional corporation as a binding force for intraregional activity will undoubtedly decline. Furthermore, the region has two coastal resource service areas and two school districts. This tendency toward cleavage is not likely to reverse itself in the short term.

Recent events underscore the persistence of this tendency. The City of Nome assessed property taxes on Nome Eskimo community property in 1988, which the Nome Eskimo community declined to pay on the grounds that, as an IRA tribal government, it was sovereign and hence not liable for local or state assessments. The case is now pending before the Alaska Supreme Court (Tundra Times 1988c:1). The issue is discussed in further detail in the subsection on ethnicity and tribalism in Section V.

Yet there is evidence of counterbalanced tendencies in the region. In 1991, elders attending the Bering Straits Elders Conference adopted a resolution encouraging regional corporations to work together to open up camping privileges on corporation

land for shareholders of any and all corporations in and outside the region (Alaska Federation of Natives 1991:13) which, on the face of it, seems to run counter to the uncooperative cleavages sometimes seen among institutions. Efforts such as this may act to defuse the polarizing tendencies that are apparent in the region.

Private-Sector Development: With the decline of State revenues, a continuing interest in the development of fisheries resources at State and local levels (combined with a weakened dollar and constraints on non-U.S. commercial fishing in U.S. territorial waters), and improved mineral extraction methods, private-sector development in fisheries and gold mining is likely to assume a more prominent role in the regional economy. Mining employment in Nome is higher now than during any year over the past decade, and offshore mining prospects may permit a greater increase in this sector.

The Alaska Gold Company has increased the length of its field season, and support industries such as transportation and services show generally stable growth since 1980. On the other hand, government employment has declined since the 1985-1986 highs; and in fact, State and Federal government employment is now lower than any time since 1979. Local government employment essentially matches 1980 levels. Between 1987 and 1988, mining employment in Nome reached about 300, edging out the dominant trade and State government sectors and assuming a second-ranked position behind services (see Waring and Associates 1989).

Until State revenues increase, interests in commercial fisheries decline, the dollar becomes stronger, nonresident fishing privileges in U.S. waters become more permissive, and the commercial potential of mineral extraction declines, the tendencies described

here will likely persist. If and when these tendencies are reversed, private-sector export trade will be inhibited and the public sector will become more dominant. Economic development ideologies are discussed in Section V.

IV. HOUSEHOLD ORGANIZATION AND KINSHIP

This section describes domestic social organization in the Bering Straits region in three parts: kinship organization; household structures and economic functions; and socialization.

IV.A. Kinship Organization

Indigenous Iñupiaq and Yupik kinship continues to be reckoned bilaterally. However, collaterals were distinguished (matri- and patri-) throughout most of the Bering Strait area, and distinct patriclans evolved among the Siberian Yupik population. Females might be betrothed at an early age, and village endogamy was a preferred (but not exclusive) orientation for spouse recruitment. Postnuptial residence was matrilocal or patrilocal but rarely neolocal until the 20th century. Settlements might comprise plots of land inherited patrilineally, near the site of a patrilineal kashim, where related households would reside (Ray 1984:286-287). This pattern was most pronounced among the Yupik populations, but during the earlier stages of growth in Nome, the regional hub, village-based, customary transient-residence sites may have been evident. Even today, the Bering View subdivision is considered a "Saint Lawrence Island" neighborhood, and King Islanders have a well-established Nome neighborhood.

Gambell did and still does represent the most complex kin organization in the Bering Straits study area. One of the salient features of Gambell is the presence of 10

patrilineal clans whose male and female heads are stewards of marriages, ethical conduct, and purchases of major items for subsistence and other pursuits, and whose authority is largely derived from knowledge of subsistence skills (the female heads are widows of former male heads). As part of this system, there is a great emphasis on the importance of age as a source of respect. As one man told fieldworkers: "If a person is even 1 year older I can respect him." This kinship system dates from many centuries ago and is maintained by the cooperation required among constituent patrilineages and friends to acquire and use subsistence equipment and to harvest, process, and consume wild mammals, fishes, birds, and plants. It is also based on reciprocity, a principle that is well stated by one of the residents of Gambell: "He helped me when I was younger. I need to pay him back before he dies." (This is in reference to the person's elder brother.) The clan system includes bride service. A young man who aspires to marry a young woman serves his prospective father-in-law for about 1 year to prove his worth and enterprise. At the end of this probationary period, the couple move to or near the parents of the young man.

Village endogamy dissipated rapidly after the major disruptions of the 19th and early 20th centuries. Table 16 lists birthplaces of respondents and respondents' spouses recorded as part of the key informant field research in the study area. Only married respondents are shown; 25 percent of all respondents (excluding Gambell) were born outside the region, and almost 40 percent of all spouses were born outside the region.

Table 16

BIRTHPLACES OF RESPONDENTS AND SPOUSES, BERING STRAITS, 1988[a]

Birthplace	Respondents	Spouses
Outside the region	25.0%	37.6%
Same region, not subregion	18.8%	12.4%
Same village	56.2%	50.0%

Source: KI field data.

[a] Excluding Gambell.

The specific nonlocal home villages of spouses in Unalakleet in 1982 are presented in Table 17. Most of the home villages are in the Bering Straits region, but three other regions are represented in the data.

IV.B. Household Structures and Economic Functions

Nuclear households are now the most prominent residential household types in the study area, due in part to vast increases in housing stock during the past three decades. The economic functions of the extended-kin groups tend to persist to a greater or lesser extent, thus spanning discrete residential units and establishing networks for the sharing of labor, food, and capital that link numerous households. Similarly, average

Table 17

HOME VILLAGE OF NONLOCAL NATIVE SPOUSES
UNALAKLEET, 1982

Spouse's Home Village	Number
Aleutian Islands (unidentified)	1
Bethel	1
Elim	3
Golovin	2
Koyuk	2
Mountain Village	1
Nome	3
Point Lay	1
Savoonga	1
Shaktoolik	6
St. Mary's	5
St. Michael	2
Yukon-Kuskokwim (unidentified)	3
White Mountain	1
Unknown	1
TOTAL	33

Source: Jorgensen and Maxwell (1984).

household sizes have diminished.[19] Table 18 illustrates the decline in average household sizes since 1970.

[19] Transient non-Native households, typically are comprised of fewer members, also have increased in frequency, in step with public-sector expenditures that have funded programs requiring imported technical expertise.

Table 18

AVERAGE HOUSEHOLD SIZES, BERING STRAITS SAMPLE COMMUNITIES
1970-1980

Community	1970	1980
Gambell	6.5	4.47
Nome	4.0	3.24
Shishmaref	5.4	4.84
Unalakleet	4.8	4.15

Source: U.S. Census (1970, 1980).

Tables 19 and 20 present detailed marital status and household-composition data for one study area community, Unalakleet, for review. An excess of males is evident in both tables. It is most likely that this excess is due to unbalanced male and female migration (see Waring and Associates 1988). Females are more apt to emigrate--while more males than females enter Unalakleet, especially for employment--and female emigration is the main offsetting factor. There is no evidence that this imbalance may seriously influence growth, although it may dampen family formation through local recruitment.

Table 19

MARITAL STATUS BY SEX, PERSONS 15 YEARS AND OLDER, UNALAKLEET, 1980

Marital Status	Male	Female
Single	118	70
Married	97	99
Separated	6	5
Widowed	5	14
Divorced	9	9
TOTAL	235	197

Source: U.S. Census (1970, 1980).

Table 20

HOUSEHOLD TYPE AND RELATIONSHIP, UNALAKLEET, 1980

Household Type	Number	Percent
In Family Household		
Householder	128	20.5
Spouse	91	14.6
Other Relatives	355	57.0
Nonrelative	15	2.4
Subtotal	589	94.6
In Nonfamily Household		
Male Householder	22	3.5
Female Householder	8	1.3
Nonrelative	4	.6
Subtotal	34	5.4
TOTAL	623	100

Source: U.S. Census (1980).

The economic functions of extended-kin groups residing in independent residences is well documented for Gambell, where study team members have collected comprehensive data over several years for two MMS programs. In Gambell, households are largely nuclear in form (parents and one or more offspring). This form comprises about 60 percent of the 110 households in Gambell. About 20 percent of the households are single person, largely single men, and 16 percent are extended-family households (one or more grandparents, one or more married offspring, and one or more persons in the grandchildren's generation). The other types of households--such as married siblings living together (joint-family households) and uncle-headed households--are few in number.

Despite the preponderance of nuclear-family households, a condition somewhat dependent on a sufficient number of available houses, each household is linked to many others in sharing and mutual assistance networks in patrilineages and patrilineal clans. These networks involve the movement of natural subsistence and store-bought goods. Cash moves in this way less often, and more care is taken to protect cash resources than subsistence goods.

The family cycle begins with young people living with a young woman's family during the trial marriage period, followed by establishment of a separate dwelling for the newlyweds (not common) or dependence for housing and other necessities on the parents of the young groom. This stage of the family cycle is followed by a period of the greatest economic productivity in earnings and subsistence pursuits; and, finally, a new period of dependency occurs as families age and elder couples must receive help from their

descendants. This brief sketch represents the most common stages of the family cycle. There are many exceptions, the most common of which is bachelorhood for 20 or so young men who have their own, often very poor, households.

As with whaling crews, patriclans provide the organizational base for walrus crews. The 41 crews in Gambell in 1982 averaged fewer than four members. Walrus crews generally are composed of fathers and sons. Harvests, however, are shared with those in need--related or otherwise--and with elders, friends, fellow crewmembers, and visitors to Gambell. There currently are 105 distinct hunting and collecting crews in Gambell. One person is often a member of several subsistence crews.

In addition to the crews discussed here, a high proportion of the village population participates in fishing and gathering crews at summer camps, and several periodic crews hunt gray whales. Finally, there are the families and friends who collect land and marine plants and marine invertebrates. Viewed collectively, the hunting and collecting crews point to the complex array of social and environmental interdependencies. The entire community structure is dependent on the ability of the Islanders to capture a portion of the naturally occurring species which, in turn, are either directly or indirectly dependent on the ecologic health of the Bering Sea. As a rule, the proceeds from subsistence activities are given to the elder women in the households of successful hunters or gatherers. These women, in turn, process and redistribute the subsistence resources to members of their own clans as well as to those in need who are not members of their clans. The distribution of subsistence goods is extensive.

Following discussions in Waring and Associates (1989) by McNabb, we see that the community of origin is important in determining dominant harvest preferences, if not actual orientations and harvest objectives. This Waring and Associates study states that:

> Available data indicate that distribution (sharing) networks follow a similar logic, but for dissimilar reasons. Whereas harvest orientations and preferences are influenced by early socialization in hunting lore, familiar environments, and customary foods and preparation techniques, common distribution patterns are determined in part by kinship obligations and historic loyalties to partners (or long-term friends or crewmembers) and their families. But this dissimilarity is not complete: subsistence orientations are influenced by distribution habits tied to kinship and other social obligations to the extent that those habits and obligations influence the choice of fish and game that are sought. Hence, harvests are determined in part by what people want to share (Waring and Associates 1989:336).

In another report, the authors note that:

> Sharing networks are complex and diverse, depending in part on whether household members are white or Native and whether household members are from the community in question or other Alaskan communities. Subsistence goods are customarily given to and received from several villages in Norton Sound. Many households receive goods from more than one village outside of the community of residence. Households with non-Native adults often do not have many kinsmen with whom they can share subsistence goods, and these households often harvest and consume these resources themselves. This social circumstance in no way discourages such people from pursuing subsistence resources eagerly, and food preferences emphasize naturally occurring species (John Muir Institute 1984:102).

Both the Social Indicators Study and other MMS research illustrate the forms and roles of sharing in this region:

The importance of community of origin in sharing patterns and the resulting mosaic of diverse customs in Nome is emphasized in most of Ellanna's work. She explains:

> Based on previous Division of Subsistence fieldwork in Nome and the Bering Strait area . . . there exists a well-established distribution network for sharing, trading, and bartering fish, game, and plants. Ellanna's data on subcommunities of Nome (King Island village and previous residents of St. Lawrence Island, Little Diomede Island, and Wales) suggest that resource distribution networks for sub-populations that have previously migrated to Nome from a village in Northwestern Alaska are most well-developed within that subpopulation and between Nome and the community of origin. These networks are focused along kinship lines but extend to other social categories of "kin" not normally recognized by non-Eskimo society. Networks also extend to the elderly or others who have no primary producers within their household or family unit including individuals and households outside the subpopulation . . . the overall Nome resource distribution network cross-cuts ethnic affiliations, income levels, family affiliations, household boundaries, social class distinctions, place of household origin, and community boundaries (Ellanna 1983b:112-114).

So although kinship and community of origin emerge as prominent factors in sharing and distribution arrangements, they are not unique and universal determinants for those arrangements.[20]

---

[20] Other characteristics of persons and population segments in addition to those discussed here have been shown to covary with different kinds of sharing arrangements. Whether these characteristics actually determine sharing arrangements is unknown. For example, Magdanz (1981b) shows that short-term residents who fish the Nome River share with friends more often than do long-term residents. With regard to the Nome River fishery, he also reveals that both labor and food are shared and that 80 percent of the Nome residents who use that fishery share with someone (whether kin or friend).

> Other models for sharing are also evident. Based on Social Indicators field data for regional villages, it is apparent that associations entirely unrelated to subsistence harvests, traditional loyalties, and the other factors noted above are increasingly prominent as bases for sharing. Numerous instances of sharing among work mates and colleagues, sports team participants, and neighbors are documented (Waring and Associates 1989:336-341).

One anecdotal case example illustrates the pattern described here. A Social Indicators field assistant from the Kotzebue area accompanied the author on excursions to Bering Straits communities. Upon settling into the work routine in Nome, the assistant enumerated classmates from junior high and high school who lived in the Nome area and then contacted many of them. Food-exchange arrangements quickly ensued, and the assistant later departed with substantial gifts of local foods from previous residents of Norton Sound Iñupiaq, Yupik, and Siberian Yupik communities, which would eventually be recognized with gifts from inland Kobuk River areas.

In this case, associations cemented during adolescence in an entirely "non-traditional" context--boarding school--formed the nexus of food-sharing relationships. The persons so linked are friends, and this case is really one example of friendship-based distributions and exchanges that already have been noted. This case is offered because it provides a specific origin for the friendship that later yielded exchange arrangements: school, and the example is introduced because it shows that the exchange nexus of friendship does not imply a "weakening" or demise of an idealized and once-intact systematic set of principles for sharing. Rather, new principles are now salient in addition to the traditional ones. Furthermore, when the term "innovation" is used to

describe shifts in historic patterns, this does not necessarily mean that modern practices are solely a matter of individual preference, or cultural "mavericks." The innovations are ordinarily well patterned. New sharing relationships are patterned along associations that are now salient: professional, civic, employment, and other solidary ties are increasingly important as means for linking persons and hence become common ties for other forms of interaction, including sharing.[21]

V. IDEOLOGY

This brief section discusses religion, worldview and values, and ethnicity. Except for the discussion of religion, the coverage here mainly amplifies and summarizes issues that already have been introduced, with an emphasis on ideology.

V.A. Religion

Thirteen religious denominations are active in the Bering Straits region:

- Assembly of God
- Baha'i Faith
- Bible Baptist Church

---

[21] There is no comprehensive evidence to support these observations, but the main body of ethnological and sociological research in rural Alaska supports these inferences. The shifts described here are classic examples of an increasing division of labor that Durkheim first illustrated (Durkheim 1933). An apt quote from Durkheim puts it well, although pedantically:

> In effect, individuals are here grouped, no longer according to their relations of lineage, but according to the particular nature of the social activity to which they consecrate themselves. Their natural milieu is no longer the natal milieu, but the occupational milieu (Durkheim 1933:182).

This citation is not literally true in the Nome case because, as the text points out, kinship and other traditional social obligations are still salient; but the thrust of Durkheim's argument is relevant.

- Church of the Navarene
- Community United Methodist Church
- Covenant Church
- Latter Day Saints
- Community Baptist Church
- Nome Gospel Home
- Presbyterian Church
- Our Savior Lutheran Church
- Catholic Church
- Seventh Day Adventist

The current configuration of faiths and relative sizes of the memberships all conform closely to the historic progression of missionary activity and proselytizing in the region, in the sense that the earliest churches are also the dominant churches today. However, the Assembly of God and, to a lesser extent, Baptists, Latter Day Saints, and Seventh Day Adventists are relatively late arrivals that have established viable outposts in more than one village or large congregations in one or more communities.

The Presbyterians initiated missionary activity in 1899 in the Seward Peninsula, and the Covenant Church established missions and schools in the eastern Norton Bay area beginning in 1897. The early churches served all denominations, and it was only after the construction of church compounds and preparation of long-term plans that fissioning and "specialization" began. The first Protestant church building in Nome was constructed in 1902, at which time the congregation was about 175. A combined

Methodist-Episcopal church was built at Nome in 1906 and became the nucleus for a Methodist-Episcopal hospital. In 1913, the regional Methodists merged with the Pilgrim Congregational Church; earlier (in 1890), the latter church established the first mission and school at Wales in conjunction with the Bureau of Education. The Catholic church, well established in the Yukon area, exerted its main influences indirectly as converts migrated into Bering Straits villages. Before World War II, the key denominations were Presbyterian, Covenant, Methodist-Episcopal, and Catholic.

Between 1910 and 1920, the denominations fragmented and reorganized, beginning the period of "specialization" and sectarian recruitment noted above. A strictly Eskimo Methodist church was established in 1911 but later merged with the main Methodist-Episcopal church in 1949. It was during this period that the dominant churches attempted to consolidate their operations, and the first competition from other sects increased throughout World War II. Significant changes in the demography of the region, mainly in Nome, was accompanied by shifts in denominational memberships. The Nome Community Baptist Church was established in 1958 and quickly assumed the position of one of Nome's four main churches (in terms of membership). According to key informants, it grew from a congregation of 179 to 358 over this period. Today, the Catholic, Methodist, Covenant, and Baptist churches generally are regarded as the largest in the region.

V.B. Worldview and Values

Research on this and other Minerals Management Service projects has consolidated a growing body of data concerning economic development ideologies in the

Bering Straits region. This information highlights discrepancies among these ideologies and identifies several issues that sustain divergent ideologies. Because institutional cleavage is a characteristic feature of the regional political economy, it is appropriate to focus on these ideologies as a way to reveal worldview and values.

A concrete example appears in the Nome Nugget newspaper (6 June 1980:2, cited in Ellanna 1980), in which an editorial reflects on a visit by petroleum-industry representatives to Nome to air concerns about the Federal environmental assessment and leasing process. This editorial reveals some dominant views on development, chiefly those associated with business interests in Nome:[22]

> Last week, we had the opportunity to hear the Atlantic Richfield presentation made at the Northwest Chamber of Commerce meeting. During that presentation, it was mentioned that the permits, environmental impact statements, lease sale papers etc. would take from eight to fifteen years to complete. All that being necessary BEFORE any oil could be taken out of the Norton Basin. Now we think its great that everyone is concerned about the environment and about how all the animals and fish in the area will get along around all the drilling equipment. Marine mammals and fish are important to us here in Northwest Alaska. The thing that seems incredible is that with our country needing oil so desperately, that it should take so long to break through all of the red tape to get the stuff out of the ground . . . (Ellanna 1980b:76-77).

Based on field investigations during both 1988 and 1989, we believe that this view is common today in business and some institutional circles. Environmental vulnerabilities

---

[22] Ellanna (1980) discusses development attitudes in the context of sociocultural impacts of OCS activity. The John Muir Institute (1984) discusses development attitudes within a context of perceived institutional control. The descriptions in the latter document are expanded and analyzed in Robbins and McNabb (1987).

are recognized, but that recognition does not counterbalance a strong development advocacy. This view is not widely shared outside Nome.

Ideological differences can be seen in specific examples that support our observation of political divisiveness. Kawerak, the regional social services institution, began formulating plans in 1978 to establish a regional Coastal Resource Service Area. Preliminary policy proposals would restrict OCS development and protect subsistence species and practices. The City Council of Nome decided not to participate in the regional program due to objections to those preliminary proposals, and instead established its own Coastal Management Program (see Ellanna 1980b:313-314; Impact Assessment, Inc. 1987:47).[23] Hence, Kawerak, a regional institution sited in Nome, eventually established a regional program operates only outside the city in which it is headquartered. In another case, Nome Eskimo Community (the IRA Council for Nome) worked with Kawerak, a regional entity, to block proposals by Inspiration Mines to develop local mineral deposits. By inviting Trustees of Alaska to Nome to assist in a confrontation that pitted a community and regional organization against community business interests, those institutions further served to open local conflicts to a Statewide audience. Operating permits for Inspiration Mine activity were eventually granted after concessions regarding environmental protection were promised (see Impact Assessment, Inc. 1987:45).

---

[23] By 1982, prodevelopment attitudes in Nome, especially in the business community, had fully crystallized. For instance, the Chamber of Commerce went on public record in support of OCS development in that year by vote of its 250 members. See John Muir Institute (1984:108).

A regional perspective uncovers key differences among communities per se in the Norton Sound area. Analysis of the data collected for another MMS project (see John Muir Institute 1984) illustrates some of these differences associated with resident and institutional attitudes regarding OCS development. Table 21 summarizes attitudes and proposed or actual institutional responses to OCS development. These summaries attempt to capture dominant attitudes, and by no means do they represent consensus or uniform opinions.

In another recent example related to fears regarding impacts of mineral development, subsistence resources and cultural aspirations are linked by residents in their perception of risks of proposed developments. The MMS held a scoping meeting in Nome concerning the proposed dredging of minerals in offshore areas in Norton Sound and, according to the Tundra Times, The Eskimo Walrus Commission's opinion was that:

> A large portion of the Native people who depend on the resources from the area do not grasp the English language and need time to have someone who knows both English and their Native language to tell them exactly what the lease is and what impact it would have on their way of life.
>
> We feel that the area around Bluff, Safety Lagoon, Cape Nome and around Sledge Island should be deleted. The salmon, birds and marine mammals that migrate through this area are also utilized by others, like Kotzebue residents (Tundra Times 1988b:14).[24]

[24] Note that these are the same use areas that were designated "major use areas at risk" in the sociocultural portion of the Norton Basin Synthesis conference. See McNabb and Robbins (1985:116).

Table 21

OCS DEVELOPMENT ATTITUDES, SEVEN NORTON SOUND COMMUNITIES, 1982

Community	Attitudes	Institutional Response
Alakanuk	Residents question oil and gas developments; they fear threats from environmental impacts of all phases of development.	Local institutions fear that energy-development corporations and the Federal Government do not know enough about seismic-testing impacts, storm surges, and movements of oil and ice to proceed with safe development.
Emmonak	Residents register general attitudes that lack specific knowledge of oil and gas developments.	Emmonak Native Corp. is perceived as the local beneficiary of oil and gas developments.
Gambell	Majority of residents oppose oil developments; they fear ecological disruptions and perceive threats to subsistence activity.	Gambell Native Corp. seeks to prohibit onshore developments. The corporation and other institutions desire an islandwide comprehensive management plan and are plaintiffs in a lawsuit challenging the safety of offshore development.
Golovin	Majority of residents register opposition to oil development; they fear biological and social disruption.	Residents and leaders believe Bering Straits Native Corporation and Golovin Village Council should play a major role in controlling effects of oil developments.

(Table 21, continued)

Nome	Majority of residents support oil and gas development for economic gains. Residents willingly accept responsibility for potentially adverse social, political, and economic changes.	Institutional leaders favor oil and gas developments but are apprehensive that services and facilities will be unable to accommodate additional burdens.
Savoonga	Majority of residents oppose oil development; they fear ecological disruption and perceive threats to subsistence activities.	Three local Native institutions are working on an islandwide management plan with Gambell institutions. They do not formally support or oppose developments.
Unalakleet	Majority of residents register opposition to oil developments; they fear ecological disruption, influx of outsiders, and inflation.	Community leaders spearheaded formation of Bering Straits Coastal Resource Service Area (organized under the terms of the Coastal Zone Management Act) for inventory, analysis, and protection of coastal resources.

Source: Robbins and McNabb 1987:13.

Some portions of the Nome population support dredging, but some do not. In the citation, subsistence resources and cultural aspirations ("way of life") emerge as key areas of perceived risk. Development attitudes seem to be situational in the sense that specific circumstances, rather than ironclad doctrine or special interests, govern evaluations of risk and benefit. Note that the Eskimo Walrus Commission does not seek to prohibit dredging altogether, but only to limit access to key areas that are seen to be crucial to resources on which residents depend (see Waring and Associates 1989:342-352.)

V.C. Ethnicity and Tribalism

The previous discussion examined ethnicity in the context of development ideologies and suggested that the most prominent issues that deserve attention are largely situational. If so, firm generalizations must take situational factors into account. This is a difficult challenge because most available data do not adequately control for such factors. Based on anecdotal recollections of the senior author from 1975 through 1988, it appears that tolerance of interethnic differences is now greater in the Bering Straits region on the part of major ethnic subpopulations. This observation is supported by other data; for instance, perceived economic conflicts between Natives and non-Natives are a minority of all perceived conflicts based on KI data analysis for the Bering Straits region.

The Bering Straits region has never assumed a high profile in the Native rights and sovereignty movement, but recent events that pit a tribal authority against a municipal government provide the main evidence of regional tribalism as well as additional support for our assertion of institutional cleavage. The Nome Eskimo

Community alleges that it has never paid Nome property taxes but is being assessed overdue taxes for the 1981-1985 period. According to a brief filed before the Alaska Supreme Court on behalf of the Nome Eskimo Community, section 16 of the Indian Reorganization Act exempts tribal authorities from property taxes. In turn, the City of Nome claims that the IRA is a voluntary organization that does not qualify for tribal status (see Tundra Times 1988c:1, 6).

However the case is decided, tribalism now has become a pivotal issue, at least in Nome. It is impossible to speculate on the ramifications of the case at the regional level; however, it is noteworthy that the pending hearing of supplemental briefs for the Stevens Village case[25] is being delayed while the Court reviews the Nome case. As such, the Nome case has now attracted Statewide attention and advocacy efforts by Native-rights activists who had been mobilized primarily for the Stevens Village case. The City of Nome will file its arguments by July 30, 1988, and a decision should be rendered during 1991.

It is unclear whether or not offshore gold mining will seriously affect Nome-area economic circumstances. In the first mining lottery in 12 years, 19 companies received offshore leases during 1989. West Gold Exploration Company has dredged up 40,000 ounces of gold in the shallow offshore waters since 1985, and they seek to continue their

---

[25] Stevens Village claims sovereign immunity in a suit brought by a commercial consulting firm. The Alaska Supreme Court found in a 3-2 decision that Stevens Village does not possess sovereign immunity but permitted the filing of supplemental briefs. In essence, the attorneys for Stevens Village argue that the State Supreme Court cannot categorically deny sovereignty because that is the prerogative of Congress, which to date has not clarified the status of sovereign tribal authority in Alaska. The Stevens Village case, though restricted only to a single issue of litigation, could prove to be a watershed precedent in Alaska.

exploration and development. The Bering Straits Regional Corporation also secured an offshore tract during bidding in 1989 (see Alaska Daily News 1989:G1). The ramifications of this event will be evident only after the close of this study.

References Cited

ACES (Alaska Community Engineering Services)
1987a Kaltag Community Profile. Fison, S. and S. McNabb. Anchorage: Alaska Department of Community and Regional Affairs.

1987b Nuláto Community Profile. Fison, S. and S. McNabb. Anchorage: Alaska Department of Community and Regional Affairs.

Alaska Area Native Health Service
1987 Alaska Area Data Book. Anchorage: Alaska Area Native Health Service, Public Health Service.

Anchorage Daily News
1989 "Mining Leases Expected to Help Nome Economy." August 10, 1989. Page G1. Anchorage, Alaska.

Alaska Department of Community and Regional Affairs
1986ff Population Estimates. Juneau: Alaska Department of Community and Regional Affairs.

Alaska Department of Health and Social Services, Division of Public Assistance
1984ff Unpublished data. Juneau.

Alaska Department of Labor
1980ff Statistical Quarterly. Juneau: Alaska Department of Labor.

1981ff Population Overview. Juneau: Alaska Department of Labor.

1987a Nonresidents Working in Alaska in 1985. Juneau: Alaska Department of Labor, Administrative Services Division, Research and Analysis Section.

1987b Alaska Economic Trends 7(9). Juneau: Alaska Department of Labor, Administrative Services Division, Research and Analysis Section.

Alaska Federation of Natives
1991 Alaska Federation of Natives Newsletter 9(2). Anchorage.

Alaska Heritage Research Group
1986 Bering Straits Coastal Resource Service Area Cultural Resources Report. Fairbanks: Alaska Heritage Research Group.

Allen, H.T.
1887 Report of an Expedition to the Copper, Tanana, and Koyukuk Rivers, in the Territory of Alaska, in the Year 1885. Washington, D.C.: Government Printing Office.

Andrews, E.
1977 Report on the Cultural Resources of the Doyon Region, Central Alaska. Cooperative Park Studies Unit Occasional Paper No. 5. Fairbanks: University of Alaska.

Arctic Sounder
1988a Vol. II, No. XXIV, March 2, 1988. Kotzebue.

1988b Vol. II, No. XXV, March 16, 1988. Kotzebue.

Bogojavlensky, S.
1969 Imaangmiut Eskimo Careers: Skinboats in Bering Strait. Unpublished Ph.D. thesis. Cambridge, MA.: Harvard University.

BSSD
1987 Strait Talk 7(1). Unalakleet: Bering Strait School District.

1988 Strait Talk 7(3). Unalakleet: Bering Strait School District.

Burch, E.S.
1978 Traditional Eskimo Societies in Northwest Alaska. In Alaska Native Culture and History. W. Workman and J. Kotani, eds. Senri Ethnological Series No. 4. Osaka: National Museum of Ethnology.

Dall, W.H.
1870 Alaska and Its Resources. Boston: Lee and Shepard.

Durkheim, E.
1933 The Division of Labor in Society. 3rd Printing. G. Simpson (trans.). New York: Macmillan.

Ellanna, L.
1980a Bering-Norton Petroleum Development Scenarios Sociocultural Systems Analysis. Technical Report No. 54, Vol. 1. Anchorage: USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

Ellanna, L. (continued)
1980b Bering-Norton Petroleum Development Scenarios Sociocultural Systems Analysis. Technical Report No. 54, Vol. 2. Anchorage: USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

1983a Bering Strait Insular Eskimo: A Diachronic Study of Economy and Population Structure. Technical Paper No. 77. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

1983b Nome: Resource Uses in a Middle-Size Regional Center in Northwestern Alaska. In R.J. Wolfe and L. Ellanna. Resource Use and Socioeconomic Systems: Case Studies of Fishing and Hunting in Alaskan Communities. Technical Paper No. 61. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

Ellanna, L. and G. Sherrod
1984 The Role of Kinship Linkages in Subsistence Production: Some Implications for Community Organization. Technical Paper No. 100. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

Fienup-Riordan, A.
1983 Consequences of Harvest Disruptions on the Socioeconomic and Sociocultural Systems of the Yukon Delta. Anchorage: Alaska Council on Science and Technology.

Hughes, C.
1960 An Eskimo Village in the Modern World. Ithaca: Cornell University Press.

1975 Eskimo Boyhood: An Autobiography in Psychosocial Perspective. Lexington: University Press of Kentucky.

1984 Saint Lawrence Island Eskimo. In Handbook of North American Indians. Vol. 5 (Arctic). Washington, D.C.: Smithsonian Institution.

Impact Assessment, Inc.
1987 Institutional Change in Nome, 1980-1986. Technical Report No. 127. Anchorage: USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

1988 Village Economics in Rural Alaska. Technical Report No. 132. Anchorage: USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

John Muir Institute
1984 A Description of the Socioeconomics of Norton Sound. Technical Report No. 99. Anchorage: USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

Jorgensen, J.
1990 Oil Age Eskimos. Los Angeles: University of California Press.

Jorgensen, J. and J. Maxwell
1984 Effects of Renewable Resource Disruptions on Socioeconomic and Sociocultural Systems: Norton Sound. Technical Report No. 90. Anchorage: USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

Jorgensen, J., R. McCleary and S. McNabb
1985 Social Indicators in Native Village Alaska. Human Organization 44(1):2-17.

Little, R. and L. Robbins
1984 Effects of Renewable Resource Harvest Disruptions on Socioeconomic and Sociocultural Systems: St. Lawrence Island. Technical Report No. 89. Anchorage: USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

Magdanz, J.
1981a Northern Bering Sea Subsistence Report. Technical Paper No. 4. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

1981b Nome River Fishery II. Technical Paper No. 5. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

1983 Norton Sound-Bering Strait Subsistence Crab Fishery Update. Technical Paper No. 82. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

McNabb, S. and L. Robbins
1985 Socioeconomic and Resource Use Considerations. In J.C. Truett. The Norton Basin Environment and Possible Consequences of Planned Offshore Oil and Gas Development. Anchorage: NOAA/Ocean Assessments Division and MMS.

Nelson, E.W.
1899 The Eskimo About Bering Strait. 18th Annual Report of the Bureau of American Ethnology for the Years 1896-1897. Washington, D.C.: Government Printing Office.

Norton Sound Health Corporation
1986 Better Health for the Bering Straits People: A Comprehensive Plan, 1986-1990. Nome: Norton Sound Health Corporation.

Ray, D.J.
1964 Nineteenth Century Settlement and Subsistence Patterns in the Bering Strait. Arctic Anthropology 2(2):61-94.

1967 Land Tenure and Polity of the Bering Strait Eskimos. Journal of the West 6:371-394.

1975 The Eskimos of Bering Strait, 1650-1898. Seattle: University of Washington Press.

1984 Bering Strait Eskimo. In Handbook of North American Indians. Vol. 5 (Arctic). Washington, D.C.: Smithsonian Institution.

Robbins, L. and S. McNabb
1987 Oil Developments and Community Responses in Norton Sound, Alaska. Human Organization 46(1):10-17.

Sheppard, W.
1983 Continuity and Change in Norton Sound. Occasional Paper 37. Anthropology and Historic Preservation Cooperative Park Studies Unit. Fairbanks: University of Alaska and National Park Service.

Sherrod, G.
1982 Eskimo Walrus Commission's 1981 Research Report: The Harvest and Use of Marine Mammals in Fifteen Eskimo Communities. Technical Paper No. 56. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

Sobelman, S.S.
1985 The Economics of Wild Resource Use in Shishmaref, Alaska. Technical Paper No. 112. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

Thomas, D.
1980 Nome Salmon Subsistence Research Report. Technical Paper No. 11. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

1981 Norton Sound-Bering Strait Subsistence King Crab Fishery. Technical Paper No. 12. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

Tundra Times
1988a Vol. XXVI, March 21, 1988. Anchorage.

1988b Vol. XXVI, May 2, 1988. Anchorage.

1988c Vol. XXVI, July 11, 1988. Anchorage.

U.S. Census
1880ff Decennial Census. Washington, D.C.: U.S. Department of Commerce

VanStone, J.
1984 Exploration and Contact History of Western Alaska. In Handbook of North American Indians. Vol. 5 (Arctic). Washington, D.C.: Smithsonian Institution.

VanStone, J. and I. Goddard
1981 Territorial Groups of West-Central Alaska Before 1898. In Handbook of North American Indians. Vol. 6 (Subarctic). Washington, D.C.: Smithsonian Institution.

Vital Statistics
1977ff Alaska Vital Statistics Annual Report. Juneau: Department of Health and Social Services, Division of Public Health, Vital Statistics Research.

Waring and Associates
1988 Demographics and Employment, Alaska Communities Vol. 2. Technical Report No. 137. Anchorage: USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

1989 Nome Sociocultural Monitoring Study. Technical Report No. 131. Anchorage: USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

Whymper, F.
1869 Travel and Adventure in the Territory of Alaska. New York: Harper and Brothers.

Wolfe, R.J. and L. Ellanna
1983 Resource Use and Socioeconomic Systems: Case Studies of Fishing and Hunting in Alaskan Communities. Technical Paper No. 61. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

Zagoskin, L.A.
1967 Lieutenant Zagoskin's Travels in Russian America, 1842-1844. Henry Michael, ed. Anthropology of the North: Translations from Russian Sources. Toronto: University of Toronto Press.

The Bristol Bay Region

Joanna Endter-Wada

Steven L. McNabb

Joanne Mulcahy

THE BRISTOL BAY REGION

Table of Contents

Table of Contents (continued)

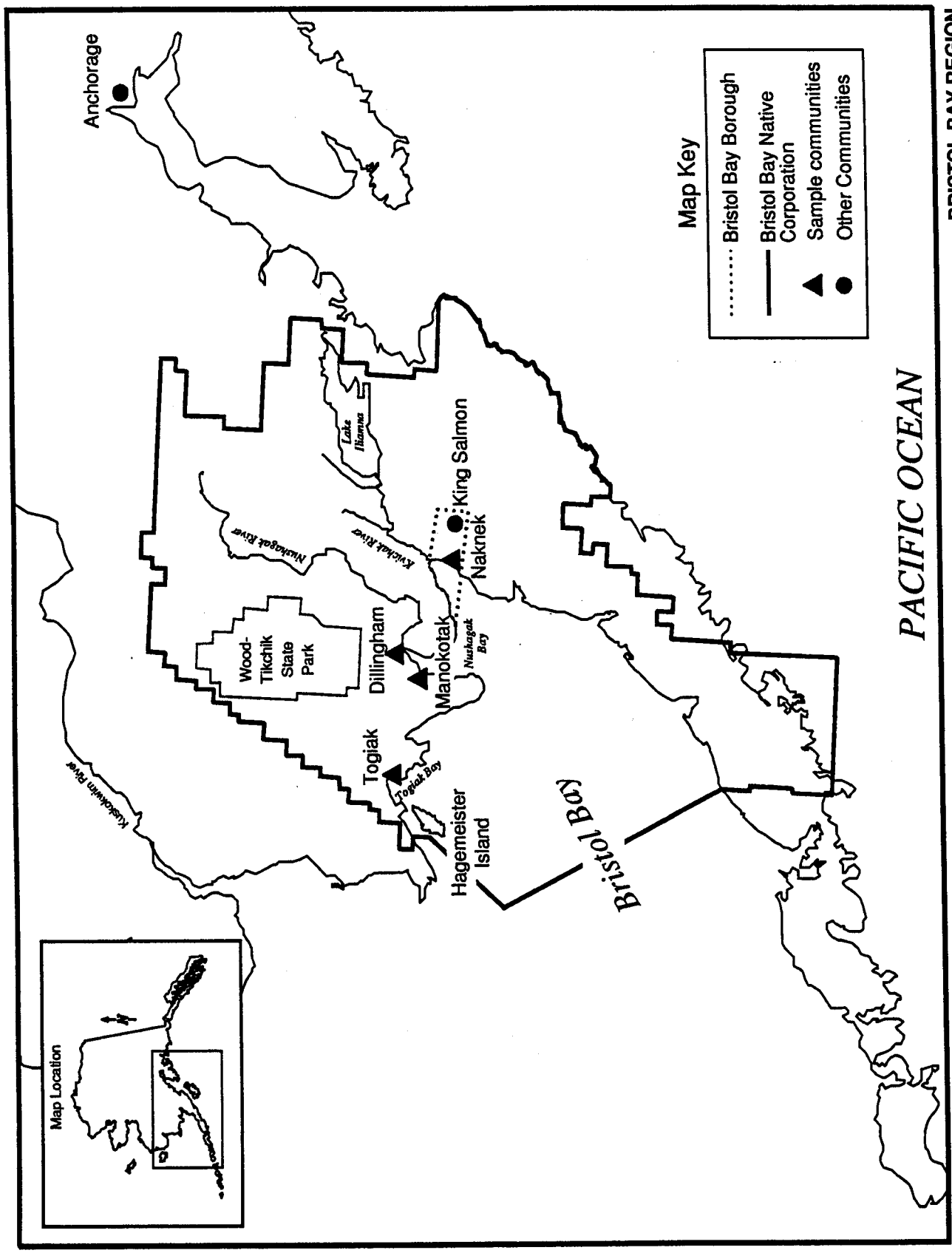
THE BRISTOL BAY REGION

List of Tables

THE BRISTOL BAY REGION

List of Figures

List of Maps


BRISTOL BAY REGION
Anchorage
Map Key
Bristol Bay Borough
Bristol Bay Native Corporation
Sample communities
Other Communities
PACIFIC OCEAN
Bristol Bay
Lake Iliamna
King Salmon
Naknek
Nushagak River
Kvichak River
Wood-Tikchik State Park
Dillingham
Manokotak
Nushagak Bay
Togiak
Togiak Bay
Hagemeister Island
Kuskokwim River
Map Location
SCHEDULE B COMMUNITIES

THE BRISTOL BAY REGION

PREFACE

This Key Informant Summary was first drafted during 1988 subsequent to the first Schedule B field season. It was edited and revised during 1989, 1990, and 1991 so as to incorporate data and discussions of changes over this interval. Field research was conducted by senior researchers in 1987 and 1989 in Schedule A sites and in 1988 and 1990 in Schedule B sites.

The seven study regions of the Social Indicators study were divided into two groups, based on concerns related to research design and efficiency of project administration. These groups are termed schedules and, as the term suggests, the groups represent not only sample portions but sampling agendas. Schedule B, of which this region is one part, also includes the Bering Straits and Kodiak regions. Subsequent to the Exxon Valdez oil spill in 1989, the scope of the Social Indicators study was expanded and a new sample of Cook Inlet, Prince William Sound, and Kodiak area villages was developed. This group then comprised Schedule C. These terms and their meanings in the overall research design are introduced more fully in the KI Summary Introduction and are explained fully in another project document entitled Social Indicators II: Research Methodology: Design, Sampling, Reliability, and Validity.

All of the information reported here that is based on discussions with institutional officials and residents was collected during two field excursions, but secondary data from other documents and archives may correspond to other years. Since there is always a lag between data collection and eventual publication, all technical documents are dated at

the time they are produced. Aside from some minor exceptions, the collection of new information ceased at the end of 1990, so this document can be considered accurate through 1990.

I. HISTORICAL CONTEXT

The key events that have induced the most fundamental social and cultural changes in Bristol Bay are similar to those described for the Aleutian-Pribilof and Kodiak regions, largely because of two important factors: (1) an early Russian legacy that introduced institutional changes that persist even today in their effects and (2) commercial-fisheries developments that have dominated the private sectors of the regional economies for nearly a century. These similarities between regions should not be overdrawn, however, because localized historical changes have themselves exercised profound influences on regional institutions and populations. Thus, while the key periods discussed in this chapter are similar to those analyzed for the Aleutian-Pribilof and Kodiak regions, we will decline an overly uniform interregional sequence of historical periods in order to underscore the localized and occasionally unique issues that warrant attention in Bristol Bay.

The periods discussed here are:

Early Contact and Commercialization (ca. 1818-1887)

Period of Disruption and Transition (1887-1970)

Period of Institutional and Economic Expansion (1970-present)

Historical reviews of critical events in Bristol Bay (and in fact throughout historic Russian America) commonly distinguish between a "Russian period" and a post-1867

"American period." This review departs from that convention despite the magnitude of institutional and social change consequent to the Treaty of Cession. We argue that key economic trends of enduring impact were set in place during the Russian period, notably the commoditization of labor for market exchange and the harvest of renewable resources for sale. These trends, which linked the Russian and American periods, accelerated across that boundary and exerted profound influences on social and economic organization. They are best seen as a single unifying theme instead of being arbitrarily broken by a conventional distinction.

A better transition is established at about 1887. It was at this time that (1) Moravian and other missions first challenged Russian Orthodoxy in the Bristol Bay region; (2) the United States Congress passed major Indian legislation (including the Organic Act of 1884 and the Dawes Act of 1887), which directly or indirectly affected the region by establishing a Federal policy framework and philosophy toward Native people that would later have important impacts; and (3) commercial salmon fishing first came to dominate economic activity in the Bristol Bay region.

The period between 1887 to 1970 is well characterized as a period of disruption and transition. Epidemics, notably of influenza during the first two decades of the 20th century, decimated local populations. This led to population migrations, the reorganization of remnant groups, and the establishment of orphanages at central locations that would eventually assume importance as regional population and service centers. The commercial salmon industry grew but then declined precipitously, throwing the economy of the region into temporary disarray; and the collapse of the commercial

trapping industry, established during Russian occupancy, subsequent to 1929, deprived residents of economic opportunities that in earlier years rivaled the salmon fisheries in terms of magnitude. Yet Native residents were effectively cut off from the most lucrative benefits of the fisheries during this period--their involvement was limited to working in the canneries.

The post-1970 period has been shaped by the passage of the Alaska Native Claims Settlement Act (ANCSA) and the Alaska National Interest Lands Conservation Act (ANILCA), the recovery of salmon stocks in the mid- to late-1970's, and the penetration of Native residents into the fishing industry subsequent to the 1975 establishment of Limited Entry. For these reasons, we describe this period as one of institutional and economic expansion. Any general designation of main historical trends omits detail and obscures exceptions. For this post-1970 period, it is important to indicate that economic expansion is far from even, and the penetration of Natives into the fishing industry is unstable because Natives transfer their Limited Entry permits to nonresidents at a greater rate than do non-Natives (see Langdon 1980). Nevertheless, the periods and terms described here are generally appropriate for a broad, thematic review of historical change in the Bristol Bay region.

I.A. Early Contact and Commercialization

According to VanStone (1984), the prehistoric archaeology of Southwestern Alaska has not been thoroughly explored. However, through a long-term project at the University of Oregon, archaeologists have been able to map out traditional periods of habitation, beginning with the Paleo-Arctic tradition (8000 B.C. to 5000 B.C.) (see

Dumond 1974, 1977; Dumond, Conton, and Shields 1975; Ackerman 1964). Based on work in the Naknek drainage, Dumond suggests that by 2500 B.C. the interior of the Alaska Peninsula was occupied by Indians, who were in turn replaced by Eskimos from the north about 1900 B.C. These bearers of the Arctic Small Tool tradition moved into coastal areas about 1000 B.C., from which time continual habitation can be shown (VanStone 1984:227). The final cultural pattern--which persisted until contact with Europeans--was the Thule tradition (1100 to the 19th century), which was marked by such features as polished slate-making, stone lamps, and kayak building (Dumond 1977:120).

Europeans arriving in Southwest Alaska in the 18th century encountered a number of linguistic and ethnic groups enjoying a fairly sedentary life that exploited both marine and inland resources. Some disagreement exists among ethnologists regarding the division of Eskimo groups at the time of contact because of conflicting observations of early ethnographers and a more recent influx of other groups (VanStone 1967:xxi). However, there is consensus regarding the presence of several distinct groups including Aleuts along the Alaska Peninsula, Dena'ina Athapascan Indians in the east and northeast near Lake Iliamna, and three Central Yupik[1]-speaking groups. The numerically dominant Yupik Eskimos can be further subdivided according to variations in resource exploitation and resulting settlement patterns. These groups are not regarded as formal political bodies or tribes but adaptive group formations (VanStone

[1] We will use the term "Yupik" without diacritics to refer to all Yupik peoples and dialects, although we recognize that some conventions use diacritics, as in "Central Yup'ik." The standard approach we use is consistent with the orthography employed by the journal Etudes/Inuit/Studies.

1967:xxi). The Aglegmiut (population approximately 1,900 at time of contact) occupied the Nushagak Bay area and much of the Alaska Peninsula and relied heavily on marine and lake habitats. The Kiatagmiut were spread throughout the Nushagak River area, including the Wood River Lakes and Tikchik Lakes (population of 400 at contact) (VanStone 1967:xxi). In the northwest portion of the region were the Togiagamiut, who numbered about 1,000 (Oswalt 1967:8).

A picture of precontact life is difficult to accurately paint, given the lack of documentation prior to the time that Natives were incorporated into the fur trade. However, VanStone's ethnohistorical reconstruction affords an image of life along the Nushagak River that can be extrapolated for the Togiagamiut (VanStone 1967).

According to VanStone, the subsistence year ended with depletion of supplies in early spring. Riverine families moved from winter sites to camps along the mountain streams. The main spring activity was trapping, although some caribou hunting continued. By mid-June, families returned to the riverine environments or to the coast to fish for salmon, which were taken with both gillnets and basket-shaped traps. By early fall, the men traveled to hunt beaver and caribou, returning to the villages in October. With the onset of winter, trapping, hunting, and ice fishing continued closer to the settlements, making use of both fixed and spring-pole snares. Winter also was the time of the greatest festivities. Dances and dance festivals occurred in the "kashgee" (*kashim*), or ceremonial house, and had both religious and secular significance (VanStone 1967:122-130).

This description of 19th century life affords a view, albeit speculative, of the Nushagak-area Eskimos at the time that the Russians--already entrenched on Kodiak and the Aleutians--began to venture north. Similar descriptions exist for the Togiak area (Kowta 1963) and for the Dena'ina (VanStone and Townsend 1970). One of the noteworthy differences in the annual cycle among coastal peoples was the importance of sea mammal hunting in the spring. However, coastal groups in the Bristol Bay Region concentrated on fishing more than sea mammal hunting and were more land-oriented than many coastal Eskimos to the north (VanStone 1984:233).

The establishment of Alexandrovskiy Redoubt at the mouth of the Nushagak River in 1818 usually is marked as the point of European contact. Captain James Cook had, however, already ventured towards Bristol Bay in 1778 and postulated the existence of a river system near its head (VanStone 1967:4). In 1818, after the Russian-American Company had gained firm control in the Aleutians, Kodiak, and Sitka, then manager Alexander Baranov dispatched an expedition to explore the north of Bristol Bay. Headed by Petr Korsakovski, the group left a number of members at the mouth of the Nushagak to build the redoubt while they pushed as far north as Goodnews Bay.

Subsequent expeditions in 1821 and 1822 were launched under the direction of Vasili Khromchenko, who conducted surveys of Hagemeister Island and predicted a productive future for the fur trade in the region. Acting on this momentum, the Russian-American Company sent a party in 1829 to make geological and ethnological observations and another in 1830 that reached the Kuskokwim River. Finally, in 1832, under the direction of Lukin and Komakov, a group of Eskimos, Creoles, and an

interpreter established the first trading station on the Kuskokwim (VanStone 1967:10-11).

The trade route between Alexandrovskiy Redoubt and the new Kuskokwim post was heavily traveled in the following decades, with supplies going upriver and furs coming in the opposite direction. Little is known of the actual relations between the Natives and Russian traders during this period; but a more lasting legacy was left by the contact between Natives and Russian missionaries, who closely followed the arrival of Russian merchants. These two forces are regarded as having had the strongest influences on the Bristol Bay region in the early 19th century. VanStone has noted that while the "Company's influences were the most immediate, the Orthodox Church has remained significant through the area. . ." (1984:237). The Church began slowly, with a few converts baptized by a Creole trader, Fedor Kolmakov, in charge of the post. In 1829 and 1832, Father Veniaminov visited the redoubt and planted the seeds for the eventual establishment of a mission with a priest in 1842.

As in other areas of Alaska, the attitudes of Veniaminov and the Orthodox Church revealed a flexibility towards Native religious practices, and special pains were taken not to interfere with local customs or subsistence activities (VanStone 1967:31-33). This contributed to the success of the Orthodox Church in the region, which by 1852 had 1,448 parishioners and had become firmly integrated into Native life.

Two other forces were far more disruptive to the Native way of life in the first half of the 19th century: the series of disease epidemics introduced by the Russians and the impact of the fur trade on the subsistence cycle. The epidemics introduced by the

Russians decimated huge segments of the Native population, beginning with the smallpox epidemic in the 1830's. VanStone surmises that although some years stood out as particularly devastating, "the specter of ill health and death was continually present among the Eskimo populations of all Southwestern Alaska" (1967:100). The second influence, the fur trade, brought about a gradual process of adaptation of the subsistence cycle and the commoditization of labor. To accommodate the Russian demand for otter and wolverine but especially beaver pelts, Natives pursued less game for food and trapped fur for trading purposes. In return, they received not only axes and other tools, glass beads, and flour and other foodstuffs but also alcohol and tobacco.

Immediately following the sale of Alaska to the United States in 1867, little actually changed in the Bristol Bay region. Holdings from the Russian-American Company were acquired by the Alaska Commercial Company, which continued to operate the same trading stations. During the decades that followed the sale, Moravian missionaries made temporary inroads into the Native communities. They established a mission near Nushagak in 1887, but its move to Bethel 20 years later affirmed the dominance of Russian Orthodoxy in Bristol Bay.

Christianity and the commercial fur trade were the dominant forces of change during the Russian period and into the decades following the Treaty of Cession. However, as VanStone notes, a far greater factor in the process of acculturation and change was the development of the salmon fishery during the 1880's.

I.B. Period of Disruption and Transition

To some extent, the periods described here are artifacts of available information; and sound but unsupported inferences about these periods show that the boundaries are quite blurred. For example, VanStone (1984:229) notes that involvement in the fur trade brought about "immediate, radical changes" in subsistence activities during the time of Russian hegemony, yet a few pages later adds that: "This process was a slow one and the Eskimos did not become totally dependent on such trade until well into the American period (VanStone 1984:237)."

We interpret the secondary and ethnohistorical records to suggest that a general sweep of commercialization and economic change was set in motion quite early, probably soon after the establishment of the Aleksandrovskiy Redoubt at the mouth of the Nushagak River in 1818. Native involvement in the European fur trade led to increased trapping of beaver, greater reliance on imported goods, and growth of coastal settlements on Nushagak Bay at the expense of upriver villages (VanStone 1984:235; 1967:115-116). But the full penetration of these changes throughout the region was delayed and occurred in stages as other markets for renewable resources, particularly salmon, were established. Furthermore, VanStone's own records indicate that few accounts of life during the first period exist, and most of the available early documentation pertains to the 1880-1910 interval (see VanStone 1984:229). So although the first period might be characterized as one of substantial economic upheaval, the main documentation for economic transition chronicles the period from 1887 on, which is described in this subsection.

To summarize, two important events of the first period were (1) the establishment of Alexandrovskiy Redoubt at the mouth of the Nushagak River in 1818 and (2) the construction of a Russian Orthodox church there in 1841 (VanStone 1984:238). The Russian-Native interaction at such sites was substantial, and the Redoubts served as a nexus for the flow of trade goods to villages in the hinterlands. In addition, missionaries based at the sites rapidly penetrated adjacent areas. VanStone notes that: "The spheres of influence of these isolated posts represented zones of intense contact between the Russians and Eskimos (1984:238)." The intensity of Western contact did not abate after the Treaty of Cession (recall that VanStone claimed that complete market dependency was not achieved until well into the American period). Hence, a strong and probably accelerating commercialization of the economy and a growing dependency of Natives on regional service, administrative, and trade centers represents the backdrop for the post-1887 period.

The first Moravian mission was established near Nushagak in 1887. Though the Moravians served and proselytized in the area for only 20 years, by the close of their brief tenure other sects--primarily evangelical Protestant denominations--had entered the region (see VanStone 1984:238). Their activities were based at the existing trade centers, which, by this time, had already achieved political and economic dominance in the region.

At about the same time, United States' policy had clearly shifted toward an assimilationist philosophy. This was exemplified by the Dawes Act of 1887, which

followed the Organic Act by 3 years.[2] Although the Dawes Act did not apply to Alaska (indeed, farming prospects were bleak), reindeer husbandry was sponsored after 1890 in several portions of Alaska, including Bristol Bay. The husbandry experiment in Bristol Bay was a huge failure. However, remnants of the Togiak herd are now in private ownership on Hagemeister Island southwest of Togiak Bay (see Wolfe, Gross et al. 1984:176). Despite the absence of enduring impacts of such programs, the first stage of this period is notable for establishment of several important pieces of Indian legislation that clearly exemplify the assimilationist intent of Congress and the Executive branch near the turn of the century. Most importantly, the Organic Act first specified the Federal responsibility for Native services, a precedent that would resurface continually in social services, health, and education policies over the next century.

VanStone clearly documents a bridge between the Russian and American periods and recognizes the crucial significance of commercial fisheries development over a long timespan. He explains:

> With the sale of Alaska to the United States, this overall pattern [fur trading] did not change a great deal . . . . In fact, from an economic standpoint, it is probable that not until the advent of commercial salmon fishing in Bristol Bay in the 1880's did the inhabitants of any part of southwestern Alaska begin to experience contact situations radically different from those they had been accustomed to during the Russian period . . . . Although Christianity and the fur trade emerge as factors of major acculturative importance in southwestern Alaska during the Russian period, the commercial salmon-fishing industry that began to develop in Bristol Bay during

[2] The General Allotment Act (214 U.S. Stat. 338), or Dawes Severalty Act, allotted reservation lands to individual Indians in an attempt to turn them from hunters and gatherers into farmers, make them property owners, and eventually assimilate them. The primary purpose behind the allotment program was to reduce Indians' use of reservation land, the "surplus" of which was then sold to White settlers.

> the 1880's was eventually to have far greater significance (VanStone 1984:238).

The effects of the salmon fishery were immediate and sweeping. In 1884, the Arctic Packing Company established the first Bristol Bay cannery at Kanulik, Nushagak Bay (directly across the bay from modern Dillingham). The following year another cannery was built on the west side of Nushagak Bay near the site of Dillingham, and in 1886 a second cannery was built at the site of modern Dillingham. Other canneries soon followed, and 10 canneries operated in Nushagak Bay between 1908 and 1910 (City of Dillingham 1985:16-17). During the earliest years of the fishery, few Native residents obtained jobs at the canneries; instead, Euro-Americans worked the fleets, and an imported Asian labor force retained most of the cannery jobs. But limited fishing opportunities and employment in this and allied sectors attracted many Natives to the Nushagak Bay area on at least a seasonal basis. The rapid growth of services and trade in general made the Nushagak Bay communities focal points for an expanding economy. Other historical material illustrates that fisheries opportunities would exert a profound influence on demographic, economic, and social patterns from this time forward wherever and whenever they were introduced in Bristol Bay.[3]

---

[3] The significance of renewable resource markets is not restricted to this period, of course. Earlier discussions illustrated how the fur trade exerted similar social, economic, and demographic effects under Russian domination. For example, consider that the Aglurmiut, who resided in the Kuskokwim River delta in the 1700's, had been displaced by neighboring Yupik groups and by 1829 had resettled in the Nushagak area--where, under Russian protection, they served the Russian American Company (see Khlebnikov 1979:54-62). Other noneconomic factors were also spurring massive relocations during the earlier period, such as the epidemics of 1838-39 (smallpox), 1852-53 (influenza), and 1861 (influenza)(Fienup-Riordan 1984). However, as the incidence and virulence of such epidemics slowly diminished in the 20th century, the dominance of commerce as a motive force for social change increased. The Bristol Bay commercial salmon fishery is undoubtedly one classic example of this dominance; Prudhoe Bay oil extraction would later become another classic example.

The 1918-1919 influenza epidemic devastated numerous Bristol Bay settlements and encampments and set the stage for the intra- and interregional relocations that centralized much of the population. By 1920, the population of the entire bay did not exceed 500 persons. For comparison, consider that the Togiak area population alone may have exceeded 1,000 in 1880 (see City of Dillingham 1985:17; Wolfe, Gross et al. 1984:94). The population at Kanakanak (part of present-day Dillingham) was about 250 before the epidemic, but most residents did not survive. In 1918, the Kanakanak school facility was enlarged by the Bureau of Education and remodeled as a hospital. Soon after, an orphanage was established there. Yet, by 1920, the census recorded a population of only 36 persons at Kanakanak. The Wood River Yupik populations were nearly exterminated by the epidemic. The populations of the Nushagak area slowly grew (but did not completely recover) over the next decade as emigrants from Togiak and the Kuskokwim River villages relocated to the southeast of their homelands.

The number of salmon canneries in Bristol Bay peaked at 25 in 1920, followed by a period of consolidation. A shortage of labor during World War II resulted in increased opportunities for local residents, particularly Natives, to participate in Bristol Bay's commercial salmon fishery. Overfishing led to restrictions on commercial activities in the 1930's, and the number of processors declined to only 6 by 1939 (VanStone 1967:63-72).

Several developments led to the emergence of Dillingham as the regional service center for Bristol Bay. Three early schools were founded there: one at Kanakanak Cannery in 1904, one at Choggiung in 1909, and a territorial school at Dillingham in

1920-1921.[4] The Alaska Native Health Service Hospital at Kanakanak has served the entire region since 1918, and the orphanage was established there following the 1919 influenza. Dillingham became a transportation hub once air travel began in the region. It also became the location of government offices and later the Alaska Native corporations (Van Stone 1967:63-72).

The population of Dillingham reached 577 in 1950 and then declined to 424 in 1960 as canneries were established elsewhere.[5] The first 3 years of the 1960's witnessed rapid institutional growth in Dillingham, which then assumed the undisputed role of services and administrative hub for the Bristol Bay region. By 1962, a new high school and boat harbor had been built in Dillingham; and in 1963 the city incorporated, annexing Kanakanak and Wood River village (see City of Dillingham 1985:18-19). Social, educational, and health services expanded rapidly during the 1960's as a consequence of massive Federal Government programs and transfers. By 1970, the population had increased to 914. Looking elsewhere in the region, it is significant that the Bristol Bay Borough (Naknek, South Naknek, and King Salmon) incorporated in 1962, which underscores the significance of institutional expansion in the early 1960's.

Yet this era of rapid fisheries expansion and development did not create uniform opportunities for all persons. Although virtually all able-bodied males in Nushagak-area

---

[4]Kanakanak and Choggiung were early Native fishing and cannery sites that are now part of the incorporated city of Dillingham.

[5] For instance, a cannery was established at Togiak in 1954, and the Togiak population increased from 108 in 1950 to 220 in 1960. Togiak in turn became a focal point for immigration from surrounding areas, such as the Kuskokwim River Delta. The decentralization of fisheries opportunities slowed the rate of immigration to the Dillingham area *per se* (see Wolfe, Gross et al. 1984:94-95 and VanStone 1967).

villages participated in some aspect of fisheries wage labor or self-employment by 1960 (VanStone 1984:240), an imported labor pool held the majority of cannery jobs and for-hire fishing vessel positions administered by the canneries (see Impact Assessment, Inc. 1984:308; VanStone 1984). After 1951, motor-driven vessels were permitted to fish Bristol Bay (sailing skiffs had been used previously), which allowed higher levels of local participation, but this measure alone did not curtail the domination of local fisheries by outside interests. Profound disenchantment with and vocal opposition to these and other resource and political inequities merged with the broader struggle for local control and land settlement in the late 1960's.

I.C. Period of Institutional and Economic Expansion

Bristol Bay has experienced tremendous change in the past two decades. The major sources of this change have been the passage of ANCSA in 1971 and ANILCA in 1980, the institution of Limited Entry (enacted in 1973 and administered from 1975 on),[6] the Small Rural High Schools Act of 1975 (subsequent to the Molly Hootch decision in 1972), and oil and gas developments in the State.

The effects of changes brought about by the legislation passed in the early 1970's were immediate and far-reaching. First of all, implementation of ANCSA changed the institutional structure within Bristol Bay. ANCSA created village corporations in most

[6] Other important legislation in the 1970's--such as the Indian Child Welfare Act, the Indian Self-Determination and Education Assistance Act, and the Indian Health Care Improvement Act--exemplify important policy decisions at the federal level that added substantial impetus and support for protection or restoration of Native rights. While these acts are not linked directly to ANCSA and Limited Entry, they do illustrate a general policy climate that is pertinent to the Alaska case.

communities[7] as well as a regional for-profit (Bristol Bay Native Corporation, or BBNC) and a regional not-for-profit (Bristol Bay Native Association, or BBNA) corporation. ANCSA and ANILCA also led to increased Federal and State involvement in regional land and resource management.

Secondly, through implementation of ANCSA, ANILCA, and Limited Entry, private-property and public rights to lands and natural resources formally held or used in common by Native people are being established, and additional government control over land and resources is being exerted. This has altered traditional land use patterns and, in some instances, limited Natives' access to subsistence areas and resources and to the means necessary to engage in the commercial salmon fisheries. It also has resulted in occasional interference with traditional hunting practices. Thus, the Natives' ability to engage in subsistence pursuits or to earn a living has been reduced. The changes brought about by these three acts also have led to increasing economic differentiation within Bristol Bay communities and to the emergence of the "haves and the have nots" (a phrase used by several interviewees). These changes have led to some internal conflict within the region and within communities.

One of the major provisions of ANCSA was to give land to the Native village and regional corporations. Implementing the land provisions of ANCSA has required tremendous time and energy, and the process of conveying land is far from complete. Some Bristol Bay residents complained that ANCSA has led to quarrels and internal

---

[7] King Salmon was not recognized under ANCSA. By 1980, the Portage Creek and Ekuk village corporations had merged with Choggiung, the Dillingham corporation. Both Portage Creek and Ekuk are unincorporated cities. The Alaska Peninsula Corporation represents the merger (1978) of the Newhalen, South Naknek, and Kokhanok corporations; the latter communities are not sample villages for this study.

conflict among people within the region, especially over who owns the land and how to divide it. For example, there have been conflicts between the regional corporation on the one hand and village corporations and private land owners on the other hand over the definition of their surface and subsurface estate, especially in relation to gravel. Some Native people are dissatisfied with their corporation's control over land and with having to pay for land. When village corporations do not have enough land to distribute to all of their shareholders, they have considered selling land to those who can afford to purchase it. There are also potential conflicts when fish camps used by Natives from one village lie within the lands selected by another Native corporation. Some Bristol Bay Natives are concerned that they may have to lease this land in the future. (See Sec. III.B for more information on land issues.)

Before 1970, relatively few Native residents of Bristol Bay had access to the most lucrative benefits of commercial resource extraction in the fisheries (i.e., harvesting for profit as independent fishers). The institution of Limited Entry permits for fishing privileges was supposed to alter this situation. However, this major administrative shift would have had only minor ramifications without the complementary revival of salmon stocks in the late 1970's. Together, these factors permitted some redistribution of economic opportunities and increased incomes for many Native residents over the short term.[8]

---

[8] As noted earlier, however, Native permit holders transfer their permits to nonresidents and/or non-Natives at a higher rate than do non-Natives. This highlights the continuing economic vulnerability of the Native population. Substantial income and capital differentials among Native population segments consequent to Limited Entry may portend stratification that could erode the communitarian practices that had persisted throughout the earlier phases of commercialization. The broad ramifications of Limited Entry, though, are (continued...)

Many residents of Bristol Bay remain bitter over the initial implementation of Limited Entry, and tensions over it brew. People are upset about the selection criteria used, which tended to favor those with greater capital investment in the industry. They do not think the process was fair because some people were not aware of or did not understand the application procedures. Other people did not keep thorough enough records to qualify for permits. Several groups of people "fell through the cracks," such as those who were away at school, in the military, or engaged in wage work for a few years in the early 1970's. In several instances, older children who had setnet fished for years but who were assisting one parent with a drift-net fishing operation during the early 1970's were unable to qualify while their siblings obtained setnet permits. Residents still mention cases where people who had fished all their lives did not get permits, yet others obtained permits for "weekend fishing." Dissatisfaction with the use of influence and connections to get permits also was expressed. One person said, "We didn't lose our fishing rights under ANCSA, we lost them under Limited Entry."

A class-action suit was settled in May 1988 to allow some people who previously did not get Limited Entry permits to file for them. Reasons that were acceptable included living in remote villages, not being informed, and/or language difficulties that prevented some people from filing. But applicants still needed to meet certain criteria and have records to prove their past involvement in the fishery. Holding gear licenses, making deliveries of fish, and/or being a captain between 1960 and 1972 were often

---

[8](...continued)
poorly understood and must be considered problematic at this time. See Impact Assessment, Inc. (1984:326-336) and Langdon (1980).

crucial to eligibility. Some of the cases are now in probate, and problems as to who will inherit those permits are surfacing. According to one institutional interviewee, of the Social Indicators sample communities, there were pending 13 cases from Togiak, 6 from Manokotak, 9 from Naknek, and 11 from Dillingham in 1988.

Over the long term, Limited Entry has benefitted some Bristol Bay residents, but not all of them. Limited Entry has led to several problems. For example:

- Many original permit holders sold their permits for small sums of money because they did not know the permits would be so valuable in the future, and now they are unable to buy them back. Interviewees commented on the escalating monetary value of Limited Entry permits. Some of them said that permits never should have had monetary value and that people in Bristol Bay had not anticipated this. The way they see it, the right to fish does not belong to only a few people, it belongs to everyone.
- Limited Entry permits have been used as collateral on certain types of loans and sometimes have been lost in default. Some older people are selling permits in order to support their children and grandchildren, or in order to avoid painful decisions on who (which child) should inherit them. For the most part, permits are being lost to people who reside outside of Bristol Bay.
- Limited Entry also has led to internal family and community upheavals, especially in regards to temporary transfers or inheritance of permits.

The main reason for lingering bitterness over Limited Entry is that peoples' access to the fishery was cut off. Limited Entry has limited who can become involved in

commercial fishing. People lament their inability to fish like they used to. The abilities of men to earn a living and provide for their families have been reduced, while their independence and control over their own work is more limited as crewmembers (if they can find the work). Limited Entry also has threatened the economic viability of communities. Some people have sold permits and left their communities, which means that any future stream of income and activities that were provided through those permits are no longer available. People particularly resent the fact that outsiders who have bought permits can fish in Bristol Bay when they cannot.

Research indicates that in 1980 about 83 percent of Bristol Bay Natives relied on commercial salmon-fishing earnings to some extent (Langdon 1981).[9] By the 1980's, the proportion of total village income derived from commercial fishing among residents (net of business expenses) might exceed 75 percent in some communities (Impact Assessment, Inc. 1984:234). Despite a drastic decline in fisheries earnings during the 1971-1977 interval[10] when the stocks were depleted, commercial fishing contributed about 65 percent of all real personal income in Bristol Bay during the 1970's (Impact Assessment, Inc. 1984:49-50). However, the dominance of the fishery was not uniformly

---

[9] This figure is not incompatible with VanStone's earlier assertion that by 1960 nearly all adult males were involved in commercial-fisheries work. By 1980, the regional economy had diversified sufficiently that work in services, trade, and mainly government sectors was more abundant. Hence, the apparent reduction in fisheries dependency may merely indicate diversification rather than any absolute decline in the importance of fisheries to local incomes. On the contrary, available data show that the fisheries are more robust now than in the 1960's. Much of the activity in other industrial sectors is, of course, dependent on incomes derived from fishing, especially in services and trade.

[10] The stocks may have begun a recovery in 1976, the year 200-mile territorial-limit legislation was enacted. Other factors that affected market conditions, such as the short-lived botulism scare of 1981, had few ramifications for the health of the industry. The botulism case contributed to an abrupt shift in the volume of canned (as opposed to fresh, brine, or frozen/cured) exports, but a shift away from canned preservation as the preferred mode of processing was under way as early as 1978 (see Impact Assessment, Inc. 1984:157).

reflected in earnings among all population segments. For Bristol Bay *residents*, commercial fishing comprised about 31 percent of real personal income during the 1970's. Thus, nonresidents secure a disproportionate share of earnings from the fishery in spite of substantial local involvement created under the terms of Limited Entry. Analyses of economic data reported later in this report bear out this observation.

The Molly Hootch decision in 1972 and the enabling legislation that soon followed (the Small Rural High Schools Act of 1975) brought changes to Bristol Bay communities by creating Rural Education Attendance Areas (REAA's) in the unincorporated regions of the state. The REAA's function essentially as school districts; and of the four education administrations that are present in the study area, two are REAA's: the Southwest Region School District based in Dillingham (covering the area from Levelock southwest to Dillingham and then north to Togiak) and the Lake and Peninsula School District based in King Salmon (covering the eastern portion of Bristol Bay and the Alaska Peninsula from Port Alsworth to the Chignik communities). In addition, the City of Dillingham and the Bristol Bay Borough have established their own school districts.[11]

The Small Rural High Schools Act of 1975 mandated that local high schools be built in rural communities. Local schools have enabled adolescents to remain in their homes and communities and have helped stem the outmigration of youth, leading to growing rural populations. School facilities built subsequent to the Hootch decision have also provided villages with community meeting halls and gyms for recreational activities.

[11] First-class cities (Dillingham) and boroughs assume responsibility for areawide education administration. The REAA's, though based in Dillingham and King Salmon, are not linked to the non-REAA administrations.

Yet, there is debate on the merits of local schools. Some interviewees that went away to high school before 1975 commented that the experience had broadened their outlook and given them greater preparation for dealing with the outside world, and they wondered whether village schools insulated students too much. The small size of the high school-student population in most villages also limits the courses that can be offered. Many of those who went away to school found marriage partners from other areas, which is especially important for very small villages with highly interrelated populations.

However, other interviewees think local schools have allowed Natives to have more input into the education of their children, especially in terms of trying to preserve the language and culture. Manokotak and Togiak have very active Community School Committees that advise the school staff. They have been successful at making the schools more responsive to their needs.

II. POPULATION AND DEMOGRAPHY

This section is divided into two parts. The first describes total village populations; the second examines the age, gender,[12] and ethnic characteristics of these populations. Population data for the early historic period are poor, so village estimates or censuses cannot be reported uniformly for all sample villages or years. Because cross-sectional characteristics of the populations are not reported on a yearly basis, coverage in the second section does not extend past 1980, the year of the last Federal census for which data are available.

---

[12]At the request of the Minerals Management Service, the word "gender" is used in place of "sex," the more common term in demography. This convention will be used in all KI summaries.

II.A. Overall Population and Net Changes Through Time

Table 1 summarizes population data from decennial censuses, which in some cases are adjusted to account for neighboring populations that are now within the municipal boundaries of sample communities.

Table 1

POPULATION ESTIMATES, 1900-1980
(20-Year Intervals)

Community	1900	1920	1940	1960	1980
Dillingham[a]	195	218	39	800	1,563
Manokotak				149	295
Naknek				249	318
Togiak		91	56	220	470

Source: Alaska Housing Authority (1971) and U.S. Census (1900, 1920, 1940, 1960, 1980).

[a] Dillingham figures include Kanakanak; upon incorporation in 1961, Dillingham annexed Kanakanak and Wood River. The 1960 Dillingham estimate is based on the census total for Dillingham (424) plus a Kanakanak estimate from the Alaska Housing Authority.

The data generally support the picture of migration associated with extractive industry opportunity described in the historical review. Dillingham exhibits robust growth as a fishery center after abatement of the effects of the 1918-19 influenza epidemic. Togiak exhibits a net population decline until the 1950's, despite immigration

from the Kuskokwim River area, when cannery operations commenced there. Thereafter, the Togiak population shows strong growth. Tables 2 and 3 enumerate census data and population estimates for the two largest sample villages in the region, Dillingham and Togiak. These tables permit a more detailed inspection of population shifts in these communities. Note that Dillingham exhibited the highest decennial rate of growth in its history between 1970 and 1980, as the salmon stocks revived and the 200-mile territorial limit returned some economic advantage to U.S. fishermen in American waters. Similarly, Togiak exhibited the greatest decennial growth between 1950 and 1960, after the cannery had been established there. (The more recent intervals are analyzed for all sample villages in Table 4.)

Table 4 illustrates for the four sample communities population sizes, the percentage of population that was Native, and percentage changes in total population between 1970 and 1980. This table clearly shows the continuing effects of fishery-related migration into Bristol Bay. Naknek, the only community whose proportion of Native residents grew across this interval, experienced immigration after the institution of Limited Entry, which enfranchised many Native residents, and after the recovery of salmon stocks. The slight diminution of Native populations as proportions of total populations in the other villages is due primarily to expanding government (and, secondarily, to trade and service) opportunities over the 1970-1980 interval.[13]

[13] Recall also that the Hootch decision and establishment of small rural high schools occurred during this period, which resulted in a minor but measurable influx of non-Native technical and teaching staffs to the more remote villages.

Table 2

POPULATION TRENDS, DILLINGHAM AND VICINITY
1890-1985

Year	Population			Percent Change	
	Dillingham	Kanakanak	Total	Decennial	Annual
1890	166	53	219		
1900	145	50[a]	195	-11.0	
1910	165	50[a]	215	10.3	
1920	182	36	218	1.4	
1929	85	177	262	20.2	
1939	278	113	391	49.2	
1950	577	54	631	61.4	
1960	424[b]		800[b]	26.8	
1970			914[c]	14.2	
1980			1,563	71.0	
1981			1,670		6.8
1982			1,791		7.2
1983			1,896		5.9
1984			2,073		9.3
1985			2,141		3.3

Sources: U.S. Census (1890-1980 figures); Rogers, 1955; Alaska State Housing Authority, June 1971; and Alaska Department of Labor (1981-1985 figures).

[a] Estimates by Rogers (1955) based upon history of cannery operations and other data.
[b] No population for Kanakanak was recorded by the Census. The Alaska State Housing Authority (June 1971) estimated the population of the immediate Dillingham area at that time to be approximately 800.
[c] Kanakanak and Wood River Village were included within Dillingham's corporate limits upon its incorporation in 1963.

Table 3

POPULATION TRENDS, TOGIAK
1880-1985

Year	Population	Percent Change	
		Decennial	Annual
1880	276[a]		
1890	94[a]	-65.9	
1920	91	-3.2[b]	
1929	71	-22.0	
1939	56[c]	-21.1	
1950	108	92.9	
1960	220	103.7	
1970	383	74.1	
1980	470	22.7	
1981	511		8.7
1982	507		0.8
1983	531		4.7
1984	554		4.3
1985	556		0.4

Sources: U.S. Census (1880-1980 figures) and Alaska Department of Labor (1981-1985 figures).

[a] 1880 and 1890 population listed for Togiagamute (Togiagamiut).
[b] Increase recorded for 1890 to 1920 period.
[c] The 1939 Census listed Togiak with a population of 10 and Togiak Bay with a population of 46.

Table 4

BRISTOL BAY SAMPLE VILLAGES: POPULATIONS, ETHNICITY, AND POPULATION CHANGES, 1970-1980

Village	1970 Total	1970 Native (%)	1980 Total	1980 Native (%)	Total Change (%)
Dillingham	914	64.3	1,563	57.0	+71.0
Manokotak	214	95.8	294	92.9	+37.4
Naknek	178	21.9	318	50.6	+78.7
Togiak	383	98.4	470	94.3	+22.7

Source: U.S. Census (1970, 1980).

Table 5 lists village populations on an annual basis for those years during the 1980's for which data are available. Because the Alaska Department of Community and Regional Affairs (DCRA) has curtailed a large portion of its population-estimation responsibilities in recent years, these DCRA data may be flawed. A comparison of these data with permanent fund dividend records for the two largest communities in the regional sample, Dillingham and Togiak, reveals several discrepancies (see Tables 6 and 7 for Dillingham and Togiak, respectively). We are inclined to accept the dividend data as being the most accurate because residents have a strong incentive to submit accurate records to obtain State dividends, most likely yielding accurate data.

Table 5

YEARLY POPULATION ESTIMATES, 1980-1986

Village	1980	1981	1982	1983	1984	1985	1986
Dillingham	1,563	1,670	1,791	1,896	2,004	2,026	2,153
Manokotak	294	290	299	301	303	299	299
Naknek	318	na	na	390	405	na	na
Togiak	470	511	507	531	554	554	623

Source: Alaska Department of Community and Regional Affairs.

II.B. Age and Gender Profiles

Although the populations of the sample communities are "aging," the extent of this demographic shift is very modest. As is often the case in rural Alaska, males outnumber females in each community; but again, the extent of the discrepancy is very modest. The populations in these sample communities are nearly balanced by gender and show robust growth characteristics. Despite the increasing age of the populations, prospects for continued growth are good because the age composition of 1970 populations favored the very young. Some post-1970 growth is due to return migration, according to key

informants.[14] Tables 6, 7, and 8 summarize age and gender data for the sample communities.

The data for Togiak and Manokotak may provide the best evidence for possible return migration, given the historic propensity for Bristol Bay young adults to relocate to communities with fishery-related opportunities. In the post-1970 period, these opportunities were more generally available to Native residents, and at dispersed locations that permitted residence in natal communities. The data for Dillingham may illustrate an ongoing and perhaps accelerating trend of immigration and transient residence of persons born outside Bristol Bay (primarily nonresidents working in the government, trade, and services sectors).

Available evidence suggests that the fertility characteristics of the populations will permit sustained growth, mainly in the smaller, largely Native communities of Togiak and Manokotak. In addition to immigration and return migration, note that the largely Native communities have aged sufficiently that large numbers of people who were adolescents in 1970 were in or entering their most fertile stages of life by 1980. Figures 1 through 4 present death and birth data for each of the sample communities in Bristol Bay. Post-1980 natural increase generally keeps pace with overall population growth, suggesting that migration is not the dominant factor in regional population change.

[14] As of about 1980, available data suggested that approximately 35 percent of the BBNC shareholders lived outside the region (see Impact Assessment, Inc. 1984:87). No quantitative data are available, but some key informants registered a perception that absent shareholders may be returning at higher rates.

Table 6

PERMANENT FUND DIVIDEND RECIPIENTS
DILLINGHAM
1982-1985

Age Group	1982	1983	1984	1985
0 - 4		181	213	205
5 - 9			176	193
10 - 14			156	173
15 - 17			92	92
18 - 19			68	57
20 - 24			192	198
25 - 29			239	231
30 - 34			229	257
35 - 39			165	183
40 - 44			128	140
45 - 49			82	87
50 - 54			72	72
55 - 59			448	57
60 - 64			32	33
65 - 69			26	26
70 - 74			17	19
75 & Over			24	29
Unknown	3	6	3	5
TOTAL	1,843	1,885	1,962	2,057

Source: Alaska Department of Revenue, Permanent Fund Dividend Recipient Profile, 1985.

Table 7

PERMANENT FUND DIVIDEND RECIPIENTS
TOGIAK
1982-1985

AGE GROUP	1982[a]	1983[b]	1984	1985
0 - 4		52	65	69
5 - 9			45	47
10 - 14			55	50
15 - 17			30	29
18 - 19			27	32
20 - 24			69	67
25 - 29			65	66
30 - 34			50	58
35 - 39			24	29
40 - 44			22	24
45 - 49			21	19
50 - 54			18	21
55 - 59			16	16
60 - 64			19	21
65 - 69			9	8
70 - 74			8	5
75 & over			3	6
Unknown	0	2	1	4
TOTAL	524	547	547	571

Source: Alaska Department of Revenue, Permanent Fund Dividend Recipient Profile, 1985.

[a] 1982 age breakdown is as follows: 0-17 - 193; 18-27 - 126; 28-37-80; 38-47 - 44; 48-57 - 38; 58-67 - 27; 68-77 - 14; 78+ - 2; Unknown - 0; Total - 524.

[b] 1983 age breakdown is as follows: 0-4 - 52; 5-17 - 138; 18-27 - 138; 28-37 - 87; 38-47 - 47; 48-57 - 37; 58-67 - 30; 68-77 - 14; 78+-2; Unknown - 2; Total - 547.

Table 8

AGE AND GENDER FIGURES, BRISTOL BAY SAMPLE COMMUNITIES 1970-1980

Village	1970				1980			
	Male	%	Female	%	Male	%	Female	%
Dillingham	465	(50.1)	449	(49.9)	806	(51.6)	757	(48.4)
Median age	19.9		21.5		25.3		24.4	
Manokotak[a]	107	(50.0)	107	(50.0)	142	(52.0)	131	(48.0)
Median age	13.1		13.4		18.3			
Naknek[a]	91	(51.1)	87	(48.9)	83	(51.6)	78	(48.4)
Median age	24.9		17.3		21.9			
Togiak	204	(53.3)	179	(46.7)	241	(50.1)	232	(49.9)
Median age	16.0		16.0		23.5		21.4	

Source: U.S. Census 1970, 1980.

[a] 1980 data for Manokotak and Naknek are Native only. Census-area median ages for the Dillingham and Bristol Bay Borough areas, respectively, are 26.4 and 23.2.

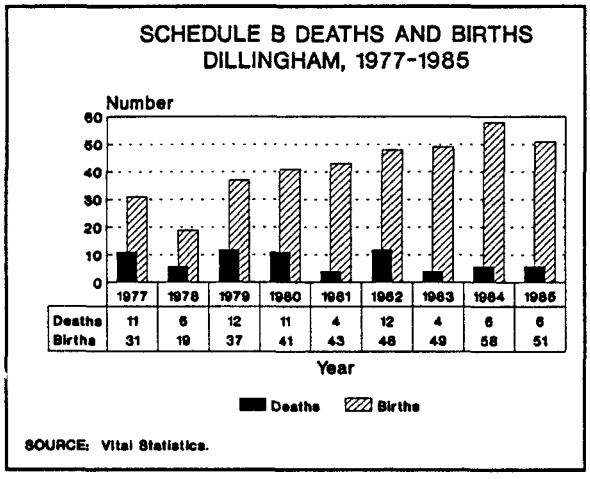


Figure 1

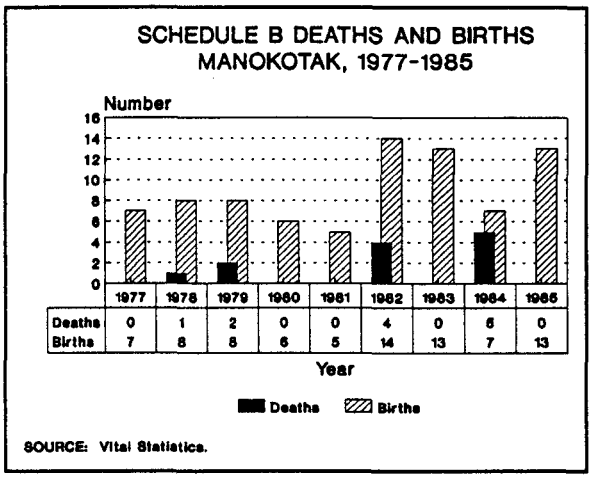


Figure 2

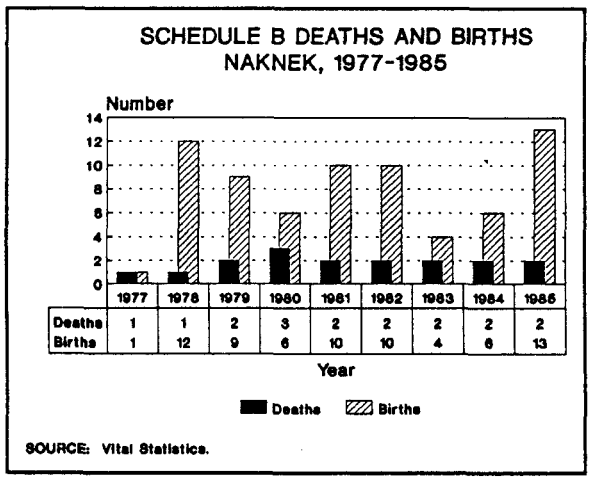


Figure 3

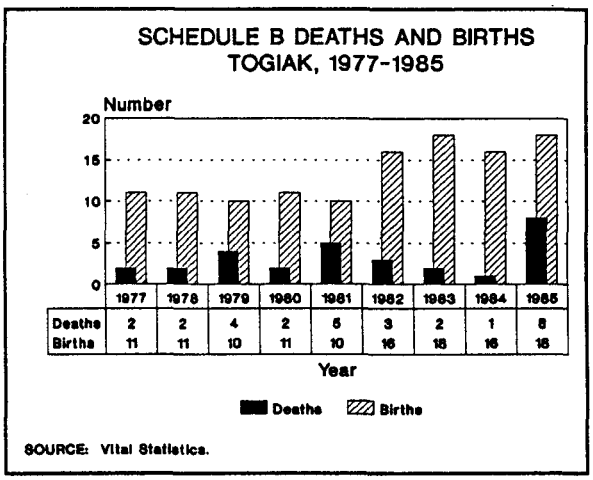


Figure 4

III. COMMUNITY ORGANIZATION AND ECONOMY

This section addresses governance; land status; resource management; commerce and industry; health, education, and social services; voluntary associations and community activities; and important trends of sociopolitical change in the Bristol Bay region. The emphasis is largely regional, but specific details concerning the sample communities are provided where they are relevant.

III.A. Governance

Traditional Councils: Each study community in the Bristol Bay region has a traditional council that has been recognized by the Federal Government under ANCSA but is not recognized by the State. These councils vary substantially in political prominence and level of activity. In Manokotak, the Traditional Council is very similar in membership to the city council and is elected simultaneously. This pattern has existed since at least the early 1980's (Impact Assessment, Inc. 1984:102). In this community, joint membership is established by design as a measure to encourage integration of administration and governance over programs or issues that are seen as essentially similar. Because community needs are perceived as a joint set of priorities, a common administrative framework is seen as a logical remedy for planning and oversight that could otherwise tend toward disorganization.

The Dillingham and Naknek (Paug-Vik) councils are sporadically active, and many community residents consider them unrepresentative and ineffective. However, note that the constituents of the councils in these communities are relatively small, because these are the sample communities that are dominated by non-Native-population

segments. The researchers occasionally encountered Natives who were not aware that local councils existed. Because these communities are politically dominated by powerful municipal governments, the traditional councils are poorly integrated into the community administrative structure. Relations among governing authorities are occasionally divisive, and strong differences of opinion among traditional council and municipal factions have arisen. One key informant in Naknek affiliated with the traditional council alleged that relations were poor and that municipal authorities generally ignored the wishes of the Native population.

Traditional leadership in Togiak is very active but is divided between two different bodies. There is a Traditional Council that is recognized by the Bureau of Indian Affairs (BIA), has an office in the city hall, and shares some members with the Togiak City Council. Togiak also has the Nasaurlurmiut Traditional Elders Council, which is led by an influential extended family, is loosely affiliated with the Yupik Nation movement,[15] and has its own meeting hall. Both bodies have sought to increase tribal powers in order to strengthen and protect local control and thus more effectively deal with community problems.

The division in traditional, elder leadership within Togiak is largely due to disagreement over whether the community should formally affiliate with the Yupik Nation. This debate has unfolded over the past several years. Recently, the majority of Togiak residents chose not to join the Yupik Nation's efforts to have a Yupik election

[15] The Yupik Nation is a loose confederation of Yupik villages seeking to test the limits of Native sovereignty in Alaska by asserting authority over land disposal, social services, and judicial administration, especially those overseen or funded by the Federal Government. The movement is strongest in the Kuskokwim region, where many Togiak residents have historic and kinship ties.

district based in Bethel included in the State's reapportionment plan. Most Togiak residents prefer to remain in the Bristol Bay election district, because they receive government services from Dillingham and also because the Togiak fishing district is part of the Bristol Bay fishery.

Traditional councils have no tax base and receive funding from Federal and State grant programs. They are primarily involved in providing social services to community residents. For instance, the Naknek village council administers the village Native clinic through the Bristol Bay Native Association, sponsors bingo, and provides assistance for welfare programs. One of the major activities of all of the village councils in recent years has been getting their membership enrolled so that the members would be eligible for Indian Health Service (IHS) benefits, education grants, and other BIA programs. Enrollment also will give them a voice in village-council affairs.

Municipal Governments:

Dillingham: Dillingham was incorporated as a first-class city in 1963 and carries out municipal affairs under a city-manager form of government. The city levies a 3-percent sales tax but relies on municipal-assistance grants from the State for most capital development and operations costs. The city exercises control over the municipal utilities (water, sewer, power), the port authority, the city school district, parks and recreation, airport management, public safety, and planning and zoning.

The city of Dillingham has grown over the years. The emergent city annexed Kanakanak and Wood River upon incorporation. A HUD (Housing and Urban Development) housing development was built in the northeast section of the city in the

early 1980's. Since the mid-1970's, housing has been developed along the road connecting Dillingham to Aleknagik. Dillingham's Native village corporation, Choggiung, Ltd., and private allottees have subdivided and sold some of their land along this road. In fall 1989, the city of Dillingham expanded to include part of the Lake Road area. Expansion of municipal boundaries was a controversial issue, with many conservative residents favoring minimal government (hence no expansion) and other residents favoring an increase in the tax base to support the schools and additional municipal services. The City of Dillingham faced stiff opposition from residents when the expansion was initiated.[16]

Manokotak: Manokotak--incorporated as a second-class city in 1970--does not retain a city manager but instead organizes its municipal affairs through a mayor-council system exclusively. A 2-percent sales tax underwrites some municipal services; however, municipal assistance and revenue-sharing grants fund virtually all city operations and capital improvements. The municipal powers assumed by the city include provision of water, power, and refuse collection. Manokotak reached a residential-saturation limit in the mid-1980's, and an extension of the community occurred in 1989 through completion of a HUD housing project over 5 miles east of the town. The HUD housing has alleviated crowded living conditions in many households.

Locating the HUD housing project so far from the town of Manokotak required special arrangements for emergency health care, utilities, and school transportation; all

---

[16] Recall that many Bristol Bay residents opposed cooperative-management proposals that permitted land disposal by the State. Residence in Dillingham is not itself sufficient reason to favor actions that could strengthen the city. Some residents see such proposals as little more than a means for the city to assume zoning and planning control of unincorporated lands on which they prefer to live as they please.

community facilities were located in the town itself. A road had to be built; water, sewer, and electricity services had to be provided; and the area still did not have telephone lines in March 1990. A local person with a van provides people with transportation between the town and the HUD housing development.

Interviewees offered several reasons why the HUD housing was built so far from the town of Manokotak. Two of these were (1) the availability of land and (2) several local residents pushed to have the HUD development built there in order to aid a long-term community strategy of getting a road built to Bristol Bay. Presently, Manokotak residents must travel south by boat down the very winding Igushik River to reach the bay, and a road running directly east to the bay would save them much time. The grant for the HUD housing project enabled the road to be built about halfway to Bristol Bay.

Togiak: Togiak was incorporated in 1969 as a second-class city and, although the city retains a city manager, the mayor and council establish policy and manage a substantial share of city business. The city levies a 2-percent sales tax and hopes to levy a raw-fish tax in the near future as a substitute for declining State municipal assistance and revenue-sharing grants. The city initiated annexation plans for most of Togiak Bay in late 1987 and, if the annexation is approved by the State, will be in a position to tax all fishing vessels in Bristol Bay. The city is responsible for water, sewer, public safety, power, refuse collection and road maintenance, and maintains a planning and zoning commission.

Bristol Bay Borough: Naknek is the sample community within the Bristol Bay Borough. The borough incorporated in 1962, hence it was the first municipal

organization in the study area. Until the recent formation of the Lake and Peninsula Borough, the Bristol Bay Borough also was the only borough in the region. The Bristol Bay Borough collects substantial revenues from a 3-percent raw-fish tax levied on vessels offloading fish within borough boundaries, a 5-mils tax on real and personal property, and interest on reserve funds. Less important sources of revenue are State revenue-sharing and municipal-assistance grants. The borough (1) manages areawide schools, police and fire protection, health care, harbor activity, parks and recreation, telephone and telecommunications, roads, solid-waste disposal, sewer and water systems, and the cemetery; (2) owns the public utilities (sewer, water) as well as the port, airport, and clinic; and (3) maintains a planning and zoning commission and an areawide school board.

III.B. Land Status

Federal legislation adopted since 1971 has dramatically changed land ownership patterns in Bristol Bay. The 1971 Alaska Native Claims Settlement Act (ANCSA) transferred land from public to private ownership and reduced the areas of land claimed by Native inhabitants. The 1980 Alaska National Interest Lands Conservation Act (ANILCA) resulted in a large amount of Federal land being designated as part of national parks, monuments, and refuges. Many of the State's land selections also have been placed in specific designations. The status of land in Bristol Bay has a direct bearing on the management of fish and wildlife resources and on the development alternatives proposed for that land.

Table 9 shows the approximate number of acres of land owned or selected by each of the major land managers in the Bristol Bay region as of December 1983. Land ownership has changed somewhat since 1983 but remains unsettled in most areas because the Bureau of Land Management (BLM) has been in the process of conveying land to Native corporations and the State and also of adjudicating conflicting land claims.

Most of the State-owned and -selected lands are in the Wood-Tikchik Lakes area, the Nushagak and Kvichak river drainages, and along the Bristol Bay side of the Alaska Peninsula. In addition to the land listed in Table 9, the State claims all tide- and submerged lands offshore to 3 miles and the beds of all navigable waterbodies. The State has established two game refuges in Bristol Bay (Izembek and Cape Newenham), five State critical-habitat areas (Port Moller, Port Heiden, Cinder River, Egegik, and Pilot Point), and a game sanctuary (Walrus Island), totalling about 100,000 acres. The Alaska legislature also established the 1,428,000-acre Wood-Tikchik State Park, which is the largest State park in the United States.

The ANCSA recognized 39 Native villages or groups in the Bristol Bay region that were entitled to receive land. Several of the Aleut village corporations and the Bristol Bay, Aleut, Calista, Koniag, and Cook Inlet regional Native corporations also have been allowed to select land in Bristol Bay. Bristol Bay village corporations have received interim conveyance to most of their land entitlement and final patents to some of that land. For the most part, Native groups have selected lands in close proximity to their

Table 9

BRISTOL BAY LAND OWNERSHIP IN ACRES, 1983

Owner	Approx. Acres	% of Total
State of Alaska:		
a. Patented or tentatively approved	9,209,000	29.9
b. Selected	3,740,000	12.1
Total State	12,949,000	42.0
Native:		
a. Patented or interim conveyed	3,810,000	12.4
b. Selected	760,000	2.5
Total Native	4,570,000	14.9
State and Native Conflicting Selections	240,000	.8
Federal Government:		
a. FWS (Fish & Wildlife)	10,780,000	35.0
b. BLM (no selections)	1,940,000	6.3
Total Federal	12,720,000	41.3
11(a)(3) State Selections on Alaska Peninsula	348,680	1.1

Source: Bristol Bay Area Plan for State Lands (Alaska Department of Natural Resources, Alaska Department of Fish and Game, and Alaska Department of Environmental Conservation, September 1984, pages 1-5).

villages and along the shores of bays or rivers. They have selected lands in areas where they traditionally lived and also fished and hunted.

The Fish and Wildlife Service (FWS) lands in the area include all of the Togiak, Alaska Peninsula, Becharof, and Izembek National Wildlife Refuges and parts of the Yukon Delta and Alaska Maritime National Wildlife Refuges. Other land held by the Federal Government is managed by the BLM and is eligible for selection by the State. Land within Bristol Bay also adjoins three national preserves or monuments (Lake Clark, Katmai, and Aniakchak), which are managed by the National Park Service. Proximity to these preserves influences management and development alternatives for adjoining lands.

One of the main problems with land ownership patterns in Bristol Bay is that lands held or claimed by the Federal Government, the State of Alaska, Native corporations, and private individuals are interspersed with one another. Lands held privately or by another government agency often lie within areas set aside for parks, preserves, monuments, and wildlife refuges. This situation makes land and resource management more difficult. Land exchanges are being pursued, with the general emphasis on placing lands capable of development in private (including Native corporation) or State ownership in exchange for placing sensitive wildlife habitat lands under the control of the FWS or the Alaska Department of Fish and Game (ADF&G). In cases where land exchanges cannot be negotiated, government agencies are trying to establish cooperative management plans that will govern land and resource use in a particular area (Alaska Department of Natural Resources et al. 1984; U. S. Department of the Interior [USDOI] 1984). One person involved in resource management in

Dillingham commented that Alaska has just begun to scratch the surface of the potential competition and conflict between the State and Federal governments over land and resources.

Another land ownership problem has to do with individual Native allotments. Within the past 3 years, the BBNA contracted to take over the realty management responsibility of the BIA to expedite the transfer of titles to lands that Natives claim under the allotment act. Titles to lands where there was no conflict have been transferred, but this represented only about 20 percent of the cases. The remaining cases generally involve conflicting claims by individual Natives, the State, and the regional corporations. These lands must either be surveyed and have legal descriptions drawn up or, in some instances, the BLM must recover title to lands already conveyed to the State or to Native corporations before it can transfer title to individual Natives who had prior claims. In the meantime, the bureaucratic delays in settling title issues have caused difficulties for Native allottees and Native corporations who wish to construct homes on or develop this land. These problems have been exacerbated by mistakes made in the original surveys done by the Federal Government, which have caused additional delays in settling land titles. Some of the lands to which title has not been transferred are now involved in estate and heirship settlements, and probates are delaying the process even more.

Changes in land ownership brought about by ANCSA and ANILCA also have reduced Natives' access to traditional hunting and gathering sites. Often areas where people picked berries, set traplines, or hunted game are now within the boundaries of

national parks or preserves. Original agreements worked out under these acts guaranteed Natives the right to conduct subsistence activities on Federal land, but several Native interviewees complained that the Federal park system has been limiting their access to traditional subsistence areas within park boundaries. Much Native land fronts rivers now controlled by the State, and there is a need to coordinate management of these areas.

A greater amount of private property, in addition to Government-controlled property, is also diminishing Natives' access to traditional subsistence sites. One interviewee complained, "It is harder and harder to get what we eat." Others often complained about signs that say, "Private property, keep off: No berry pickers or wood cutters allowed." One of them wondered if the people who owned the land had planted the berries and, if not, what gave them the right to keep all of the berries. An older woman explained that Natives believe if you let people pick berries on your land, you will have more the next year. Some interviewees admitted to trespassing in order to pick berries; and one explained, "I don't know if that is stealing. If the berries are going to fall off and go to waste, why not go to us? Those berries keep us in vitamin C for the winter."

Land is one of the major concerns for the Native corporations. Titles to land and easements are still being determined throughout Bristol Bay and, until these are finalized, Native corporations have been unable to distribute land to shareholders, encourage settlement or residential expansion, or promote economic development on those lands. The land questions have been far more difficult to deal with in practice

than anyone expected when ANCSA and ANILCA were passed. The Native corporations must deal with many problems that other corporations in the United States do not confront, such as securing title to their property, sorting out the land entitlements of their shareholders and other government agencies, and administering a land base.

III.C. Resource Management

Several factors have provided the impetus for regional land and resource planning in Bristol Bay. Much of this planning is in response to the requirements and implementation of ANCSA and ANILCA. Past difficulties with the commercial fisheries and recognition of Bristol Bay's economic vulnerability due to reliance on a limited set of highly variable resources have made the majority of Bristol Bay residents concerned about the hazards of overharvesting and interested in planning for resource protection. Increased competition between commercial, sports, and subsistence users also has forced government agencies to engage in planning in order to better manage potential conflicts.

Various levels of government have been involved in developing land and resource management plans for the Bristol Bay region. Beginning in 1981, the USDOI (through the FWS) and the State of Alaska (through the Alaska Land Use Council and its Bristol Bay Study Group) worked together toward developing a Bristol Bay Cooperative Management Plan. This plan was to be a comprehensive and systematic regional management plan for the 31-million-acre Bristol Bay region as mandated by Section 1203 of ANILCA, Public Law 96-487. Federal and State agencies and Bristol Bay representatives cooperated to develop measures to protect essential resources and develop others. The major concerns that they identified were potential population

growth, oil and gas development, land disposal, and increased recreational fishing and hunting. The plan generated substantial controversy during its development. Many local residents alleged that the planning process was forced on them and that it led inexorably to land settlement provisions that favored the State of Alaska while ignoring local desires.[17]

After 3 years, the State withdrew as a participant in the implementation of the Cooperative Plan and chose instead to issue its own Bristol Bay Area Plan for State Lands in September 1984. The Federal Government was still obligated to prepare a land management plan for Bristol Bay and issued the Bristol Bay Regional Management Plan and Final Environmental Impact Statement (EIS), which applies to Federal land (USDOI 1984). Both plans came out of the earlier cooperative effort and provide a broad policy framework for the management of State and Federal lands, respectively, in Bristol Bay.

In the absence of a cooperative regional management plan, the State and Federal governments have proceeded separately to develop more detailed management plans for the lands under their control. The State has proceeded with the Nushagak and Mulchatna Rivers Recreation Management Plan, the first step in the process of producing a regional recreation management plan for Bristol Bay. The State produced a Resource Assessment in August 1988, a Public Review Draft in June 1989, and a Final Report in 1990 for the Nushagak and Mulchatna river drainages. The Federal Government (USDOI, FWS) has issued a Final Comprehensive Conservation Plan, EIS,

[17] Specifically, the draft plan required the disposal of 14,000 acres by the State for municipal expansion and residential development.

and Wilderness Review for Becharof National Wildlife Refuge (1985a), Alaska Peninsula National Wildlife Refuge (1985b), Togiak National Wildlife Refuge (1986), and Alaska Maritime National Wildlife Refuge (1988).

The main way in which local interests have had some voice in Bristol Bay resource management is through establishing coastal zone service areas that can develop management programs under the terms of the Federal Coastal Zone Management Act of 1972 and the Alaska Coastal Management Act of 1977. Three such programs have been established in Bristol Bay, one under the Bristol Bay Coastal Resource Service Area (CRSA) Board, one under the Aleutians East CRSA Board, and one through the Bristol Bay Borough. Through these programs, resources have been inventoried, local priorities identified, and coastal management plans developed. Activities taking place in the coastal areas, which require permits from the State and Federal governments, are reviewed for consistency with these coastal management plans. However, the CRSA's do not have permitting authority, and consistency reviews occur only during the application process for Federal and State permits.

Through the various land and resource management plans mentioned in the preceding paragraphs, issues of concern to local residents have been identified. One of the main issues confronting residents of Bristol Bay is maintaining fish and wildlife populations and habitats in light of increasing competition for the region's resources. Another major issue is protection of the existing culture and subsistence lifestyle of the region's residents. A third major issue is how to encourage economic productivity and diversity in the region while minimizing conflicts with the fishing industry and subsistence

lifestyle. This would include potential development of resources such as oil, gas, minerals, and timber.

The various management plans for Bristol Bay also have addressed issues such as the location and amount of Government land disposal, permitting for remote cabins on Federal and State lands, and provisions for mineral and oil and gas development. The State has received political pressure from urban residents to make more of its lands available to the private sector. Bristol Bay residents suspect that disposals of State lands satisfy the demand of land speculators, and the residents object when these disposals are in valuable fish and wildlife areas. Other issues of concern include increased trespass on private land, increase in litter and other waste, invasion of (Native) privacy, allocation of recreational resources between noncommercial and commercial users, allocation of commercial recreation opportunities among lodge and guide operators, public versus private land use for commercial lodges and camps, and the abilities of the Federal and State governments to enforce fish and game regulations.

Increasing competition for Bristol Bay's fish and wildlife resources has created conflicts between subsistence, commercial, and recreational users of these resources. There has been a dramatic increase in the number of commercial and recreational users from outside the region, which has coincided with an increase in the populations of villages that depend on fish and wildlife resources for subsistence. This has resulted in increased human presence and harvesting pressure. Increased competition for resources has displaced traditional users, requiring local fishers and hunters to travel farther from their usual harvesting areas. There tends to be greater conflict between people who fish

for sport and subsistence than between commercial and subsistence fishers. This is because sport and subsistence fishing both generally take place in the river areas, whereas commercial and subsistence fishing take place in different areas (bays vs. rivers), and also because most local residents are themselves both commercial and subsistence fishers.

The conflict between commercial and subsistence uses of resources has been greatest in the commercial-fishing districts. Historically, the Bristol Bay fishery has been managed primarily for commercial purposes. As competition in the industry has increased, the ADF&G has tried to prevent the possibility that people might attempt to sell their subsistence catch. They have done so by trying to separate subsistence-fishing areas from commercial-fishing areas and by allowing subsistence fishing only during commercial-fishing periods. This has made it more difficult for residents of the commercial-fishing districts and participants in the commercial fishery to harvest salmon for subsistence purposes and has changed the way in which people traditionally organized to conduct subsistence fishing. Tensions over this led to changes in the regulations in 1988 that now allow managers to call emergency openings for subsistence after commercial closures of 5 days or more (Seitz 1990).

Tensions over increased competition for local resources have been exacerbated by differences in cultural values. Local Natives often view the practices of sportsmen as wasteful and do not agree with the recreational aims of their activities. To them, catch and release fishing is seen as playing with the fish and also as an offense to the fish

(Wolfe 1989). Sportsmen from outside the Bristol Bay area generally are very wealthy, which increases local resentment toward them.

Non-Native fishers (primarily sport and commercial), on the other hand, are often bothered by Natives giving salmon to dogs, which they see as wasteful. Neither do Non-Natives understand the Native preference for certain species of fish. As one Native person explained it, having king salmon versus silver salmon is like having T-bone steak vs. round steak. Yet, non-Natives do not understand this distinction because they usually view salmon in commodity terms. Non-Natives have tried to influence regulations set by the Board of Fish in order to let commercial fishermen have greater access to the higher priced species of salmon while leaving the lower priced species for subsistence purposes. This issue is likely to be a greater source of conflict as the resources become more scarce.

Another instance in which State resource management has conflicted with Native practices is in the setting of fishery openings and game seasons. Natives generally procure enough resources for 1 year and then they quit, but they sometimes run out before the next season. They are taught not to waste--to harvest just what they need--and then if they need more, to go out and get it. They also give food away when they have enough and know they can get more. Because of this approach to resource procurement, Natives often need to hunt or fish at times when it is prohibited by the ADF&G. In addition, they sometimes wish to hunt or fish for Native foods whose harvest is prohibited or restricted by ADF&G. This causes many of them great angst and often produces guilt when they must break laws to engage in traditional pursuits.

Increased recreational activity negatively impacts local residents' use of natural resources, without providing much economic benefit. Visits by sportsmen from outside the area add to the seasonal population influx that Bristol Bay communities experience due to the commercial fisheries. Most recreational outfitters and guides are headquartered in urban Alaska and siphon potential income from Bristol Bay. Village corporations want a greater ability to engage in recreational enterprises, which could provide local benefits and give them greater control over recreational activity. To avoid paying fees to Native corporations, some guides from outside the region have moved their operations onto State lands as those lands become available. Some people feel that the State has unfairly granted a small number of individuals proprietary interest to public fish and wildlife resources by leasing them land for lodges and camps, with the potential for these leases to turn into land ownership through future State land disposal.

Natives in Bristol Bay are most concerned about maintenance of the subsistence way of life. They want the fisheries and game protected and generally do not want dams, roads, oil development, or people to interfere with or to impact those resources. Although local residents want better air-traffic and ferry service for their own needs, they strongly oppose a road connection to the other regions of the State (e.g., to Anchorage). They are concerned that such a connection would increase the access outsiders have to the area and would negatively impact their communities, and they also are concerned about the potential impact of roads on the terrain and on land mammals. Additionally, they want the conveyance of land to Native corporations accelerated. They believe that sufficient private property already exists in the area for commercial recreation facilities

and that additional lands should not be removed from the public domain for this purpose.

III.D. Commerce and Industry

The significance of the commercial-fishing industry in Bristol Bay has been underscored repeatedly in this report. It is important to recognize that the role of this industry is extremely variable in virtually all respects. Obviously, the industry workforce is highly seasonal. Less well recognized is the fact that the proportional contribution of fishing earnings to incomes varies substantially across population segments and villages. In the historical review, we indicated that self-employment and wage incomes associated with commercial fishing could exceed 75 percent of total village income in some villages. Despite the overall dominance of fishing in regional centers like Naknek and Dillingham, the proportional contributions of fishing incomes in such communities may be less than those evident in smaller, remote communities. Public administration (government), trade, and services are centered in hubs, leading to a relative diminution of the fisheries contribution there.

For Bristol Bay *residents*, commercial fishing comprised 31 percent of total income over the 1970-1980 decade, whereas government and support sectors accounted for 54 percent. Transfers accounted for 13 percent (Impact Assessment, Inc. 1984:51-52). Thus, the public sector accounts for about 50 percent of the personal adjusted income of residents,[18] compared to commercial fishing.

---

[18] Since some support-sector income is in the private sector, the figures cited here cannot simply be added to arrive at a public-sector total. But because most services (health and education primarily) are in the public sector, this calculation is approximately correct. Whatever the exact proportions may be, it is clear that the public sector overshadows commercial fishing for *residents*.

More than half (57%) of total personal income earned in Bristol Bay during the 1970's was earned by nonresidents (Impact Assessment, Inc. 1984:51). These cross-sectional differences in the distribution of earnings and labor make it difficult to characterize the economy of Bristol Bay. Although fishing dominates the regional economy per se, the validity of that characterization is hardly constant across all population segments. And the resident/nonresident differences are not confined to fishing alone. Figures 5 and 6 illustrate *nonresident* wages and employees by standard industrial classification (SIC) as proportions of totals, respectively, for all Schedule B regions.

The Bristol Bay and Dillingham census areas are pertinent here and may be compared to other Schedule B regions. Over half of the wages paid in the mining and manufacturing (i.e., fish-processing) sectors of the Dillingham census area in 1985 were received by nonresidents. Similarly, over half of the wages paid in the manufacturing and wholesale-trade sectors of the Bristol Bay (Borough) census area in 1984 were collected by nonresidents. Half or more of the employees in the agricultural (i.e., fishing), mining, and manufacturing sectors in the Dillingham census area during the same year were nonresidents. For the Bristol Bay area, close to half (or more) of the employees in the construction, manufacturing, wholesale-trade, retail, and services sectors were likewise nonresidents.[19]

---

[19] The reader should bear in mind that a nonresident of the Dillingham census area might well be a resident of the Bristol Bay census area, and vice versa. Hence, these figures probably overstate nonresident earnings and employment if the region is conceived as *both* Dillingham and Bristol Bay census areas. But independent observations unfailingly support the general observation of substantial income leakage and transient employment in the region. For example, one document notes that the influx of nonresidents to Dillingham alone during the fishing season may exceed twice the resident population (City of Dillingham 1985:22), and most are clearly from outside the region.

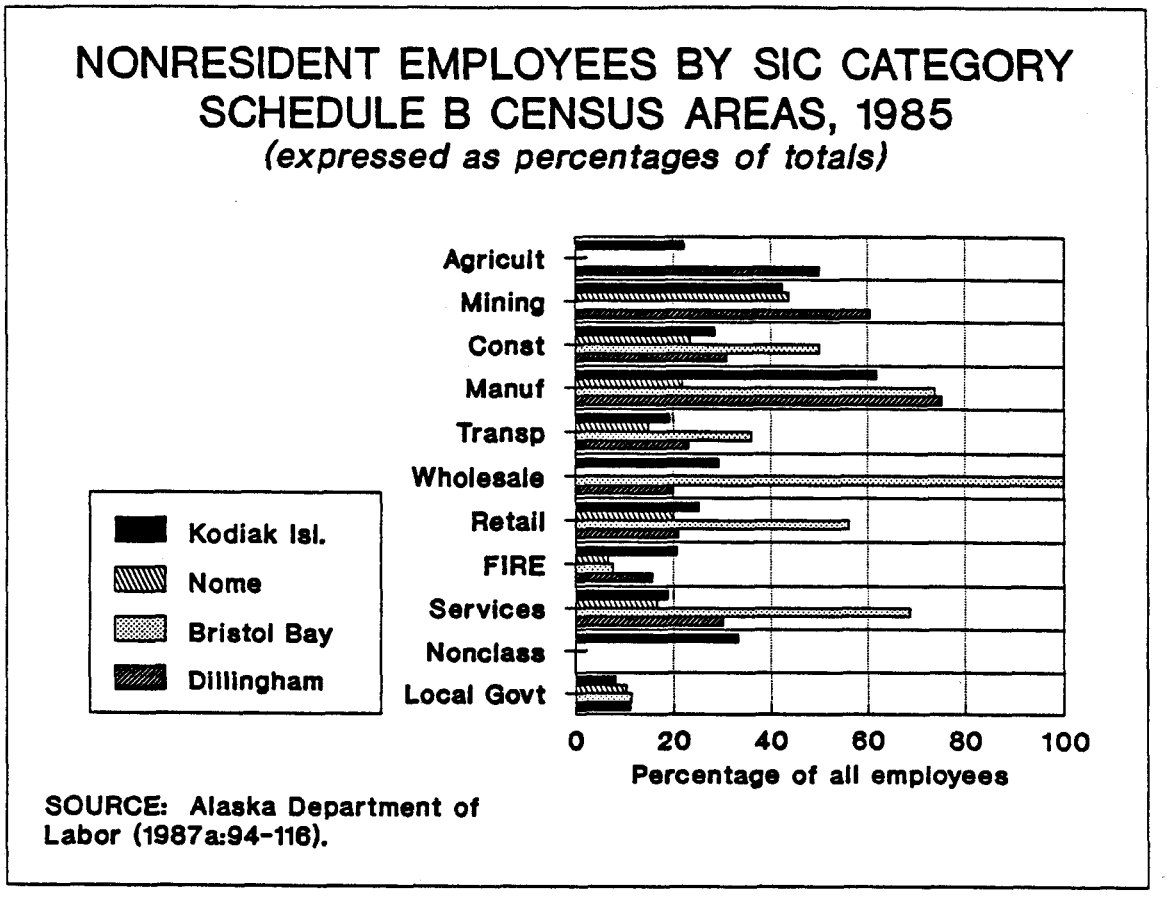

NONRESIDENT EMPLOYEES BY SIC CATEGORY
SCHEDULE B CENSUS AREAS, 1985
(expressed as percentages of totals)
Agricult
Mining
Const
Manuf
Transp
Wholesale
Retail
FIRE
Services
Nonclass
Local Govt
Kodiak Isl.
Nome
Bristol Bay
Dillingham
0
20
40
60
80
100
Percentage of all employees
SOURCE: Alaska Department of Labor (1987a:94-116).

Figure 5

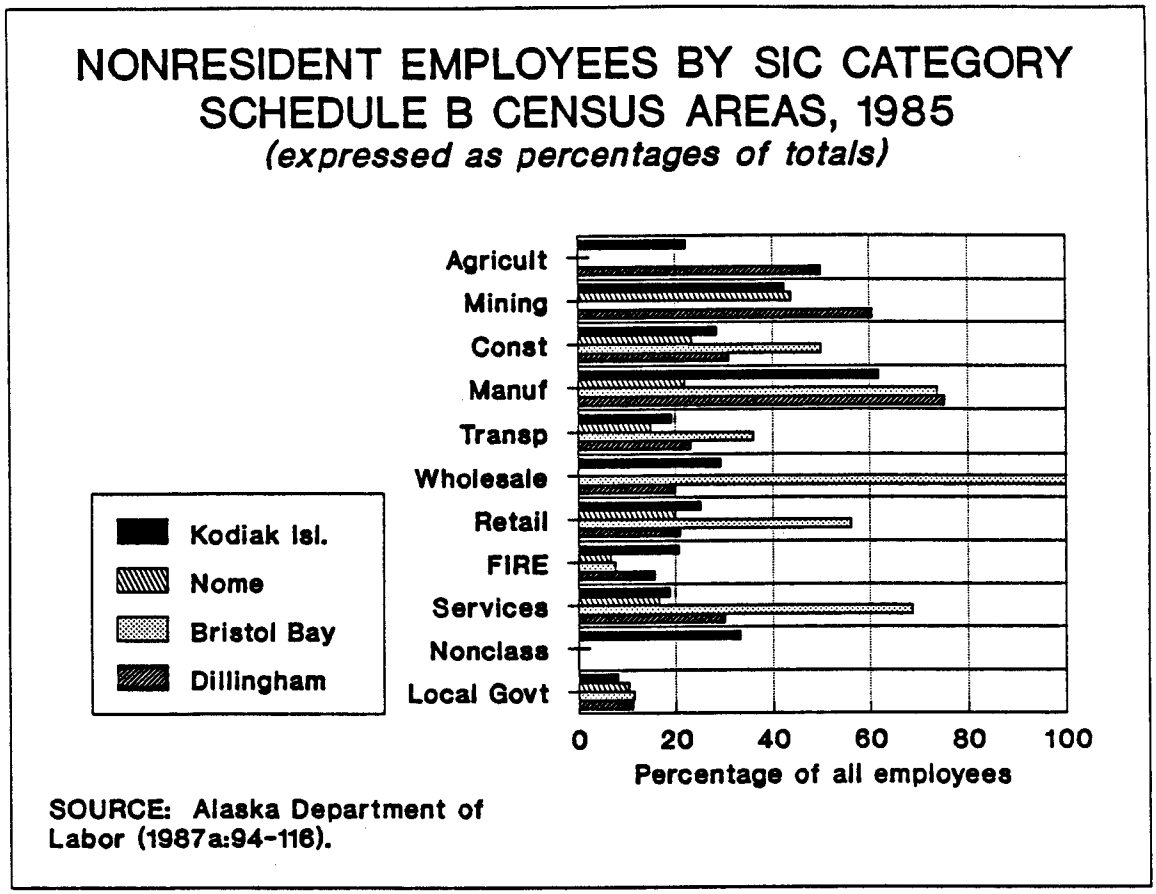

NONRESIDENT EMPLOYEES BY SIC CATEGORY
SCHEDULE B CENSUS AREAS, 1985
(expressed as percentages of totals)
Agricult
Mining
Const
Manuf
Transp
Wholesale
Retail
FIRE
Services
Nonclass
Local Govt
Kodiak Isl.
Nome
Bristol Bay
Dillingham
0
20
40
60
80
100
Percentage of all employees
SOURCE: Alaska Department of Labor (1987a:94-116).

Figure 6

Growth of the service, public-administration (government), finance and real estate, construction, and trade sectors of the Bristol Bay economy after 1970 was especially pronounced. The emergence of a finance, insurance, and real-estate sector was, of course, largely a consequence of ANCSA, because ANCSA profit corporations are conventionally classified under F.I.R.E. (Finance, Insurance, and Real Estate). Public-sector growth due to State and Federal transfers during this period was responsible for most of the growth in other areas, aside from F.I.R.E. Tables 10 and 11 enumerate employment by industry for 1970 and 1980 in the two largest Bristol Bay sample communities, Dillingham and Togiak. Table 12 lists numbers of employees in public-sector jobs in Dillingham, the administrative and commercial hub of the region, for 1986. These data together emphasize the importance of public-sector expenditures in Bristol Bay and show that, at least for *residents*, neither private-sector fishing nor public-sector services can be said to dominate the regional economy.

The general institutional and economic expansion that accompanied ANCSA, Limited Entry, and the revival of salmon stocks apparently has not led to sustained economic growth in real terms. Figure 7 shows that the total payroll in the study area have remained fairly uniform since 1980 (comparisons are presented with several other Schedule B regions). Figure 8 shows that average monthly wages in constant dollars actually have declined since 1980.

Figure 9 charts per capita income for 1984 in Schedule B regions and in Anchorage and compares these incomes to the United States average. The striking difference between the Dillingham (lower than the U.S. average) and Bristol Bay

Table 10

DILLINGHAM EMPLOYMENT BY INDUSTRY, 1970 AND 1980

Industry	1970	1980
Construction	10	44
Manufacturing	0	15
Transportation	43	56
Communications	13	26
Trade	41	79
F.I.R.E.	0	51
Services	109	258
Public Administration	27	97
Other	26	30
TOTAL	269	656

Source: U.S. Census, 1980.

Table 11

TOGIAK EMPLOYMENT BY INDUSTRY, 1970 AND 1980

Industry	1970	1980
Construction	0	3
Manufacturing	0	0
Transportation	0	3
Communications	5	4
Trade	6	0
F.I.R.E.	0	2
Services	22	36
Public Administration	5	10
Other	0	12
TOTAL	38	60

Source: U.S. Census, 1980.

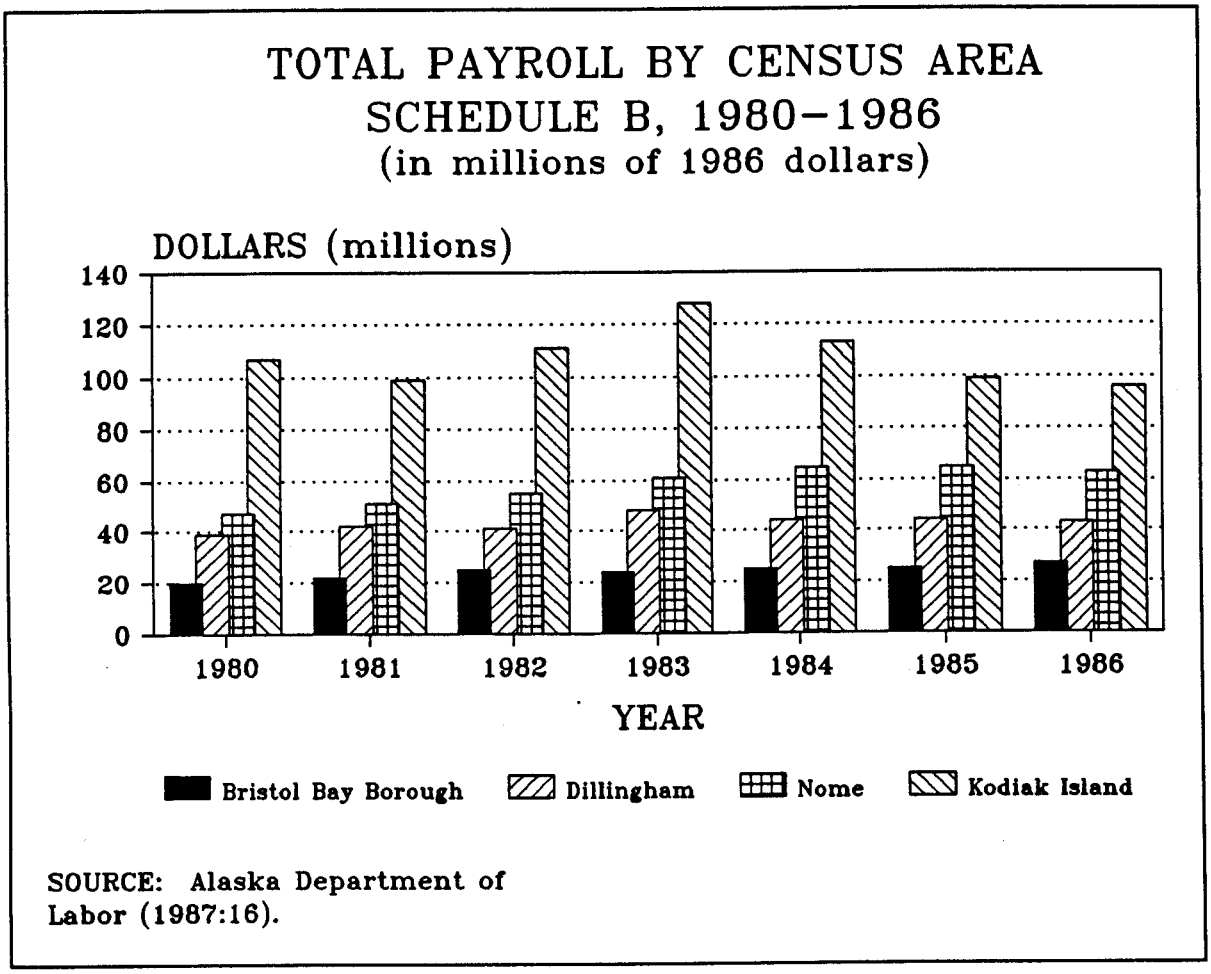
Table 12

GOVERNMENT AND NONPROFIT-CORPORATION EMPLOYMENT
CITY OF DILLINGHAM, 1986

	Number of Employees	
	Full Time	Seasonal
FEDERAL GOVERNMENT		
U.S. Army Corp of Engineers	0	5
USDOI, Fish and Wildlife Service	6	1
U.S. Post Office	5	0
U.S. Federal Aviation Administration	5	0
STATE GOVERNMENT		
Alaska Court System	3	0
Department of Commerce & Economic Dev.	1	0
Department of Community & Reg. Affairs	3	0
Department of Fish and Game	9	50
Department of Health & Social Services	7	0
Department of Labor (Employment Center)	1	1
Department of Law (District Attorney's Office)	3	0
Department of Public Safety		
Alaska State Troopers	1	0
Division of Fish & Wildlife Protection	1	2
Division of Motor Vehicles (contracted to City of Dillingham)		
Department of Transportation & Public Facilities	6	2
Legislative Affairs Office	0	2
University of Alaska		
Cross-Cultural Education Dev.	2	0
Marine Advisory Program	2	0
Rural Development Program	2	0
Rural Education Center	1	2
LOCAL GOVERNMENT		
Bristol Bay Coastal Resource Area Program	2	0
City of Dillingham	40 [a]	5
Dillingham City Schools	80	0
Southwest Region Schools	18 [b]	0
NONPROFIT CORPORATIONS		
Alaska Legal Services	2	0
Bristol Bay Area Health Corporation	100 [c]	0
Bristol Bay Area Housing Authority	6	1
Bristol Bay Native Association	25	0
Naanquaq Day Care Center	2	8
TOTAL	333	80

Source: Fall et al., December 1986.

[a] Includes 10 part-time positions.
[b] Dillingham office only; includes one part-time position.
[c] Includes 5 part-time staff.



SOURCE: Alaska Department of Labor (1987:16).

Figure 7

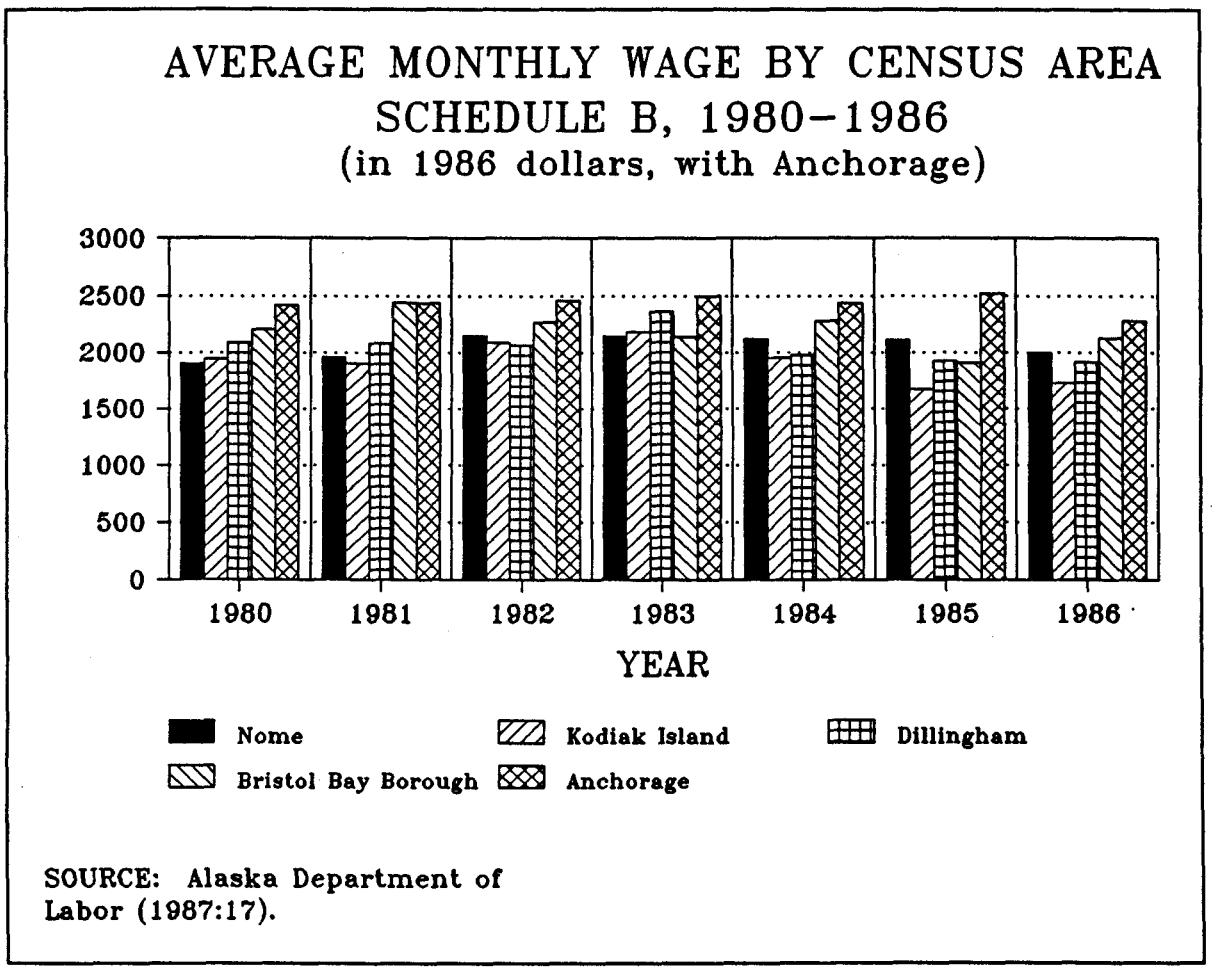
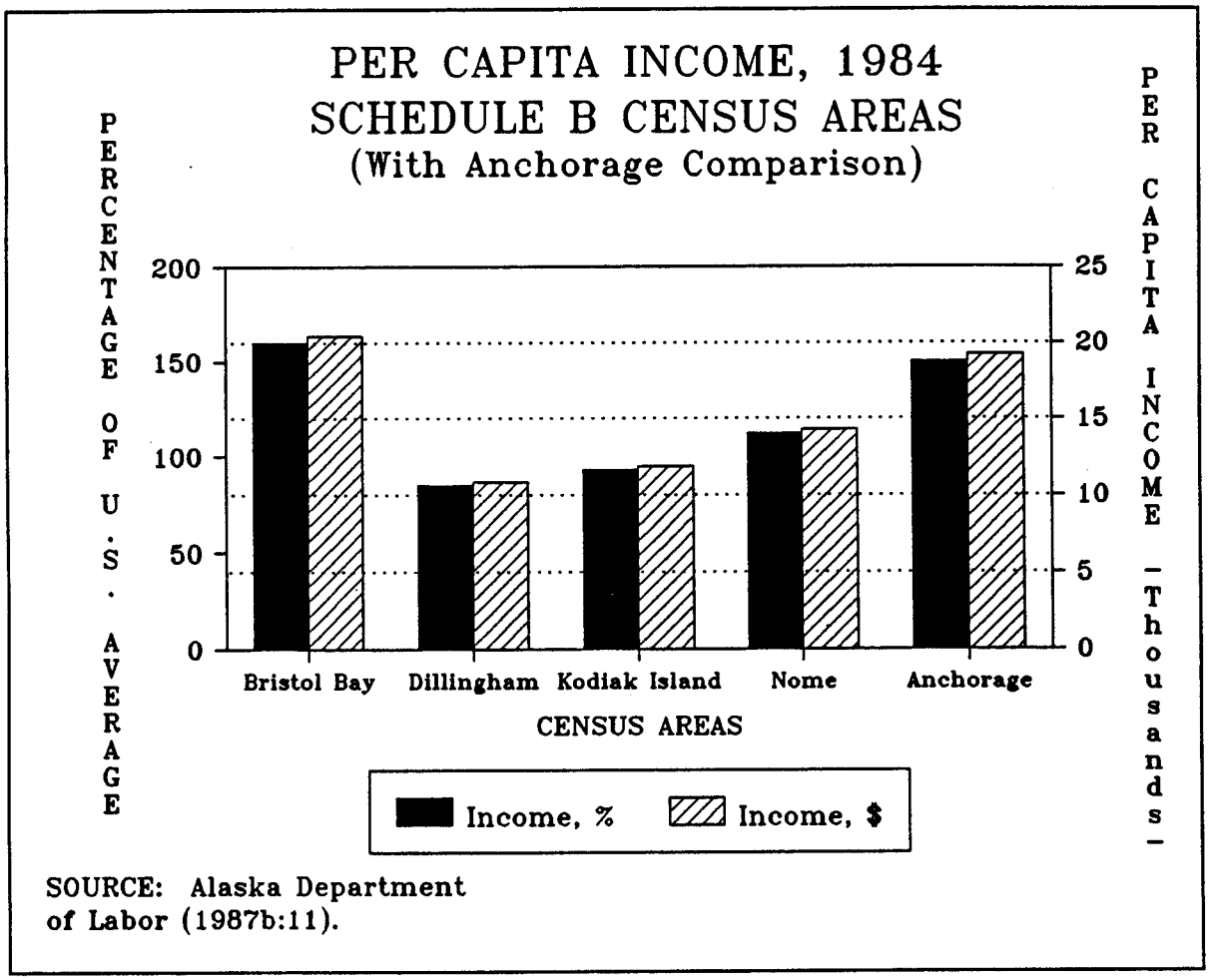

AVERAGE MONTHLY WAGE BY CENSUS AREA
SCHEDULE B, 1980–1986
(in 1986 dollars, with Anchorage)
3000
2500
2000
1500
1000
500
0
1980
1981
1982
1983
1984
1985
1986
YEAR
Nome
Kodiak Island
Dillingham
Bristol Bay Borough
Anchorage
SOURCE: Alaska Department of Labor (1987:17).

Figure 8



SOURCE: Alaska Department of Labor (1987b:11).

Figure 9

(Borough) census areas implies that, despite lucrative earnings, many study-area residents are below the wage standards of the United States. Given high costs of living, they may be in a position of double jeopardy (i.e., modest wages, exorbitant costs). Figure 10 lends support to that premise: The Dillingham census area registers a per capita income level at about 80 percent of the U.S. average, yet food costs for a family of four (in Dillingham City, 1987) list at 163 percent of the U.S. average.

Field research carried out during the early spring months of 1988, 1989, and 1990 provided market-basket-price data that supplement the cost data summarized above. Tables 13 and 14 list prices for a market basket of food and dry goods at stores in each of the Bristol Bay sample communities. Although the lines of supply from Dillingham are most tenuous and costly in the Togiak case, Manokotak logs the highest costs among the communities. Manokotak has a single store and cannot buy in sufficient quantities, due to a small consumer population and limited storage space, to achieve substantial discounts. In addition, Manokotak is so close to Dillingham and enjoys such frequent service that the convenience factor alone makes air shipping at frequent intervals a regular occurrence. On the other hand, Togiak boasts three stores (and two very small home-based retail stores operating during irregular seasonal hours) and substantial intravillage retail competition. Key informants associated with the stores indicate that price control as well as quality control are therefore serious concerns. These factors together yield relatively low prices for Togiak consumers. Naknek and Dillingham each have superior access to warehousing and transportation services, resulting in generally low prices in those communities.

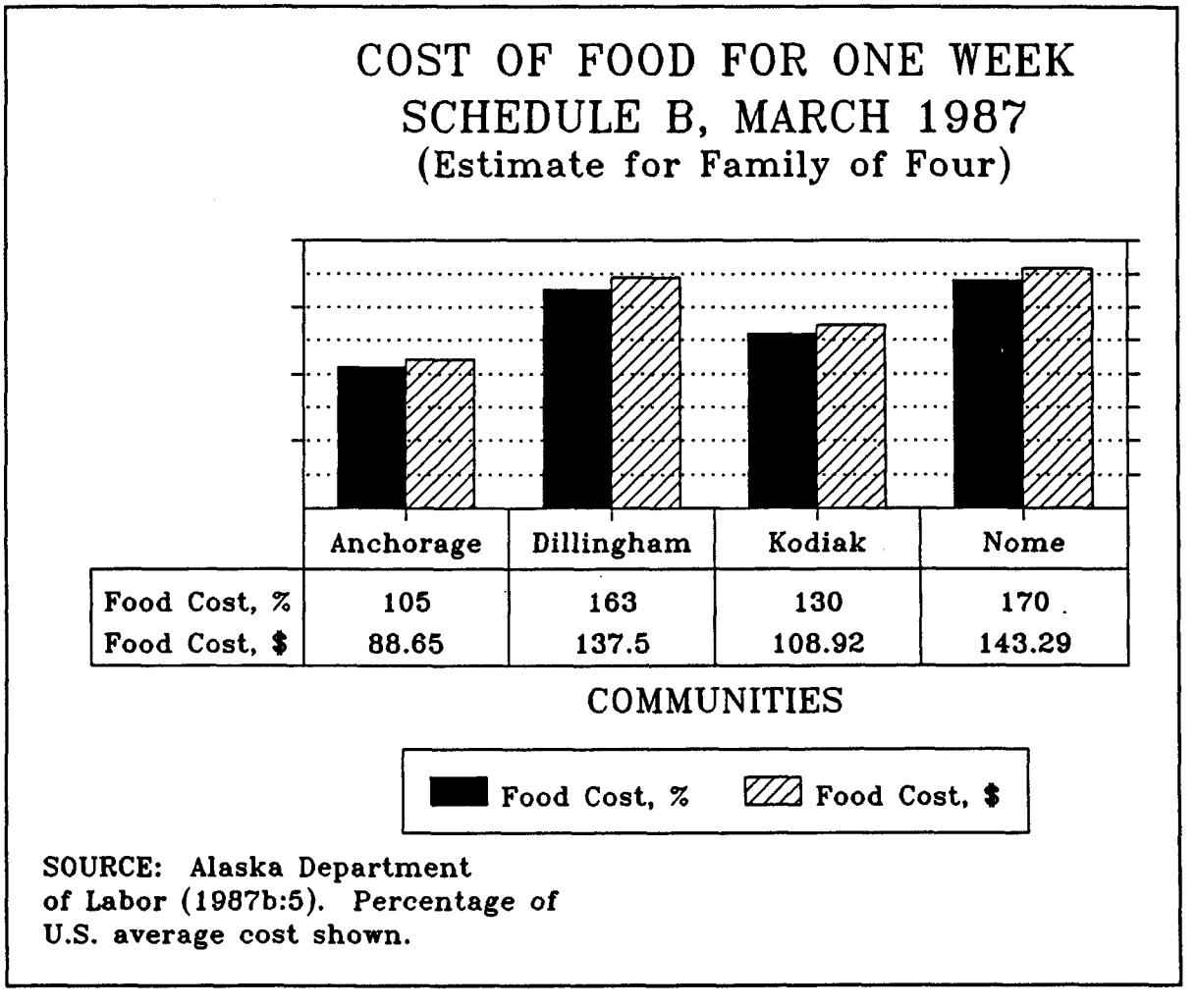


Figure 10

Note: "Food Cost, %" represents a comparison to the U.S. average

Table 13

RETAIL PRICE COMPARISONS, BRISTOL BAY SAMPLE COMMUNITIES, 1988

Commodity	Dillingham		Manokotak	Naknek	Togiak	
	Store A	Store B			Store A	Store B
10 lb flour	5.15	4.75	6.30	5.69	5.30	5.69
12 oz evap milk	.89	.85	1.10	.99	1.10	.79
1 lb onions	1.19	.49	na	.89	na	.66
48 oz oil[a]	3.89	4.75	3.40	4.19	4.15	3.29
6-pack cola	3.69	3.69	4.80	3.80	4.50	3.90
10 lb sugar	6.79	6.69	7.55	6.55	7.00	6.65
18 oz corn flakes[b]	2.49	2.89	3.00	na	na	2.95
18 oz bread	1.69	2.19	3.20	2.19	na	2.09
1 lb bacon	2.69	2.89	na	2.89	na	2.55
3 lb coffee[c]	10.59	13.09	9.20	16.72	11.10	11.79
1 lb butter	3.09	3.19	3.65	2.69	1.85	2.79
12 qt powd milk	7.99	7.85	na	8.65	7.35	7.59
22 oz punch mix	3.69	3.65	3.90	3.72	4.00	3.85
2-D batteries	2.99	3.49	2.70	3.19	3.45	4.25
35-hp Evinrude	na	2500	na	2499	na	2251
1 gal gasoline	1.41	na	1.89	1.48	1.73	1.73
16-ft skiff	na	na	na	2300	na	na
Pampers 12[d]	7.05	6.55	17.35	6.15	6.65	6.15
1-gal Coleman	6.99	8.95	na	6.99	na	7.00
ax handle	na	8.49	9.00	na	na	8.89
1 qt motor oil	2.49	1.79	2.25	1.99	1.99	1.85
Coleman lantern	na	51.55	na	60.00	na	na

Source: Field notes.

[a] 32 oz in Dillingham A, Manokotak, and Togiak.
[b] 25 oz frosted flakes in Dillingham A and Togiak.
[c] 2 lb size in Manokotak.
[d] Huggie's Maximum Strength 28's.

Table 14

RETAIL PRICE COMPARISONS, BRISTOL BAY SAMPLE COMMUNITIES, 1989

Commodity	Dillingham		Manokotak	Naknek	Togiak	
	Store A	Store B			Store A	Store B
10 lb flour	5.55	5.45	6.80	5.59	5.25	6.15
12 oz evap milk	.75	.75	1.10	.75	1.01	.75
1 lb onions	.99	.95	na	.79	1.85	.55
48 oz oil[a]	3.99	4.89	4.99	4.65	4.70	5.32
6-pack cola	3.79	3.79	4.80	3.79	3.90	3.39
10 lb sugar	6.99	7.39	8.40	7.29	8.25	6.59
18 oz corn flakes	3.19	3.29	3.90	3.09	na	3.09
18 oz bread[b]	1.69	1.79	2.75	1.49	na	1.69
1 lb bacon	2.29	2.39	na	2.49	na	2.39
3 lb coffee	12.35	14.49	14.95	14.21	11.10	15.13
1 lb butter	2.85	2.95	3.45	2.65	3.52	2.85
12 qt powd milk	8.99	7.95	na	7.65	7.80	7.65
22 oz punch mix	3.69	3.85	4.00	4.15	3.65	3.99
2-D batteries	3.19	3.19	4.00	3.79	3.19	--
35-hp Evinrude	na	na	na	2599	na	
1 gal gasoline	1.64	1.64	2.00	na	1.73	1.75
16-ft skiff	na	na	na	2199	na	na
Pampers 12[c]	7.69	7.19	17.65	6.15	11.99	7.18
1-gal Coleman	6.99	na	na	6.99	na	7.50
ax handle	8.95	na	9.00	na	na	na
1 qt motor oil	2.49	2.29	2.25	1.99	1.99	1.85
Coleman lantern	na	---	na	---	na	na

Source: Field notes.

[a] 32 oz in Togiak 2; 64 oz. in Manokotak.
[b] 24 oz in Dillingham, Manokotak, Togiak, Naknek.
[c] Pampers 32 ct.

The regional economy is poorly characterized only in terms of the commercial economy, however, because most households harvest local, naturally occurring resources for food. It is difficult to disentangle commercial and subsistence activities in all rural Alaskan locales with a robust fisheries economy, as in the case of Bristol Bay. Because households involved in fishing make substantial investments in commercial gear that may also be used for subsistence harvesting, the balance of expenditures and incomes derived from the activities defy any simple analysis. Yet it is clear that commercial and subsistence activities are integrated by a joint, complementary distribution of labor and capital even if the balance of that distribution is unclear.

Some sources attribute the tight integration of commercial and subsistence activities to similarities of species, timing, environments, and labor requirements. Because commercial and subsistence fishing require the same basic skills and parallel investments at common times, or at very different times so that opportunity costs are eliminated, the activities "fit" together (see Wolfe, Gross et al. 1984 for this argument). Other researchers argue that early involvement in the fur trade immediately and permanently altered the prevailing harvesting patterns in Bristol Bay, and that dependencies on trade goods were accompanied by the elimination of some harvesting practices early on, thus establishing a new, synchronized annual round that was essentially an innovation (see VanStone 1984:229, 237). In this view, two systems do not coexist side by side, but rather a single system exists that is poorly characterized in terms of a "fit" between independent systems.

The argument proposing a natural "fit" between subsistence harvests and cash incomes, predicated in part on the assumption of a range a complementary activities that do not conflict, finds its poorest applications in large hub communities. These communities are characterized by large ranges of economic opportunities that would, in theory, permit numerous opportunities for blends of economic activity and the greatest flexibility for avoiding undesirable opportunity costs. Dillingham is a case in point. Available harvest data show that, contrary to predictions based on the "fit" premise, harvests tend to be lower in Dillingham. Table 15 lists harvest volumes from a sample of respondents in Dillingham, Manokotak, and Naknek in 1982.

Table 15

NUMBER OF HARVESTED ANIMALS AND FISH, BY SPECIES, BY VILLAGE, 1982

Species	Dillingham	Manokotak	Naknek
Salmon	3,039	3,009	2,305
Whitefish	195	773	85
Pike	187	843	50
Smelt	7,620	6,840	8,066
Herring	900	1,010	0
Moose	11	17	23
Caribou	36	20	74
Seals	3	13	1
Ducks	286	443	559
Geese	106	234	157
Swans	2	6	0
Beaver	21	74	2
Fox	37	299	26

Source: The ADF&G, Division of Subsistence, reported in Impact Assessment, Inc. (1984:22-23).

These data, based on roughly proportional samples in many Bristol Bay communities, indicate that communities with broader opportunities calibrated to several seasons do not necessarily engage in harvests "integrated" to those alternative activities in any obvious sense. Dillingham harvests are low in comparison with Manokotak, one of the smallest communities in the region. The ideologies representative of the larger hub communities, such as Dillingham, do not promote subsistence harvest activities in the ways they are promoted and sustained in smaller, largely Native communities.

Native Corporations. The BBNC is the regional for-profit corporation in Bristol Bay created by ANCSA. The BBNC derives some of its revenues from the Anchorage Westward Hilton Hotel. It also participates in a joint venture with several other regional corporations and VECO to lease oil drilling rigs on the North Slope. The BBNC's other sources of revenues are interest on a stock portfolio and Section 7(i) payments from other regional corporations. Its investments largely are external to the region. The BBNC grew out of the Bristol Bay Development Corporation, founded in 1969 to administer Office of Economic Development (OED) educational and economic development programs.[20] The BBNC also assumed the land ownership responsibilities that a companion organization, BBNA, first investigated in 1966 (see below).

The BBNA administers State and Federal programs in Bristol Bay and is recognized as a tribal entity by the Bureau of Indian Affairs (thus, the BBNA administers BIA tribal operations, assistance, and real estate programs in the region).

---

[20] Note that numerous village and regional corporations trace their roots to corporations formed in the 1960's to administer OED programs. Kiqiktagruk Inupiat Corporation (KIC), the Kotzebue village corporation, is an example of a village ANCSA organization formed on this model. See NANA Region KI Summary.

Most BBNA programs are Federal in origin; over recent years, the BBNA has been responsible for provision of Johnson-O'Malley, CETA (Comprehensive Employment and Training Act), EDA (Economic Development Administration), and ANA (Administration for Native Americans) programs. The BBNA also is responsible for administration of a regional Coastal Zone Management Program, funded by the State of Alaska.[21] Other State programs include weatherization and energy assistance.

Until 1980, the BBNA administered housing and health programs in the region. In 1980, the Bristol Bay Housing Authority (BBHA) and Bristol Bay Area Health Corporation (BBAHC) were incorporated as independent agencies to administer HUD and Public Health Service (PHS) programs, respectively. The BBAHC, which manages the regional hospital at Kanakanak and oversees the community health aides in regional villages, has assumed responsibility for primary health care (i.e., inpatient care at the hospital) in addition to ambulatory care. In so doing, it joins the Nome and Edgecumbe service units and the Maniilaq Association as the only Native authorities in the State administering hospital care.[22]

Most of the village corporations have concentrated their investment activity within their local communities and have focused on providing needed services to residents. For instance, Togiak Natives Ltd. owns and operates Our Store, a large retail and service

---

[21] There are two CRSA's in this region: the Bristol Bay Borough CRSA, serving the borough communities only, and the Bristol Bay CRSA, which comprises an area ranging from Port Heiden to Togiak on the north and Nondalton on the northeast, and which includes some south-peninsula villages. Hence, three of the communities (Togiak, Manokotak, and Dillingham) are in one CRSA, and the fourth (Naknek) is in another CRSA. The Bristol Bay Coastal Management Program Management Plan was completed in 1987 (see Bristol Bay Coastal Resource Service Area 1987).

[22] Maniilaq Association assumed responsibilities for inpatient care in the NANA region in June 1988 under an interim agreement with AANHS (IHS).

store in Togiak, owns and leases a fish-processing plant in Togiak, and runs a sports-fishing enterprise. Choggiung, Ltd. and Paug-Vik, the village corporations of Dillingham and Naknek, respectively, own and manage commercial buildings and have subdivided and sold some of their land for residential development. Paug-Vik also owns land and housing that is rented to Federal and State personnel (Federal Avaiation Administration [FAA], ADF&G, U.S. Air Force) in King Salmon.

III.E. Health, Education, and Social Services

Health: Health care is provided in the Bristol Bay region by a number of public agencies whose service domains sometimes overlap and occasionally conflict. The Federal Government is represented in the IHS programs operated by the Alaska Area Native Health Service (AANHS). Inpatient, long-term, and specialized care are available at the Alaska Native Medical Center in Anchorage through AANHS. The Federal Government also provides the services contracted through the BBAHC as mandated by the 1975 Indian Self-Determination and Education Assistance Act. The Bristol Bay region includes five villages that fall under the administrative territory of the Anchorage Service Unit of IHS.

The BBAHC was organized in 1973 and serves 6,000 people in 32 villages, all of whom are represented on a Native board of directors. Their programs presently include health education, emergency medical services, and primary care through the Community Health Aides in each village. These programs are funded through IHS contracts. The BBAHC also operates the 29-bed Kanakanak Hospital in Dillingham, which was, until

1981, administered through the United States Public Health Service. The hospital has two general practitioners, a dental clinic, pharmacy, laboratory, x-ray, and other facilities.

The State Department of Health and Social Services provides funding for a number of programs in the region, including the services of four Public Health Nurses, which complement the work of the Community Health Aides in the villages.

Mental health has been an issue of particular concern in recent years. While behavioral illness has taken over as the leading cause of death throughout Alaska in the last few decades, rates of mortality due to accidents, alcohol, and homicide have been disproportionately higher in Bristol Bay than in the rest of the State (Palinkas 1987:292). The high transient rate, lack of adequate housing, and conflicting Native and non-Native worldviews have all been cited as causes (Palinkas 1987; Braund and Payne 1983).

The BBAHC's Human Services department has developed a number of programs to try and address these concerns. Their staff includes a clinical psychologist who offers a range of counseling and referral services and administers programs in prevention of drug and alcohol abuse. Mirroring developments throughout the State, alcohol has become the central focus of mental health programs. The BBAHC has an alcoholism counselor and six trainees who work out of Dillingham and travel to the villages in conjunction with the Community Health Aides. Another BBAHC program based in Dillingham is the Alternative Activities to Drug Abuse Project, providing recreational alternatives to youth (Barlow et al. 1984:207). Dillingham also has local chapters of Alcoholics Anonymous and Alanon. During our research, it was indicated that such

programs would be equally welcome in many of the villages, where a lack of activities for local youth is a frequent complaint.

Education: Responsibility for educational services in the study area is divided between several administrative bodies: the City of Dillingham, the Bristol Bay Borough, and two REAA's, the Southwest Region School District and the Lake and Peninsula School District.

The REAA's were created in 1975 when the State of Alaska transferred responsibility for rural Alaska's schools to districts organized around the regional boundaries established by ANCSA. Inspired in part by the growing regionalism in rural Alaskan communities, these districts were meant to bound areas that are culturally, economically, and linguistically homogeneous (Braund and Payne 1983:309). This legislation also closely followed the Molly Hootch decision, aimed at establishing greater local control over education. While REAA's have proved effective for a number of purposes, including establishing boundaries for coastal zone management, their organization may actually prove to be a deterrent to the eventual creation of boroughs in Bristol Bay, an already controversial issue (see III.G, Main Trends of Sociopolitical Change). Though many residents voice support for the establishment of regional structures to provide local government services, in fact the power of REAA's is limited in this respect. As State-funded entities, REAA's are unable to levy taxes, limiting their ability to expand into service provision (Braund and Payne 1983:312).

The Southwest REAA, which is based in Dillingham, extends from Togiak to the Bristol Bay Borough. The Lake and Peninsula REAA, based in King Salmon, covers the

eastern territory of Bristol Bay and the Alaska Peninsula, including the Chignik communities. The City of Dillingham administers education for the citywide area, while the Bristol Bay Borough provides education for Naknek, South Naknek, and King Salmon. Economic discrepancies between the Dillingham City schools and the surrounding REAA's, which have greater access to State funds, have caused problems in recent years. This discrepancy has led to low staff morale among Dillingham teachers, who have gone without a pay raise or cost of living raise for 4 years. The Dillingham School District has been involved in trying to get the State to adopt a different funding formula for aiding city schools such as Dillingham.

Each of the communities in this study now has a school with grades K-12 and a range of bilingual and bicultural programs. Bilingual programs are particularly strong in Togiak and Manokotak, where 84.4 percent and 80.7 percent (respectively) of the students speak Yupik only or Yupik with some English (Braund and Payne 1984:148,160). Adult and community education programs are conducted through the Bristol Bay Rural Education Center, a division of the University of Alaska, which has a facility in Dillingham as well as outreach programs.

Education is a widely cited priority by residents. In response to a question on the key informant protocol, almost 74 percent of respondents stated they believed there was a strong association between formal education and success. Many community members are proud of the schools and cite the recent rise in the number of students seeking higher education, particularly in Togiak (field notes; Southwest Alaska Municipal Conference publication on Togiak, October 1987).

However, a number of concerns regarding the schools also were frequently cited. One widely perceived problem in the smaller rural communities is the difficulty of attracting committed and stable teachers. The isolation, shortage of rental housing units, and other difficulties lead to high turnover rates. In 1980, 29 teachers returned to schools in the Southwest REAA, and 19 new instructors were hired--a shift from the 1979 ratio of 14 new to 31 returning teachers (Barlow et al. 1984:197). This rate actually is somewhat lower than other areas of the State, which has been attributed to the presence of a headquarters for rural teacher training in Dillingham (Barlow et al. 1984:423). One Bristol Bay Borough official noted a similar problem in that area, although he also cited a declining turnover since his arrival in the area nearly 30 years ago. This confirms Statewide changes in replacement rates of teaching staff, which have shifted from 50 percent in 1953-58 to 30-35 percent in 1958-60, and finally to the 1983 rate of 20 percent for Dillingham and 26 percent for the Bristol Bay Borough.

Residents voiced concern about these educational issues and the possibilities of decreased funding for bilingual, bicultural programs and the Johnson-O'Malley-funded preschool programs. These concerns coexist with the equally strong desire to maintain the traditional values that often clash with formal educational curriculums. One Dillingham respondent stated that while she hoped to raise her only daughter in a traditional manner, speaking Yupik, she also expected her daughter to pursue a Master's degree--since, in her words, "A B.A. doesn't mean anything anymore." Other researchers have noted this tension between traditional values and the educational system as the bearer of Western values. Palinkas observed that "In some communities, children are

told by their parents not to speak of school while at home because of the perceived threat of the values taught in the schools to traditional orientations." (1987:300).

Social Services: Social Services are provided in Bristol Bay through both the Alaska State Division of Family and Youth Services and the Bristol Bay Native Association. Over half the household interviewees stated they used these services (52.2%). This compares with 1984 data, which showed Bristol Bay residents using health-care services at a rate slightly higher than the rest of the State, but social services on par with or lower than other regions (Barlow et al. 1984:207-208).

The BBNA provides a number of programs in addition to those previously cited in the areas of mental health and alcohol prevention. The agency administers a federally funded Indian Child Welfare Program, working with the Traditional Councils on child protection and the pursuit of Native foster homes. The BBNA staff also work in conjunction with a number of other Dillingham agencies to provide diverse family services. For example, through a memorandum of agreement with BBNA, S.A.F.E (Safe and Fear-Free Environment, a member of the Alaska State Council on Domestic Violence and Sexual Assault) provides shelter and transportation to victims of family violence. The S.A.F.E. organization has worked to develop culturally appropriate materials concerning domestic violence, to expand community outreach programs in the villages, and to obtain funding for a new shelter facility. One staff member stressed that they were working on "getting more Native involvement every year as board members and as volunteers." This seems to be particularly important in areas where traditional

gender distinctions prevail and family services are viewed as, in the words of one informant, "breaking up good marriages."

The BBNA's Elderly Services Program complements the work of the Dillingham Senior Citizens' Center. Both receive funds from the Older Alaskan's Commission, which the Seniors' Center supplements with rental fees from their conference room and apartment units. The BBNA's program maintains Senior Services Coordinators in five of the villages, provides meals in 12 villages 3 days a week, and offers advocacy and referral services. The newly constructed, modern Senior Citizens' Center in Dillingham sponsors daily lunches and gender-segregated steam baths 1 day a week in an attempt to recreate a sense of the community atmosphere many elders were used to in the villages. The center's population is 80 percent Native, so that provision of their needs is a priority.

Other BBNA programs include an infant-learning program for developmentally handicapped children, employment and training counseling and services, and a realty office to assist with Native land allotments and restricted-townsite lots. Most residents had favorable comments about the social services and programs available through the BBNA.

The State Division of Family and Youth Services employs a social worker in Bristol Bay who is responsible for counseling, child and adult protective services, and licensing for foster homes and day care. State and village entities have potential conflicts in the area of child protection. Following the Statewide post-ANCSA movement towards greater autonomy and local control, many Native associations have actively interceded to prevent the removal of Native children from their homes and

villages. In 1987, BBNA filed 40 intervention notices on behalf of the traditional councils (requesting involvement with the court proceedings) in attempts to prevent such action. While State workers are often Native or non-Natives sensitized to Native concerns and cross-cultural differences, child protection can provoke tensions in provision of services and definition of "turf." The dilemma is comparable to that facing Native teachers who offer positive role models for students as members of the same community but also represent the values and needs of an assimilationist educational system (Barnhardt 1974).

III.F. Voluntary Associations and Community Activities

There are differences between communities in Bristol Bay in terms of the types of social activities in which residents are engaged. The larger communities of Dillingham and Naknek tend to have more and better facilities in which groups can gather than the smaller villages in Bristol Bay; and both communities have a fairly wide range of civic, fraternal, recreational, service, and social organizations. These include volunteer fire departments and ambulance crews, chambers of commerce, various church auxiliary groups, clubs such as the Lions and the Elks, sportsmen associations, sports leagues, and youth organizations (e.g., Girl and Boy Scouts), to name a few. Both Dillingham and Naknek also have organizations devoted to coordinating special community events, such as Beaver Round-up and the community concert series in Dillingham or Fishtival and Winterfest in Naknek; and both communities have regularly scheduled bingo gatherings, which are occasions for socializing and fund raising.

In smaller communities such as Togiak and Manokotak, more formal voluntary organizations are less prevalent. Subsistence activities, steam baths, and other traditional means of social interaction continue to pattern village life. The organized activities that do take place generally revolve around the church and the school. Basketball and snowmobiling are two favorite pastimes. Villagers often will travel long distances in all kinds of weather to play in basketball tournaments--basketball has become popular and has been facilitated by the construction of high schools with gyms in most villages.

Fishermen's associations, which often gather to address specific political and economic issues, also fulfill important social functions, especially in Dillingham and Naknek. Such organizations operating in the Bristol Bay region include the Alaska Independent Fishermen's Marketing Institute, the Western Alaska Cooperative Marketing Association, and the Bristol Bay Herring Marketing Co-op. These organizations serve to differentiate fishermen occupationally from other groups and locals from outsiders.

III.G. Main Trends of Sociopolitical Change

This section summarizes the major directions of sociopolitical change that have been discussed thus far in Sections I, II, and III.

Organizational Interdependence: This term refers to increasing intercoordination among institutions, new and old, that previously operated relatively autonomously and is a counterpoint to the trend of *institutional consolidation* noted for the NANA region. The Bristol Bay pattern, however, need not imply merger or fusion of institutions. In Bristol Bay, some institutions have in fact merged in order to preserve scarce resources

and increase efficiency in joint activities where a union of common interests exists. For instance, the Alaska Peninsula Corporation merged four small village corporations (Port Heiden, Ugashik, South Naknek, and Newhalen), eliminating the need for (in effect) four duplicate sets of administrative procedures. Choggiung Corporation is another case in point. This village corporation for Dillingham provides administrative services for several small village corporations in the Nushagak subregion.

In contrast to Impact Assessment, Inc. (1984), we suggest that continuing consolidation and merger among regional organizations is unlikely until Dillingham achieves sufficient political support to form a borough. This issue is controversial. The reasons for incorporating into a borough are to gain greater political leverage and greater access to State funding. Reasons for not incorporating into a borough include Dillingham's limited ability to provide services due to its low tax base. If a borough were formed, it would have to fund its own schools and take over the functions of the Southwest Region REAA (School District). People in Dillingham, the regional center, fear they will become more financially responsible for the villages. The villages, on the other hand, are concerned about their representation and about being taxed to support Dillingham. Smaller communities fear that power will reside with the larger communities, especially Dillingham, and that larger communities will control the financial resources. Residents of outlying villages strenuously object to borough incorporation over the short term.

Rather, formal associations designed to coordinate increasingly complex management and administration among organizations representing *different* or *multiple*

interests are more likely to develop than boroughs. The Bristol Bay Cooperative Management Plan and the Bristol Bay Coastal Zone Management Program are two cases in point of this tendency.

The descriptive data presented thus far portrays the Bristol Bay region as a mosaic of multiple institutions with little formal coordination, which, furthermore, may on occasion grow fractious and divisive. Moreover, the Bristol Bay population reveals little homogeneity aside from local or subregional concentrations that may show substantial internal coherence due to common interests, history, language or culture. Secular organizations such as economic-interest groups (for example, fishermen's organizations) are likely to establish interdependence with other groups, serving as bridges that focus on specific mutual interests despite disagreements on other issues.

The Southwest Alaska Municipal Conference, a coalition of 24 incorporated cities, 2 boroughs, and 29 unincorporated cities in the Kodiak, Aleutian-Pribilof, and Bristol Bay regions, is a third case in point. The Conference seeks to conduct market analyses, coordinate economic development, and identify common problems and joint solutions, all geared primarily toward regional and community development. The Conference knits together a preexisting interest group comprised of the key fisheries communities of the State and, by limiting attention to common interests, avoids entirely the other (often competing) community priorities for which no consensus exists.

The loose affiliation between a segment of Togiak's population and the Yupik Nation is a fourth case in point. No fusion or merger has occurred; rather, the organization assumes the role of coordinating activity among numerous institutions

related to a single or limited set of discrete objectives. The authority and latitude of the Togiak's Nasaurlurmiut Traditional Elders Council is in no way jeopardized, yet a small set of goals shared in common with numerous other Native organizations is advanced at little cost or risk. During a period of economic decline, diminishing revenues and increased competition for limited resources at the State and Federal level, these coordinated efforts are apt to continue.

Diversification of the Private Sector: Although it is premature to anticipate the scope or speed of private-sector diversification, most plans now in place or in preparation stress an emphasis on this form of development. The Bristol Bay Coastal Management Program plan identifies numerous avenues for private-sector diversification, not only in established industries such as commercial and sport fishing but also in infant or new industries, such as mining, timber, and hydroelectric power (see Bristol Bay Coastal Resource Service Area 1987).

Several key informants identified diversification of bottomfish harvests as a goal, noting yellowfin sole specifically in this connection. Feasibility studies are under way, and the Southwest Alaska Municipal Conference is playing a role in studying potential markets and investments for this species. Yet few concrete proposals or strategies for accomplishing this diversification have been offered, and the reader should recognize that private-sector diversification is a perennial proposal in rural Alaska (especially during periods of decline in public-sector funds) that to date has not met with wide success.

Restrictions on Resource Access: As public-sector revenues decline and competition for renewable resources increases, restrictions on and costs levied for access to the resources are likely to increase. Many communities in the Southwest Alaska Municipal Conference are now establishing plans to levy raw-fish taxes in their port areas, if they have not already done so. Togiak is a case in point. One impetus for Dillingham's muted but plain desire to create a borough in the future is the prospect of an areawide raw-fish tax. Hence, economic necessity may motivate one form of restriction: pay as you go. This option is doubly attractive because the taxes are levied on many nonresidents for whom services are not provided.

Statutory or regulatory restrictions are also salient in this connection. The Bristol Bay Coastal Management Program stipulates numerous restrictions designed to protect and conserve natural resources, recognizing at the outset that the fierce competition for the resources is not likely to abate. The AMSA's (Areas Meriting Special Attention) are also identified in key wildlife areas, particularly the Togiak area and the Nushagak-Mulchatna River drainages. New restrictions in these areas could limit activity by nonresidents and residents alike in vulnerable areas now used by hundreds of commercial and sport users every year.

Additionally, legislative and tax reform at interregional or State levels may create indirect restrictions or at least levy additional costs for some users of Bristol Bay resources. In 1988, the mayor of Dillingham called for reinstitution of a State income tax on the grounds that nonresidents reap the major profits from Bristol Bay fisheries yet leave nothing behind. If municipalities are going to be faced with increasing revenue

burdens, he argued, then an equitable income tax will at least recoup some of the earnings that are presently lost, thereby permitting the State to charge nonresidents for some resident services. This controversial proposal was the first of its kind in the region.[23]

Finally, legislative or administrative changes in Limited Entry regulations would most certainly alter the prevailing access to Bristol Bay resources. For several years, the State has considered instituting a Limited Entry scheme with respect to herring. Such changes are likely to pose more rather than fewer restrictions over the long term.

IV. HOUSEHOLD ORGANIZATION AND KINSHIP

This section describes domestic social organization in the Bristol Bay region in three parts: household structures and economic functions, kinship organization, and socialization.

IV.A. Household Structures and Economic Functions

Nuclear households predominate in the Bristol Bay region but, as is common throughout rural Alaska to a greater or lesser extent, these discrete residential households often function as units tied to larger extended-kin groups. These functions include customary labor, capital, and food sharing but may now also include cooperative commercial harvests of salmon for pay or profit share (see Impact Assessment, Inc. 1984; Wolfe, Gross et al. 1984 for descriptions of these practices in the post-1980 period).

---

[23] Around the same time, Dillingham's mayor vetoed a tax increase that would have raised the property-tax mill rate from three to six and would have generated school support of $300,000 locally. He did this on the grounds that education is a State responsibility. This challenges the State to redefine local tax obligations. Under State law, communities are required to meet a mandatory level of support for schools or face cuts in State funding. The mayor termed that requirement "blackmail."

Entire communities may fission during summer months and reestablish traditional fishing encampments consisting of one to several households. These households cooperate closely during the season as younger adults (mainly males) skipper and man vessels or work shorebased setnets, while remaining family members tend camp and children; put up subsistence fish; or, on occasion, seek wage work while other family members fish. These seasonal relocations may result in virtual abandonment of villages; for example, every sample respondent from Manokotak vacates the community during the summer. Residents from Manokotak traditionally establish summer fish camps in Igushik.

Household sizes have tended to decline in regional villages as new housing stock becomes available, permitting dense households to fission as elderly residents or newlyweds seek their own or new homes. This feature of demographic change is widely reported throughout rural Alaska. Table 16 summarizes household-size data since 1970.

Table 16

AVERAGE HOUSEHOLD SIZES, BRISTOL BAY SAMPLE COMMUNITIES 1970-1983

Community	1970	1980	1983
Dillingham	3.84	3.30	na
Manokotak	5.78	5.38	na
Naknek	3.96	3.55	na
Togiak	5.80	4.60	5.30

Sources: U.S. Census (1970, 1980); Wolfe, Gross et al. (1984).

na = not available

Because Wolfe, Gross et al. (1984) did not enumerate teachers and other classified school employees as "transient" residents, the effective household size in Togiak may be slightly less than is reported for 1983. However, since both Togiak and Manokotak tend to draw spouses for postmarital residence and have growing populations, household size may not be stabilizing in those communities despite the presence of new housing stock.

Table 17 illustrates marital status by gender for 1970 and 1980 in the sample communities. These census tabulations report only on residents over the age of 14 years. Hence, it is likely that the 1980 surplus of "never married" persons is in part the result of maturation of adolescents who were not enumerated in 1970. The surplus males and low marriage proportions at Naknek are due, in large part, to the presence of military personnel in the vicinity, some of whom reside in Naknek.

IV.B. Kinship Organization

Ethnohistorical evidence for early contact-era social organization in the northern, Eskimo part of Bristol Bay is scanty. The best-available data for historic kinship organization pertain to late 19th- and early 20th-century patterns that had been substantially altered. The foremost ethnohistorical expert for the Bristol Bay area, VanStone, infers some Nushagak practices from Kuskokwim-area practices (1984:233).

As far as can be determined, extended-family households lived in common structures only at seasonal encampments. At permanent winter villages, males lived together in the communal ceremonial and fraternal structure(s) (*kashim*), whereas children and females resided in separate dwellings. Residence was generally duolocal

Table 17

MARITAL STATUS BY GENDER, 1970-1980
BRISTOL BAY SAMPLE COMMUNITIES

Community/Status	1970		1980	
	Males	Females	Males	Females
Dillingham				
Married	174	176	242	290
Widowed	7	21	12	39
Divorced	12	7	31	42
Separated	2	11	46	13
Never married	93	74	159	156
Manokotak				
Married	30	30	46	47
Widowed	2	5	1	3
Divorced	2	2	2	2
Separated	2	0	5	1
Never married	12	14	40	37
Naknek				
Married	32	29	58	65
Widowed	2	4	3	4
Divorced	4	2	7	12
Separated	1	2	10	1
Never married	25	14	43	32
Togiak				
Married	53	53	76	72
Widowed	1	4	4	10
Divorced	3	1	3	2
Separated	2	1	5	1
Never married	55	43	75	72

Source: U.S. Census (1970, 1980).

but matrilocal for females, such that the permanent winter dwellings (aside from the *kashim*) formed a residential nucleus for matrilineages. However, the residential pattern did not coincide with a classificatory distinction since kinship was reckoned bilaterally and descent groups were not evident in the Nushagak area. Village endogamy established a deme-like local social organization, but spouses were necessarily recruited from outside the village in many cases due to small village size (VanStone 1984:233).

These historic patterns were extinguished as a consequence of vast regional migrations, epidemics and consequent population declines and relocations, and commercialization that created new seasonal migratory patterns during the 19th century. The *kashim* still exists in relic form, evident in bath houses in most villages--which, however, are segregated by gender and maintained by individuals for the use of virtually all same-gender residents and visitors. Several key informants explained that:

> When you see smoke [from a bath house] everyone is invited.

Despite the abundance of bath houses in the villages and fluctuating membership in nightly steam baths, a sense of *community* solidarity nonetheless exists. This is most evident in intercommunity rivalry in alleged tolerance to heat and village reputations that allege outstanding endurance for some communities.

Kinship is still reckoned bilaterally; however, postmarital residence generally is neolocal and village endogamy has substantially declined. Some regional villages, notably Togiak and to a lesser extent Manokotak, are widely perceived by key informants

as communities that draw spouses from other villages and regions.[24] However, Dillingham is undoubtedly the major example of spouse recruitment from outside the community and region. One key informant noted, perhaps with some exaggeration: "Half the people in Dillingham have all of their in-laws outside the region." Key informant data support the observation. Of 23 key informants who provided information on place of birth for themselves and their spouses, only 34.8 percent of the respondents and 26.1 percent of the spouses of married respondents had been born and raised in their current village of residence. Table 18 lists key informant responses for married respondents.

Table 18

BIRTHPLACES OF RESPONDENTS AND SPOUSES
BRISTOL BAY, 1988

Birthplace	Respondents	Spouses
Outside the region	52.2%	47.8%
Same region, not subregion	0	4.3%
Same subregion, not village	13.0%	8.7%
Same village as residence	34.8%	26.1%
No information	0	13.0%

Source: Key informant field data.

[24] This perception matches historical data on relocations in the region. Manokotak was populated in large degree by emigrants from the Togiak area, and Togiak was populated by return migrants and emigrants from throughout the northern portion of the region and the Kuskokwim area. These statements refer to relocations subsequent to late 19th- and early 20th-century epidemics.

Further analysis of key informant genealogies is provided in the main analysis document (Social Indicators III). This analysis provides additional information on kinship organization in the sample communities.

IV.C. Socialization

As with our understanding of traditional kinship organization, knowledge of patterns of socialization is based on sketchy early documentation and ethnohistorical reconstruction (VanStone 1984). Traditional Native socialization involved the inculcation of idealized norms of hospitality, generosity, and reciprocity among community members. We infer that the household divisions between the male *kashim* and separate female dwellings played an important role in the transmission of values. Division of labor was well marked along gender lines. Women gathered and prepared food, bore primary responsibility for childrearing, and constructed and repaired clothing. Men provided traditional subsistence foods and held the specialized religious and healing roles (VanStone 1984:233).

As pointed out in Section IV.B, changes in marriage and residence patterns have greatly altered traditional social structures. While gender divisions in subsistence remain marked, changes also are evident. Men still occupy the majority of decisionmaking roles in Yupik culture; however, women have taken on important, though often informal, positions of power. In addition to the health-care jobs, they hold the majority of stable clerical and other year-round village-staff positions. Exemplary is the description one bush pilot offered of the wife of the local air-transport coordinator, "He is the official, but when she says, 'Jump,' he says 'How high?'"

As in many other areas of rural Alaska, another major factor in changing socialization is the transfer of responsibility to formal educational institutions. This is not to suggest that this process is total or that educational facilities represent entirely Western enculturation. As already discussed, bilingual and bicultural programs are strong in all of the schools. However, over 60 percent of respondents in the region indicated that even in the home, they were using a combination of Western and traditional patterns of socialization.

The role of the elders in village life has also been transformed with the institutionalization of values transmission. While the post-ANCSA awareness of Native culture led to greater recognition of elders' importance, lack of formal education, which is now a mark of status, limits their formal political power in the village arena (Palinkas 1987:298).

Despite these shifts, traditional patterns do persist in the region, as indicated in the continuity of the village sweat bath from the earlier *kashim* (see Sec. IV.B, Kinship Organization). Further, while women have moved into new arenas, gender distinctions remain marked. As one village official in Togiak phrased it, "In Yupik culture, men have the say."

V. IDEOLOGY

This brief section discusses religion, worldview and values, and ethnicity. Except for the discussion of religion, the coverage here mainly amplifies and summarizes issues that already have been introduced, with an emphasis on ideology.

V.A. Religion

From reconstructed data, we can surmise that traditional Yupik religious practices were based on an animistic cosmology of interdependent human and animal worlds. Mythology and traditional ceremonialism in the *kashim* formed the background for religious activity (VanStone 1984:233).

As previously discussed, the impact of Russian Orthodoxy in the years following the 1818 establishment of Alexandrovskiy Redoubt had a profound effect on the entire region. Scholars have forcefully argued that the Church's flexibility towards Native practices and the "fit" between Native cosmology and the Orthodox worldview led to its ready acceptance and cultural tenacity (VanStone 1967, 1984; Oleska 1982).

Russian Orthodoxy continues to be an important cultural and religious force today. Dillingham's priest estimates his parishioners at about 500 baptized members. However, as in other areas of Alaska, Orthodoxy's historical dominance has been challenged, beginning with establishment of the Moravian mission in 1887. Though its missionary presence was relatively short-lived (1887-1906), a number of areas retain strong Moravian influence, notably Togiak and Manokotak. Other evangelical groups followed the Moravians, and a number of organized churches are represented in the region today. In the Bristol Bay Borough, there are community chapels in Naknek and King Salmon and Lutheran, Roman Catholic, and Russian Orthodox Churches in Naknek. Seventh-Day Adventists as well as Moravians are represented in Togiak. Dillingham has a diverse number of denominations, which include Russian Orthodoxy,

Roman Catholic, Lutheran, Moravian, Community Baptist, Assembly of God, Seventh-Day Adventist, and Church of the Latter Day Saints.

A number of churches are involved in community activities, including efforts to address pressing social issues. While not formally administering an alcohol-abuse-prevention program, the parish priest travels to five of the villages advocating a "pledge program." Other ministers also are involved in counseling and in the alcohol, suicide, and domestic violence prevention programs.

V.B. Worldview and Values

A traditional Yupik worldview continues to inform life in the region, though to varying degrees depending upon the extent of commercialization in each community. The core values of Yupik culture involve interdependence among community members and between the human and natural worlds. This subsistence-based worldview incorporates a cyclical notion of time encompassing human and animal rebirth as part of the natural cycle. These views are manifest in Yupik naming patterns and exchange rituals (Fienup-Riordan 1983). Their persistence also is evident in remarks from elders in Dillingham such as the comment by one women regarding sports fishing and the phenomenon of "catch and release": "I don't know how anyone could do such a wasteful thing, catch those fish and just throw them back!"

Other aspects of a subsistence-based worldview include a sense of individual identity as emergent from the group and the maintenance of social networks through exchange and redistribution of subsistence resources. The integration of subsistence activities with commercial ventures, particularly in smaller communities, has been

addressed (see Sec. III.D, Commerce and Industry). Note that a majority of respondents in the region indicated at least occasional, if not regular sharing of resources (see Table 19).

Table 19

RESOURCE RECEIVING WITHIN VILLAGE

Value Label	Value	Frequency	Percent
Pooled Within HH	2	5	21.7
Occasional Sharing	3	8	34.8
Regular Sharing	4	9	39.1
Total	9	23	100.0

Source: Key informant field data.

The traditional Yupik worldview is often juxtaposed with an encroaching Western or commercial sociocultural orientation. Representative of Euroamerican values, this system is characterized by self-sufficiency and independence, individual attainment, production geared towards savings and investment of profits, and negative reciprocity (Palinkas 1987:295). These contrasting worldviews are not binary divisions but rather orientations integrated to varying degrees throughout the region. While the differences between them has been analyzed as a cause of psychosocial stress, they also are seen as complementary. Palinkas notes that "In different ways, the commercial orientation has been adjusted to fit in with the traditional one. For example, the increase in income,

extracurricular activities in local schools, and improvement in networks of transportation throughout the region have made possible an expansion of kinship links to other communities" (1987:300).

The shifting nature of a traditional worldview in a time of cultural transition is evident in the comments of several area residents. One Togiak woman described the still-prevalent distributive mechanisms in her mother-in-law's sharing of resources: "You'd think she'd have nothing. She gives away all her food and seal oil. But the more she gives away, the more she gets. That's how it is." In sharp contrast, another member of the same community, a single mother, lamented her lack of access to subsistence resources: "I live here in the village, and every day I crave my Eskimo foods. I guess I have to wait for my son to get old enough to help me." Another resident articulated the way in which newly adopted values can be adjusted to traditional goals. In response to a question about competition, she stated: "Our children should be competitive, but for the good of the whole culture. We should compete with non-Natives to build up our image and express our pride." Her comments are also indicative of the influence that political movements such as the Yupik Nation have had in the Bristol Bay region.

V.C. Ethnicity and Tribalism

Togiak possesses the most enterprising and aggressive traditional councils among the sample communities; yet, as the discussions have shown, a segment of the Togiak population nonetheless maintains a tenuous and only exploratory relationship with the Yupik Nation, which is probably the preeminent interregional tribal-rights organization in the southwestern portion of the State. Considerable controversy has been generated

by Yupik Nation activity in recent years and, given the conservative ideologies of some dominant population segments in the area (notably in Dillingham), it is possible that tribal-rights activism is approached with caution and tact. The membership issue in Togiak itself was subject to extensive community debate, according to key informants.

Since functions of traditional councils have been so thoroughly eclipsed by large institutions dominated by non-Natives in Dillingham and Naknek, Togiak and Manokotak provide the salient sample-village cases for an examination of tribalism in the sample area. The councils in these communities have extremely limited programs, in part because they rely upon BBNA to administer Federal programs geared toward Natives on a regional basis and in part because they rely on the city councils to deal with State programs. Both councils need new constitutions and bylaws and are expected to update tribal enrollments (for which no funds are available). The Bristol Bay Native Association currently is sponsoring BIA-enrollment workshops to provide the technical assistance communities need to complete their enrollment updates. The Bristol Bay Area Health Corporation has alerted councils of the fact that unenrolled community members may be forced to pay for medical services. This fact in particular has created alarm and confusion in some communities but has resulted in renewed enrollment activity.[25]

The Togiak council seeks to establish tribal courts on the model of experimental courts now under investigation elsewhere in the State, primarily geared toward adjudication of alcohol, drug and Indian Child Welfare Act cases. The council also plans

[25] Federal cutbacks in PHS funding and proposals emanating from the Executive Branch to limit Indian services are undoubtedly responsible for some of the concern about accurate and up-to-date tribal enrollments.

to secure funding for a centralized senior citizen-youth program in Togiak, and it currently is working with the City and Togiak Natives (the village ANCSA corporation) to identify excess municipal lands to convey to landless residents. However, none of these proposals and plans can be carried out until the constitution, bylaws, and enrollments are completed.

The key informant data show some evidence of interethnic stress. Respondents were asked to characterize the major sources of economic conflict in their community. The Bristol Bay responses from 1988 are tabulated in Table 20. These responses suggest that economic and ethnic conflicts together account for most of the perceived conflict, and in equal proportions.

Table 20

PERCEIVED SOURCES OF ECONOMIC CONFLICT
BRISTOL BAY, 1988

Source of Conflict	Proportion of Respondents
No conflict	17.4%
Conflict between corporations and residents[a]	17.4%
Conflict between Natives and non-Natives	17.4%
Combination: conflict between corporations and residents and between Natives and non-Natives	21.7%
Conflict between government and residents	0.4%
Unclassifiable/no response	21.7%

Source: Key informant field data.

[a] The term refers to business corporations in general, not ANCSA corporations in particular.

References Cited

Ackerman, R.
1964 Prehistory in the Kuskokwim-Bristol Bay Region, Southwestern Alaska. Pullman: Washington State University Laboratory of Anthropology.

Alaska Department of Community and Regional Affairs
1980 ff. Annual Population Estimates. Juneau.

Alaska Department of Labor
1987a Non-residents Working in Alaska in 1985. Juneau: Alaska Department of Labor, Administrative Services Division, Research and Analysis Section.

1987b Alaska Economic Trends 7(9). Juneau: Alaska Department of Labor, Administrative Services Division, Research and Analysis Section.

Alaska Department of Natural Resources, Department of Fish and Game, Department of Environmental Conservation
1984 Bristol Bay Area Plan for State Lands. Juneau: State of Alaska.

Alaska Department of Natural Resources, Department of Fish and Game, and Bristol Bay Coastal Resource Service Area
1988 Nushagak and Mulchatna Rivers Recreation Management Plan: Resource Assessment. Juneau: State of Alaska.

1989 Nushagak and Mulchatna Rivers Recreation Management Plan: Public Review Draft. Juneau: State of Alaska.

Alaska Department of Revenue
1985 Annual report. Permanent Fund Dividend Recipient Profile. Juneau.

Anchorage Daily News
1988 Dillingham Mayor Nixes Tax Increase. Saturday, July 9, 1988.

Alaska State Housing Authority
1971 City of Dillingham Comprehensive Plan. Anchorage.

Barlow, K., M. Downs, B. Harris, L.A. Palinkas, and J.S. Petterson (Impact Assessment, Inc.)
1984 Alaska OCS Socioeconomic Studies Program. Sociocultural/Socioeconomic Organization of Bristol Bay: Regional and Subregional Analyses. Prepared for USDOI, MMS, Alaska OCS Region, Leasing and Environment Office, Anchorage.

Barnhardt, Ray
1974 Being a Native and Becoming a Teacher in the Alaska Rural Teaching Training Corps. In The Collected Papers of the Northern Cross-Cultural Education Symposium. F. Berry, Ed. Fairbanks: Center for Northern Education Research.

Braund, S.R. and J.T. Payne
1983 Alaska OCS Socioeconomic Studies Program. North Aleutian Shelf Basin Sociocultural Systems Analysis. Prepared for USDOI, MMS, Alaska OCS Region, Anchorage.

Bristol Bay Coastal Resource Service Area
1987 Bristol Bay Coastal Management Program. Dillingham: Bristol Bay Native Association.

Dillingham, City of
1985 City of Dillingham Comprehensive Plan Update. Dillingham: City of Dillingham/Tryck, Nyman and Hayes Inc.

Dumond, D.
1974 Prehistoric Ethnic Boundaries on the Alaska Peninsula. Fairbanks: Anthropological Paper of the University of Alaska.

1977 The Eskimos and Aleuts. London: Thames and Hudson.

Dumond, D., L. Conton, and H.M. Shields
1975 Eskimos and Aleuts on the Alaska Peninsula: a Reappraisal of Port Moller Affinities. Arctic Anthropology 11(1):49-67.

Fall, J.A., J.C. Schichnes, M. Chythlook, and R.J. Walker
1986 Patterns of Wild Resource Use in Dillingham: Hunting and Fishing in an Alaskan Regional Center. Technical Paper No. 135. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

Fienup-Riordan, A.
1983 The Nelson Island Eskimo: Social Structure and Ritual Distribution. Anchorage: Alaska Pacific University Press.

1984 Regional Groups on the Yukon-Kuskokwim Delta. Manuscript. Anchorage, Alaska.

Impact Assessment, Inc.
1984 Socioeconomic/Sociocultural Study of Local/Regional Communities in the North Aleutian Area of Alaska. Technical Report 104. Anchorage: USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

Khlebnikov, K.T.
1979 Russian Amerika v neapublikovannykh zapiskath. K.T. Khlebnikov (Russian America in unpublished notes of K.T. Khlebnikov, ed., Liapunova and Federova). Leningrad: Nauka.

Kowta, M.
1963 Old Togiak in Prehistory. Ph.D. Dissertation, Anthropology Department, University of California. Los Angeles, California.

Langdon, S.
1980 Transfer Patterns In Alaskan Limited Entry Fisheries. Juneau: Limited Entry Study Group, Legislative Affairs Agency.

1981 The 1980 Salmon Season and Bristol Bay Fishermen: Performance and Prospects. Dillingham: Bristol Bay Native Association.

Lantis, M. (ed.).
1970 Ethnohistory in Southwestern Alaska and the Southern Yukon: Method and Content. Studies in Anthropology 7. Lexington: University of Kentucky Press.

Mills, M.J.
1986 Statewide Harvest Report. Federal Aid in Fish Restoration F-10-1 and Anadromous Fish Studies, Vol. 27. Juneau: Alaska Department of Fish and Game, Division of Sport Fish.

Oleska, M.
1982 Three Saints Bay and the Evolution of Aleut Identity. Anchorage: Alaska Pacific University HCRS Village Histories Project.

Oswalt, W.H.
1967 The Alaskan Eskimos. New York: Chandler.

Palinkas, L.A.
1987 Points of Stress and Modes of Adjustment in Southwest Alaska. Human Organization 46(4):292-304.

Rogers, G.W.
1955 Preliminary Economic Survey of Dillingham, Alaska and the Bristol Bay Region. Juneau: Alaska Rural Development Board.

Seitz, J.
1990 Subsistence Salmon Fishing in Nushagak Bay, Southwest Alaska. Technical Paper 195. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

USDOI
1984 The Bristol Bay Regional Management Plan and Final Environmental Impact Statement. Anchorage, AK.

USDOI, FWS
1985a Becharof National Wildlife Refuge: Final Comprehensive Conservation Plan, Environmental Impact Statement, and Wilderness Review. Anchorage, AK.

1985b Alaska Peninsula National Wildlife Refuge: Final Comprehensive Conservation Plan, Environmental Impact Statement, and Wilderness Review. Anchorage, AK.

1986 Togiak National Wildlife Refuge: Final Comprehensive Conservation Plan, Environmental Impact Statement, and Wilderness Review. Anchorage, AK.

1988 Alaska Maritime National Wildlife Refuge: Final Comprehensive Conservation Plan, Environmental Impact Statement, and Wilderness Review. Anchorage, AK.

VanStone, J.
1984 Mainland Southwest Alaskan Eskimo. In Handbook of North American Indians. Vol. 5 (Arctic). Washington, D.C.: Smithsonian Institution.

1967 Eskimos of the Nushagak River: An Ethnographic History. University of Washington Publications in Anthropology 15. Seattle: University of Washington Press.

VanStone, J.W. and J.B. Townsend
1970 Kijik: An Historic Tanaina Indian Settlement. Fieldiana Vol. 59. Chicago: Field Museum of Natural History.

Wolfe, R., J.J. Gross, S.J. Langdon, J. Wright, G. Sherrod, L. Ellanna, V. Sumida and P. Usher
1984 Subsistence Based Economies in Coastal Communities of Southwest Alaska. Technical Report 95. Anchorage: USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

Wolfe, Robert J.
1989 "The Fish are not to be Played With": Yup'ik Views of Sport Fishing and Subsistence-Recreation Conflicts along the Togiak River. Paper presented at the Alaska Anthropological Association, March 1989.

Wright, J.M.
1985 Bristol Bay Regional Subsistence Profile. Technical Paper 114. Juneau: Alaska Department of Fish and Game, Division of Subsistence.

The Kodiak Region

Joanna Endter-Wada

Rachel Mason

Joanne Mulcahy

Jon Hofmeister

THE KODIAK REGION

Table of Contents

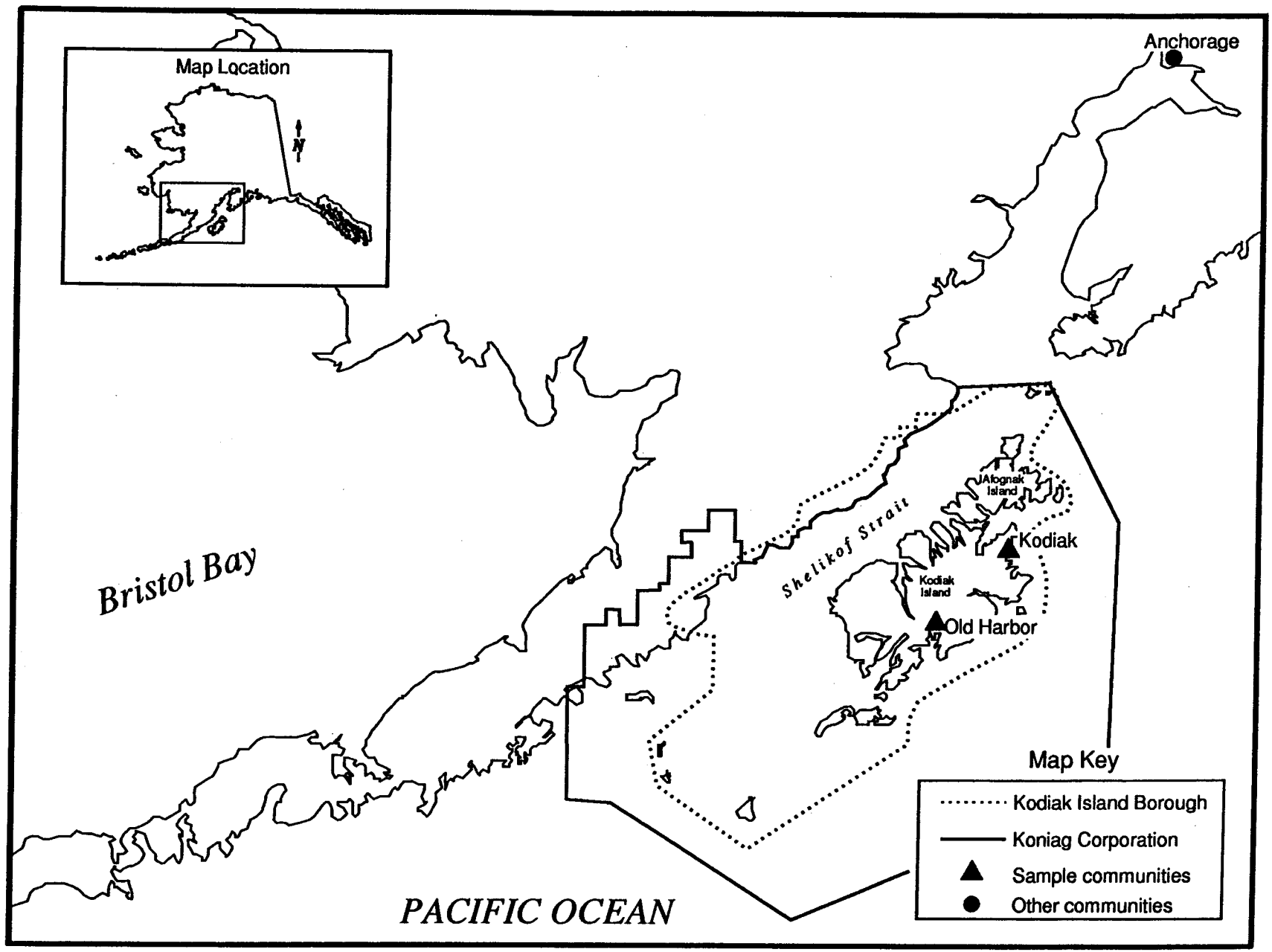
Table of Contents (continued)

THE KODIAK REGION

List of Tables

List of Tables (continued)

List of Maps



SCHEDULE B COMMUNITIES **KODIAK REGION**

THE KODIAK REGION

PREFACE

This Key Informant (KI) Summary was first drafted during 1988 subsequent to the first Schedule B field season. It was edited and revised during 1989, 1990, and 1991 to incorporate data and discussions of changes over this interval. Field research was conducted by senior researchers in 1987 and 1989 in Schedule A sites, and in 1988 and 1990 in Schedule B sites.

The seven regions of the Social Indicators Study were divided into two groups based on concerns related to research design and efficiency of project administration. These groups are termed schedules; as the term suggests, these groups represent not only sample portions but sampling agendas. Schedule B, of which this region is one part, also includes the Bering Straits and Bristol Bay regions. Subsequent to the Exxon Valdez oil spill in 1989, the scope of the Social Indicators Study was expanded; and a new sample of Cook Inlet, Prince William Sound, and Kodiak area villages was developed. This group then comprised Schedule C. These terms and their meanings in the overall research design are introduced more fully in the KI Summary Introduction and are explained fully in another project document entitled Social Indicators Project II: Research Methodology: Design, Sampling, Reliability, and Validity.

This report summarizes KI and institutional data for the Human Relations Area Files Social Indicators Study (or AOSIS: Alaska Outer Continental Shelf Social Indicators Study) in Kodiak, following research conducted between February 7 and March 7, 1991. The 1991 summary builds on the reports submitted by study researchers

in 1988, 1989, and 1990. Most of what follows is a revision and update of Joanna Endter's 1989 report.

The ethnohistory section was essentially left intact, as were several sections dealing with Kodiak's government and economy. Discussions of Key Informants' protocol responses were revised to include 1991 data. In addition, new issues in Kodiak have been incorporated in the portions of the report dealing with trends of political-economic and social change.

A new section that deals with the effects of the 1989 Exxon Valdez oil spill on Kodiak City has been added. This portion of the summary is based on ethnograhic data and data collected from KI's and institutional respondents during late summer 1989 and spring 1991. Since Kodiak is the one study region of Schedules A and B that was significantly and directly affected by this oil spill, discussions of the spill are necessary in this chapter.

I. HISTORICAL CONTEXT

I.A. Prehistory and Early Contacts

Archaeological evidence indicates that since human habitation of the Kodiak Island Archipelago was established around 8,000 years ago (KANA 1987b), several distinct cultural traditions have resided on Kodiak Island. The earliest known occupation of the islands was by people of the Ocean Bay tradition, which was divided into two stages: Ocean Bay I (4000 B.C. to 2500 B.C.) and Ocean Bay II (2500 B.C. to 1500 B.C.). These stages were followed by people of the Kachemak tradition (1500 B.C. to 1100 A.D.).

A blending of the Kachemak tradition with cultural traits diffused from the Bering Sea region and Cook Inlet and Prince William Sound areas resulted in the formation of the Koniags around 1100 A.D. (Clark 1984a; Clark cited in USFWS 1987:109-110). The Koniags, inhabitants of the Kodiak Archipelago when the Russians first arrived, were a distinct ethnic group. They spoke a Pacific Yupik language related to the Central Yupik[1] language of Bristol Bay and the Yukon-Kuskokwim Delta (KANA and ADF&G Subsistence Division 1983:5; Clark 1984b).

The Koniags achieved a rich and complex society through the leisure generated by the surpluses of a maritime hunting culture. The Pacific Eskimos are noted for their development of two-hatch kayaks ("baidarkas") and their long-term adaptation to the sea (Clark 1984b:189). They migrated between sedentary winter and summer fish camps, living from the natural abundance of fish, whales, and other marine/sea mammals (Davydov 1977; Holmberg 1985). Their semisubterranean, multiroom sod houses ("barabaras") housed up to 20 people (Lisianski 1814:200). The winter villages were autonomous, headed by a chief ("toyon") whose status was inherited. Fighting between villages was frequent. Koniag society was inegalitarian with ascribed status. Warfare, raids, and slavery as well as trade were used to redistribute wealth and mark social status (Black 1977:91-92; Davydov 1977; Holmberg 1985). The Koniags' complex culture included highly developed ceremonialism; knowledge of lancing and other surgical techniques, human anatomy, and mummification; and representational art and elaborate

[1] We will use the term "Yupik" without diacritics to refer to all Yupik peoples and dialects, although we recognize that some conventions use diacritics, as in "Central Yup'ik."

ornamentation such as labrets (Clark 1984b; Davydov 1977; Fortuine 1975; Holmberg 1985; Lisianski 1814). The Alaska Native people who presently live in the Kodiak area, as well as in some villages in Prince William Sound, lower Cook Inlet, and the Chignik area on the Alaska Peninsula, are the descendants of the Koniags. The Pacific Yupik language spoken by this group is today known to its speakers and to scholars as Alutiiq. The term "Alutiiq" has been increasingly used to refer not only to a language but to a distinct ethnic group with a common history and culture (see Sec. V.C, Ethnicity).

I.B. The Russian Period

Following the explorations of Vitus Bering in the early 18th century, independent Russian merchants known as "promyshlenniki" were attracted to the Kodiak region by reports of the abundance of sea otters, fish, and seals. A party under the direction of Stepan Glotov reached the shores of Kodiak Island as early as 1763, but the Koniags skillfully resisted their efforts to land. The first Russian settlement on Kodiak was established by Gregorii Shelikov in 1784 at Three Saints Bay on the southwestern end of Kodiak, near the present-day village of Old Harbor. Shelikov, leader of a company of Siberians organized to explore the economic possibilities in Alaska, began what developed into a lucrative fur trade in the North Pacific. Shelikov established, operated, and eventually expanded the Shelikov Company's holdings on Kodiak.

Once the Russian Government took notice of Alaska's potential, Alexander Baranov, a successful Irkutsk businessman, was appointed director of the growing company. Baranov held this position for 25 years. He established the regional primacy of the Russian-American company, which became a state monopoly in 1799. Over the

following two decades, colonization of America by the Russian-American Company extended southward to Sitka and California. Between 1819 and 1867, the company further expanded its activity to other Pacific Northwest regions and Hawaii and into the interior of Alaska (Afonsky 1977:5). Russian settlement of Alaska affected the lives and culture of the Koniag people. Russian wars of conquest against Natives, coupled with the introduction of diseases, dramatically reduced the Native population: 8,000 people residing in 65 villages inhabited the region when the Russians arrived in 1784 (Clark 1984b:187). Eight years later, the population had been reduced by nearly 20 percent. Nevertheless, there were 6,500 Koniags, making them the largest Eskimo group at that time (Oswalt 1967). Between 1840 and 1844, surviving Natives were consolidated into seven main resettlement sites. These sites are the location of present-day villages (Davis 1979:39; KANA 1987a:8). The first United States (U.S.) census of Alaska in 1880 counted 2,056 people in the Kodiak region. Of these, about 1 percent were non-Native, 33 percent were Creole, and 66 percent (or 1,354) were Native (Davis 1979:49-51). In one century the Native population of Kodiak Island decreased by 83 percent.

Under Russian rule the subsistence economy of Native communities was altered, and the nature of production was reorganized. The initial clashes between Russian fur traders and the Koniags resulted in labor exploitation--essentially enslavement--of the Natives. Not only were Natives forced to work for the Russians, men were often separated from their families and relocated to work elsewhere in the expanding Russian empire. In a more benign fashion, Natives also were drawn into trading relations with

the Russians and eventually became locked in indebtedness to Russian merchants (Davis 1979:43).

Upon establishing permanent colonies in the Kodiak region, intermarriages between Russians and Natives occurred, creating a Creole population. The biological-cultural admixture spawned additional cultural and ideological change among Native people. The degree of cultural mixing in the Kodiak region was greater than in any other part of Alaska except for the Aleutian-Pribilof Islands. A large Creole group was prominent in the settlement of Saint Paul (the site of the present city of Kodiak), where the main colony of the Russian-American Company had been moved in 1792, and on Afognak Island. An American lieutenant visiting Afognak in 1869 commented that "nearly all the Creoles are children of Creoles or of Russians and Creoles. . ." (Huggins 1981). The most frequent contact, the most numerous intermarriage, and the greatest amount of cultural change occurred in the northern villages, especially Afognak and Kodiak. The southern villages were less affected (Davis 1979).

Native culture and ideology also were altered by the introduction of the Russian Orthodox religion. Shelikov had written as early as 1784 that the Natives were willing to accept Christianity; a decade later, a ship carrying eight monks and two novices arrived at Saint Paul (Afonsky 1977:16). The influence of the Russian Orthodox Church, established under Baranov's rule, continues on Kodiak to this day. Strong tensions occurred between the Russian-American Company and the early missionaries when the latter attempted to stem the exploitation of the Native population. The Russian

Orthodox Mission established a school in 1802 that encouraged the use of the Native language and helped to create a literate Creole class.

In contrast to other missionary activities in Alaska, the Russian Orthodox Church claims to have actively encouraged the synthesis of the Native and Russian cultures. Some historians dispute these claims, particularly since Russian rule led not only to forced relocation and social reorganization but also to a restructuring of Native worldview to conform with Western religious concepts. One Russian Orthodox historian has countered that the Native identity of all the Pacific Eskimo groups as "Aleut" is actually a synthesis of Native worldview and the essential elements of Russian Orthodoxy (Oleksa 1982, 1987).

Despite these disagreements, there is general consensus that the Russian Orthodox Church is one of the lasting legacies of the Russian era in Alaska (Davis 1970). The position of the church is confirmed in oral tradition, particularly among Kodiak elders who were raised in the Russian Mission (Mulcahy 1988). The alterations in Native ideology brought about by the church continue to influence the worldview of Kodiak Natives.

I.C. The Early American Period (1867-1939)

By the late 1850's, the Russian enterprise in Alaska had become unprofitable and impractical. In 1867, Alaska was sold to the U.S. The Treaty of Cession in 1867, which transferred ownership of Alaska, also placed Alaska under the War Department. About 10 years later Alaska was administered by the Customs Department. Although Alaska

Natives were to receive the same services and privileges afforded other Native groups under U.S. jurisdiction, general neglect of Alaska Natives marked the period.

Disease and epidemics introduced by the Russians (including smallpox, influenza, and tuberculosis) continued unabated under U.S. jurisdiction. Prior to 1867, the Russians built a hospital and vaccinated Natives against smallpox. Health services all but disappeared during the early period of U.S. ownership. One historian notes: "Throughout the Russian period and into the American era. . .despite the fact that a primitive system for health services existed, it really did not touch the lives of most natives. . .. Whatever health services were available were provided in the old way by family members or native healers" (Fortuine 1975:8). Tuberculosis, a particularly devastating disease, claimed 1,302 of 100,000 Alaska Native lives in the early 20th century, when the rate for Whites in the lower 48 states was 56 of 100,000 lives (Fortuine 1975:13).

The Alaska Territorial Government also was remiss in attending to educational needs. Schools were poorly staffed and the teachers often provided both medical and educational services (Huggins 1981). In 1908, letters from teachers in Afognak village record the use of the old Russian church as a school and lament the shortage of supplies and a proper facility.

Despite lack of funds and services, the Department of the Interior managed to impose assimilationist policies on Kodiak Natives through government programs and the establishment of Protestant missions. Attempts to "civilize" the Natives are evident in elders' memories of punishment administered for speaking Alutiiq or for any blatant

display of Native practices under the schools' English-only policies. The "civilizing" worldview of the U.S. Government included emphasis on patriotism, Christian morality, temperance, and the Protestant work ethic. As Chance has pointed out, U.S. policies reflected the still dominant theory of social Darwinism, according to which Natives were at a lower level of evolutionary development (1984:648).

In 1893 the Baptists opened a mission and orphanage on Woody Island directly across from Kodiak. While they began providing social services that continue today, they did so with an agenda of winning converts. The Baptists' proselytizing activities came into direct conflict with the Russian Orthodox clergy, who were still dominant in Kodiak Native life until well after the turn of the century (Will 1981:61-64). Baptist missionary activities began in Old Harbor in 1952 (Befu 1970:39).

The most far-reaching changes in the early American period were brought about by the development of commercial fishing and other extractive industries. Some American commercial activities in Alaska began during the Russian period. The American whaling fleet operated in the Kodiak area from 1835 until 1869 (KANA and ADF&G 1983:5). Sea otter hunting continued into the late 19th century; and American hunters, like their Russian predecessors, brought the sea otter to the edge of extinction. Sea otter hunting was officially banned only after near decimation of population stocks and a Congressional investigation in 1911 (Will 1981:69).

In the late 1800's and early 1900's, canneries were built on Kodiak Island to process fish. Their operation was made possible by technological innovations, especially improved storage, canning methods, and transportation. The canneries first developed

the long-recognized potential of the salmon fishery, particularly in the rich waters near the present villages of Karluk and Larsen Bay. The first cannery was built on Karluk Spit in 1882. The industry expanded rapidly in the late 1880's, and canneries were started in other parts of the Kodiak region. This expansion led to declines in salmon runs, consolidation of various operations, and eventual domination of the industry by a few large companies. The 1912 eruption of Mount Katmai on the Alaska Peninsula disrupted the industry for several years through destruction of many salmon spawning streams, including some on Kodiak Island. By the early 1900's, halibut, herring, and cod supplemented salmon as commercial fisheries resources (see Roppel 1986 for a comprehensive history). These economic developments drew Natives further into wage labor and trade. Most households came to depend on commercial fishing for cash income and credit. The development of the canneries also increased the numbers of outsiders moving into Kodiak, particularly in the early years when some canneries exclusively used imported labor (Roppel 1986). The influx of non-Native fishermen, primarily Scandinavians who settled in the area and married Natives, influenced significant changes to Native social organization and work ethics.

In addition to its economic impact, the Mount Katmai eruption affected cultural patterns on Kodiak Island. Temporary relocation of Alaska Peninsula Koniags to Kodiak after the Katmai eruption of 1912 and their subsequent resettlement at the new village of Perryville on the Alaska Peninsula resulted in social and marriage ties between Koniag descendants in the Chignik-Perryville area and Koniags on Kodiak Island (Davis 1979:53).

Several other industries formed in the Kodiak region during this period. Fox farming was developed around the turn of the century, and trapping continued into the 1920's. Small-scale mining interests were started in the late 1890's, and even tourism began to take hold (Will 1981:74-76). These changes affected the overall economy and the town of Kodiak far more than the Native villages, which continued to integrate subsistence pursuits with increasing involvement in commercial fishing.

Prior to the eruption of Mount Katmai, cattle and sheep also had been introduced on Kodiak Island; and although the cattle industry was affected, it recovered. As a result of bear predation of livestock, government hunters were brought in to control the bear population. In turn, this action prompted concern for the welfare of the brown bear, leading in 1941 to the establishment of the Kodiak National Wildlife Refuge for the purpose of preserving the brown bear and other wildlife (USFWS 1987). The cattle industry subsequently declined.

I.D. World War II and the Post-War Period

The increased Federal Government presence during the war years dramatically changed Kodiak. Economic activity quickened as a growing non-Native population, largely military and military-related, moved in. Because of its strategic location, Kodiak served as the Aleutian Campaign Command Center during World War II. In 1938 and 1939, concern over Japanese expansion in Indo-China and Russian expansion in Siberia led Congress to appropriate $350 million for Navy bases in Sitka, Dutch Harbor, and Kodiak. A Navy submarine base and air station was constructed at Women's Bay, about 10 miles from the town of Kodiak. Fort Greeley Garrison, beside the Buskin River, and

the Fort Abercrombie observation and defense post also were constructed during the war.

Kodiak's population increased with the influx of military personnel and construction workers. Kodiak's economy boomed, primarily due to the increase in construction. Natives, who had far less access to developing economic resources, gained sporadic employment, usually temporary, from growth in construction and other industries.

In response to demands for services, Kodiak incorporated as a first-class city in 1941. Public infrastructure was built; and public services such as police and fire protection, utilities, and a hospital were organized (Payne 1980:34). Access of villagers to Western medical care increased following the 1955 transfer of health-service authority from the Bureau of Indian Affairs to the Public Health Service. As a consequence, the incidence of tuberculosis was drastically reduced (Fortuine 1975:26). Many of the village women who served as volunteer "chemo-aides" to combat tuberculosis were later incorporated into the Community Health Aide Program.

The level of economic activity and modernization remained high after the war, fueled in part by the growth in the 1950's of the shellfish industry, which brought diversification to Kodiak's fishing industry. By 1960, crabbing predominated, although few villagers participated in this new industry because it required large initial capital investment and because villagers, particularly Natives, had little access to capital (Davis 1979:54). The shrimp fishery began in 1958 and peaked in 1971 (Payne 1980:66).

Scallops were a big industry in the 1960's. This diversification to shellfish was in part a response to lean years in the salmon harvest during the 1950's (Roppel 1986).

In 1960, villagers in Old Harbor had come to depend on a mixed economy in which they gained food from naturally occurring resources, cash from commercial fishing and cannery work, and cash and supplies from government subsidies. Most Old Harbor residents fished or worked for the Kadiak Fisheries Company cannery at Shearwater in Kiliuda Bay, north of Old Harbor. Poor fishing in the 1950's meant that only some of the canneries on the island were in operation each year; and when the Shearwater cannery was closed, people from Old Harbor went to work in other canneries on the island. The basis of Old Harbor subsistence continued to be foods extracted locally, including fish, seals, sea lions, bears, ducks, gull eggs, octopus, butter clams, sea urchins, and sea slugs (Befu 1970).

The Great Alaskan Earthquake in 1964 was a major disruption in the lives of all Kodiak residents. In Kodiak City, nearly 40 percent of Kodiak's business district and three of the town's four processing plants were destroyed. The quake was particularly disruptive for the villages destroyed in its wake: Old Harbor and Kaguyak were almost totally devastated, while Afognak and Ouzinkie suffered major damage (Davis 1979). Old Harbor and Ouzinkie were rebuilt in the same locations; but the residents of Kaguyak were relocated to Akhiok, and Port Lions--a new village--was constructed to house the people of Afognak.

The 1964 earthquake, coming on the heels of several years of modest salmon harvests, altered the economies of Kodiak villages. The Shearwater cannery near Old

Harbor and the Ouzinkie Packing Company cannery in Ouzinkie were destroyed, along with 30 vessels at Shearwater and 20 vessels in Old Harbor (Roppel 1986:115, 269-270, 275-279). The Shearwater and Ouzinkie canneries were never rebuilt. Other companies closed canneries in outlying areas during the early 1960's and seafood processing became concentrated in Kodiak City (Roppel 1986). Under several Government programs, loans were made to fishermen to recover losses resulting from the earthquake. Most of these loans went to fishermen from Kodiak, Old Harbor, and Ouzinkie (Roppel 1986:115).

In addition to this social and economic reorganization, there were significant consequences from the agency involvement and economic rebuilding of Kodiak after the earthquake (Davis 1979:54). The 1960's saw an increase in the role that the Federal and State Governments played in the local area through programs for earthquake reconstruction and social services (Davis 1979). The reconstruction of Old Harbor resulted in many new infrastructural facilities. The reconstruction experience aided residents in dealing with government agencies throughout the remainder of the 1960's and 1970's in applying for and receiving programs and facilities (Davis 1979).

While the 1950's and 1960's brought population and economic growth to Kodiak, the benefits for Natives were indirect and somewhat peripheral. The effect of greater agency intervention into village life in the 1960's was more marked. The 1964 earthquake coincided with President Johnson's "War on Poverty" legislation, which spurred the creation of Federal programs such as Vista, Community Action, Headstart, and others to serve poor or rural areas (Dixon et al. 1983:115). Natives became involved in the administration and policy-making of health, economic, and social service programs.

In 1968, the Community Health Aide Program was funded, formalizing the role of village-based health care workers.

The most significant postwar changes in the lives of Native people occurred with the passage in 1971 of the Alaska Native Claims Settlement Act (ANCSA) and the political organizing that took place in regard to it. The Kodiak Area Native Association (KANA), formed in 1966, was active along with Statewide organizations such as the Alaska Federation of Natives in seeking land claims from the Federal Government. With the passage of ANCSA, KANA's role as a nonprofit regional corporation that provided services and tribal leadership became further defined.

Two other pieces of legislation were important for Native people during this period. KANA's ability to provide improved health, educational, and social services was facilitated by the passage of the 1975 Indian Self-Determination and Education Act. This law gave Native corporations the right to contract for services formerly provided by Federal agencies such as the Bureau of Indian Affairs and the Indian Health Service. Additional monies were made available through the passage in 1976 of the Indian Health Care Improvement Act, which emphasized a policy of Native self-determination and culturally appropriate solutions to social problems (Dixon et al. 1983:115). This legislation, in combination with ANCSA, began a period of cultural renewal and movement toward autonomy for Kodiak Natives.

Several important economic changes that affected all Kodiak residents occurred during the 1970's and 1980's. Kodiak's commercial fishing sector expanded and was transformed. Growth in the number and size of vessels in Kodiak's fishing fleet and

growth in the island's processing capacity made Kodiak City one of the top fishing ports in the nation. Diversification of Kodiak's fisheries occurred in the late 1970's in response to several factors, including the Magnuson Act, expanding markets, changes in stock abundance, and technological advances in the industry. The Magnuson Fishery Conservation and Management Act, passed in 1976, gave preferential allocation of catches to U.S. fishermen and led to the Americanization of Alaskan fisheries; many U.S. fishing vessels port in Kodiak. In 1978, the U.S. territorial limit was extended to 200 miles offshore. This new boundary increased the availability of fish to Americans by reducing foreign competition. A number of State and Federal programs aimed at modernizing the American fishing fleet enabled Kodiak fishermen to become financially independent from the canneries and enabled some of them to invest in fish processing (Langdon 1986:118-119).

Since the late 1970's, foreign investment in Kodiak's shore-based processing plants has increased (Cultural Dynamics 1986; Roppel 1986). During the 1980's the groundfish industry grew dynamically. With the decline of joint fishing ventures between American fishermen and foreign processing vessels, competition intensified among Alaskan and other U.S. fishermen in Alaskan waters.

II. POPULATION AND DEMOGRAPHY

II.A. Overall Population and Net Changes through Time

Because of seasonal fluctuations, it is difficult to accurately count Kodiak's population. While official figures show that Kodiak's population has increased over the past several decades, it is unclear whether they are based on censuses or estimates. The

growth has been a consequence of inmigration, which is a consequence of employment opportunities. Because employment growth has provided some stability in the public sector and in fishing-related industries, natural increase also has been considerable since the early 1970's (Cultural Dynamics 1986:236-237).

The population on Kodiak Island is concentrated in Kodiak City and the "road-connected area"--the parts of northeastern Kodiak Island that are connected by road to Kodiak City. The road-connected area goes from Monashka Bay on the north to Pasagshak Bay on the south and includes the U.S. Coast Guard (USCG) Base and the sizable community of Bells Flats on Women's Bay. The rest of the population is concentrated in several smaller villages around the island that are accessible only by air or water.

Table 1 illustrates historic population trends in the Kodiak region. At the time of the first census, Afognak was the largest village and Karluk had a growing population, primarily because both were cannery sites (Roppel 1986). Although not listed here, in 1890 Karluk reached a peak population of 1,123 when salmon processing was at its height in that area. By 1920, the community of Kodiak had become the regional population center. From 1940 to 1960, Kodiak and Old Harbor experienced the greatest rates of population growth among villages on the island. Five village populations either declined or remained stable.

Table 1

HISTORIC POPULATION TRENDS IN THE KODIAK REGION, 1880-1960
(20-year Intervals)

	1880	1900	1920	1939	1960
Kodiak City	288	341	374	864	2,628
Akhiok	114	[a]	86	82	84
Old Harbor	160	[a]	84	109	193
Karluk	302	470	192	189	129
Larsen Bay	[b]	[b]	[b]	88	72
Ouzinkie	45	n.d.	168	253	214
Afognak-Port Lions	339	305	298	197	190

Sources: Davis 1979; Payne 1980.

[a] No data available.
[b] Although some residents of Uyak, at or near the location of the present-day Larsen Bay, were counted in early censuses, there was no village named Larsen Bay until after 1920.

Table 2 shows Kodiak Island Borough and Kodiak City population trends from 1950 through 1990. Except for 1989 estimates showing a 0.1-percent population decline and the 1990 preliminary U.S. census figure that Kodiak Island Borough officials said did not represent a true decline, Kodiak Island and Kodiak City populations have increased continually since the 1940's. It may be tempting to see the Kodiak decline from 1989 to 1990 as a consequence of the 1989 Exxon Valdez oil spill; but this conclusion cannot be

Table 2

KODIAK ISLAND BOROUGH AND KODIAK CITY POPULATION BY YEAR, 1940-1990 DECENNIAL AND ANNUAL CHANGES

	Kodiak Island		Kodiak City	
Year	Population	Decennial % Change	Population	Decennial % Change
1940			864	
1950	6,264[a]		1,710	+97.9
1960	7,174[a]	14.5	2,628	+53.7
1970	9,409[a]	+31.2	3,798	+44.5
1980	9,939[a]	+5.6	4,756	+25.2
1990	13,309[a]	+33.9	6,365	+33.8
		Annual % Change		Annual % Change
1981	10,790[b]	+8.6	5,754	+30.0
1982	12,714[c]	+17.8	5,873	+2.1
1983	13,079[b]	+2.9	6,072	+3.4
1984	13,389[b]	+2.4	6,469	+6.5
1985	13,748[b]	+2.9	6,602	+2.1
1986	13,952[b]	+1.5	6,668	+1.0
1987	14,127[b]	+1.3	6,681	+0.2
1988	15,575[b]	+10.2	6,774	+1.4
1989	15,558[b]	-0.1	6,797	+0.3
1990	13,309[a]	-14.5	6,365	-6.4

Sources: Kodiak Island Borough 1988a, 1990b; Kodiak Chamber of Commerce 1989; U.S. Census 1980 and 1990.

[a] U.S. Census 1990 (figures are preliminary).
[b] State estimate.
[c] Results of a joint 1982 borough/city special census certified by the State Demographer.

justified because figures from 1982 through 1989 are based on State estimates rather than actual counts. The Kodiak Island Borough challenged the 1980 U.S. census, saying that figures were too low because, for example, they did not account for persons living in transient housing such as boats or bunkhouses. In 1982, the borough conducted a special census in Kodiak that was certified by the State Demographer. Populations for subsequent years through 1989 were estimated using a State-certified formula. Kodiak City's growth spurt began after World War II with the increase in military personnel, first with the Navy Base and more recently with the USCG Base. According to a 1982 Kodiak Island Borough Special Census, the USCG represented about 1,195 residents, or 9 percent of the population, at that time. Despite the economic downturn in fishing in the early 1980's, the total population of Kodiak Island Borough and Kodiak City increased dramatically in response to several large public works projects. The population subsequently leveled off but increased again in 1988, primarily due to personnel increases at the USCG Base.

Recent population trends within the villages are harder to discern because of discrepancies in the most recent figures, as indicated in Table 3. In the early 1980's, Davis noted a trend that Karluk, Akhiok, and Ouzinkie were relatively stable, losing some Native persons to the neighboring communities of Larsen Bay, Old Harbor, and Port Lions. The latter three villages also were growing from non-Native inmigration (Davis 1986:250).

Discussions with interviewees, school personnel, and public officials in Kodiak and Old Harbor indicated that some of these trends have continued in the late 1980's and

Table 3

POPULATION OF KODIAK REGION SAMPLE VILLAGES, 1970-1990

	1970	1977	1980	1985	1988	1989	1990[a]
Akhiok	115	69	105	102	123	93	77
Old Harbor	290	298	348	337	380	322	284
Karluk	98	98	96	91	---	82	71
Larsen Bay	109	118	168	178	169	149	147
Ouzinkie	143	204	173	165	204	204	209
Port Lions	227	251	215	243	296	300	222

Sources: Davis 1979; U.S. Census 1990.

[a] 1990 populations are preliminary figures of the 1990 U.S. Census. Population figures for the years 1980-1989 were supplied by the Alaska Department of Community and Regional Affairs.

early 1990's. Karluk and Akhiok are generally recognized as declining. Port Lions is growing and Ouzinkie appears to be stable or growing slightly. It is uncertain what is happening in Larsen Bay. In Old Harbor, several residents including the school principal named people who had died or left and thought the community had declined in population. The study sample lends support to this view, since several of the respondents selected during the first research wave in 1988 subsequently moved to Kodiak City or elsewhere.

The general trend is that former residents of small villages move to Kodiak City, Anchorage, or Seattle. Our informants attributed the outmigration to successful fishing seasons that provide sufficient funds for relocation, poor fishing seasons that require a

search for employment elsewhere, or the pursuit of better services, particularly schools, for families and children.

II.B. Ethnic, Gender,[2] and Age Profiles

Table 4 shows ethnicity by community for 1980. Kodiak City residents are predominantly non-Native, while village residents are primarily Native. The relatively small Native population in Kodiak City remained stable between the 1970 estimate of 12 to 13 percent (see Payne 1980) and 1980 (14%). Larsen Bay and Port Lions have the greatest number and percentage of non-Natives, primarily because of their long history of involvement with the commercial fishing industry. While its residents are primarily Native, Old Harbor historically experienced considerable inmigration (Befu 1970); many Natives who were born in other villages reside there.

The changing ethnic composition of Kodiak's population is reflected in the preliminary figures of the 1990 census. In addition to Euroamericans, the non-Native population in Table 4 includes the "new immigrants"--Filipinos, Hispanics, Samoans, Vietnamese, Koreans, and other Southeast Asians who have come to Kodiak in the last two decades seeking work in the fishing industry. This segment has grown considerably. In the 1990 census, 63 percent of Kodiak City's population of 6,365 were identified as White, 13 percent Native American or Alaskan Native, 20 percent Asian or Pacific Islander, and 6 percent Hispanic (U.S. Census 1990).

Filipinos are the largest group of new immigrants, although estimates of the number vary considerably--from 500 to several thousand--because many have no legal

[2] At the request of the Minerals Management Service, the word "gender" is used in place of "sex," the more common term in demography. This convention will be used in all KI summaries.

Table 4

ETHNICITY STRUCTURE OF THE KODIAK REGION, 1980

	Native	Percent	Non-Native	Percent
Kodiak City	666	14.0	4,090	86.0
Akhiok	101	96.2	4	3.8
Old Harbor	315	92.6	33	7.4
Karluk	96	100.0	0	0
Larsen Bay	120	71.4	48	28.6
Ouzinkie	163	94.2	10	5.8
Port Lions	158	73.5	57	26.5

Source: U.S. Census 1980.

status. Many Filipinos have obtained their citizenship and have brought other family members over from the Philippines. Some of them have moved from employment in the canneries to local retail stores, banks, and the post office. Some Filipinos have bought or leased taxicabs, and two Filipino-owned restaurants opened in Kodiak in 1990. An increasing number of Mexicans and other Hispanics have moved to Kodiak in the past decade, and many of them work in the cannery jobs that were until recently held by Filipinos.

Age and gender profiles of Kodiak City reflect the influence of the fishing industry. As in much of Alaska, the population is younger and has a higher proportion of males to females than the national average (Payne 1980:24) (see Tables 5 and 6). Village profiles also show the dominance of fishing. In the communities that have attracted new members with the fishing industry, the percentages of non-Natives and

Table 5

GENDER STRUCTURE OF THE KODIAK REGION POPULATION, 1980

	Males	Percent	Females	Percent
Kodiak City	2,568	54.0	2,188	46.0
Akhiok	59	56.2	46	43.8
Old Harbor	173	50.9	167	49.1
Karluk	51	53.1	45	46.9
Larsen Bay	94	55.2	74	44.8
Ouzinkie	94	54.3	79	45.7
Port Lions	123	57.2	92	42.8

Source: U.S. Census 1980.

Table 6

MEDIAN AGES OF THE KODIAK REGION POPULATION, 1980

	Total Population	Native Population
Akhiok	23.0	20.1
Old Harbor	25.0	20.9
Karluk	20.7	20.7
Larsen Bay	27.0	14.5
Ouzinkie	27.0	21.5
Port Lions	26.0	24.8

Sources: U.S. Census 1980; General Population Characteristics.

males are higher (see Tables 4 and 5). While many of the inmigrating members are single men, in some communities they are marrying into the Native population with increasing frequency. Port Lions, for example, with the highest non-Native and male population, also had the highest number of mixed marriages in 1985 (Davis 1986:228).

Finally, the low median age in the villages, particularly among Natives, reflects primarily the growing birth rate but also some outmigration of elders, who often feel that their needs can be more effectively met in Kodiak City or Anchorage (see Table 6).

II.C. Population Transience

The population of Kodiak Island exhibits considerable transience. Of the 32 KI's interviewed in 1991, 27 (84%) were born outside the subregion where they now reside. Only three were born and reared in Kodiak, and two others were born elsewhere and reared in Kodiak. Since the 1950's, people have migrated to Kodiak from all parts of the country (Befu 1970; Davis 1986; Roppel 1986), particularly from the West Coast, the Great Lakes region--especially Minnesota, and rural areas of the Intermountain West. Two 1991 KI's were born and reared in the Philippines.

While the actual amount of transience in Kodiak is difficult to measure, the following evidence from 1988 and 1989 provides indications of that transience:

(1) Among the 49 people selected at random for the AOSIS pretest sample in 1988, 33 (67%) were residing in the same community 1 year later. Several of these persons had moved within their community. Thirteen (27%) had moved from the communities in which they resided in 1988, but 3 of those respondents (6%) had relocated within the Kodiak region. Three persons (6%) were spending the winter

outside the Kodiak region. In 1990 we selected an additional 38 persons at random. Upon returning in 1991, it was possible to locate 26 (68%) of those respondents. Thus, the attrition was about 32 percent each year.

(2) Several community officials mentioned the transience and noted that about one-third of Kodiak residents are long-term, another third have resided there 5 to 10 years, and one-third turns over every year or two. Our data provide some confirmation for Davis' (1979:110-111) classification of the Kodiak population into oldtimers, new immigrants, and transients.

Kodiak City's population is transient for several reasons. Uppermost is seasonal fluctuation due to the fishing industry. The seasonal influx of workers for the processing plants declined somewhat in the past 15 years with the transition to year-round fishing. Many of the processing workers began establishing permanent residences in Kodiak in the late 1970's (Payne 1980). Yet the seasonal transience between Kodiak City and villages on Kodiak Island and the upper Alaska Peninsula, which also quickened in the late 1970's (Davis 1979:111-112), seems to have increased in the 1980's, with more villagers wintering in Kodiak and returning to their villages for each summer's fishing season. The USCG Base adds transience to the local population, with about a third of the base personnel and their dependents turning over annually. Several large construction projects (Terror Lake hydropower project; cannery expansion projects) have been completed by Anchorage firms that brought in their own employees.

The transience of Kodiak's population also has been a source of long-term growth for the community. Many of the people who have established permanent residence in

Kodiak originally came to work in the fishing industry, construction, or the USCG and liked it enough to stay or return. Partly because of the diversification of fisheries, Kodiak's economy has fared better than some other areas of the State during the oil-revenue decline of the past few years; and some people continue to come to Kodiak seeking jobs or economic opportunity.

III. COMMUNITY ORGANIZATION AND ECONOMY

III.A. Government

Local, borough, State, and Federal Governments make decisions influencing the Kodiak Island region, as do Native corporations--profit and nonprofit, regional and village. Land and natural resources are administered by each form of government in their respective domains. The same is true for construction and maintenance of infrastructure and for administration of public services. The government sector, second only to the fishing industry in terms of regional employment, provides most of the initiative and financing for community and regional development.

Political Representation: Alaska's two senators and sole member of the House of Representatives represent the entire State. At the State level, Kodiak belongs to House District 27, which also includes the East Alaska Peninsula. The current representative, Cliff Davidson, is from Kodiak City. Kodiak is part of Senate District N, which includes House Districts 27 as well as 26, the House District for Bristol Bay and the Aleutian Chain. Fred Zharoff, also from Kodiak, represents Senate District N.

The Kodiak Island Borough, incorporated on September 24, 1963, encompasses the entire Kodiak Island Archipelago. It is a second-class borough with an elected strong

mayor-and-assembly form of government. The borough is recognized by the State and Federal Governments as a legal entity that may represent the interests of the region's residents (Alaska Department of Community and Regional Affairs 1988c). The Kodiak Island Borough qualifies for a broad range of State and Federal financial assistance and also has bonding authority to gain access to revenues produced in the borough.

Six cities on Kodiak Island obtain their authority under Alaska State law. Kodiak City, incorporated in 1940, is a home-rule city with an elected mayor and council that employs a city manager. Old Harbor, Port Lions, Ouzinkie, Akhiok, and Larsen Bay are all incorporated as second-class cities that have elected city councils of six or seven members, from which a mayor is elected. Karluk remains an unincorporated village.

Each of the six Native villages on Kodiak Island has an Indian Reorganization Act (IRA) government or a traditional council. These Native governments, incorporated as nonprofit, administer local affairs and have access to various Federal services and grants. Karluk's original tribal government was formed under the IRA in 1939 so that Natives could protect their fishing and trapping rights along the productive Karluk River against encroachment by non-Natives (Roppel 1986:87-91). The ANCSA dissolved that government. The new IRA was formed in compliance with ANCSA nonprofit corporation provisions. All other Kodiak area villages formed traditional councils pursuant to ANCSA. Like the IRA councils, they provide nonmunicipal services to their members, have access to Federal services and grants, or delegate this authority to KANA, Kodiak's regional Native nonprofit corporation.

Natives in Kodiak City are seeking Federal recognition for their own tribal government. The Kodiak Tribal Council (KTC) is a nonprofit corporation that was organized in 1987 and had 821 members in March 1991. The KTC has been enrolling members--one prerequisite for Federal recognition--and acting as a tribal council to represent the interests of its members. For example, as an advocate of traditional uses of resources, the KTC has fought the ADF&G proposal to restrict Native use of sea otters. The KTC also has sought to improve health and human services for its members. The KTC sponsors a dance troupe, the Shoon'aq Dancers, who have performed in and out of Alaska. In 1991, the KTC sought a joint agreement with an airline to sponsor a tour package in Kodiak that would feature demonstrations of Native dancing and crafts and Native Youth Olympics performances. The council received a $20,000 economic development grant from the State to build a "barabara" (traditional house) for exhibit on the tour. The KTC also is cooperating with KANA to market Native arts and crafts.

Land Status and Management: Prior to the annexation of March 1989, which by petition to the State Boundary Commission appropriated additional land and water to the borough, the Kodiak Island Borough encompassed the entire Kodiak Archipelago and included all land within the Kodiak Island group from the Trinity Islands on the south to the Barren Islands on the north. The estimated size of the borough was 5,000 square miles of land and 4,565 square miles of water. The annexation of land on the Alaska Peninsula and of water areas in the Shelikof Strait added 2,130 square miles of land and 10,700 square miles of water to the borough. The total area under the

borough's control was more than doubled by that annexation (discussed more in Sec. III.E, Political-Economic and Social Change).

Control over land within the borough prior to the annexation is indicated in Table 7. A final settlement of land titles has not occurred.

Table 7

LAND STATUS IN THE KODIAK ISLAND BOROUGH, 1989

Controlling Entity	Acres Controlled	Percentage
Federal Government	1,680,000	52.5
Native Corporations	935,480	29.0
State of Alaska	482,580	15.1
Local Government	70,000	2.2
Other Private	32,000	1.0
TOTAL	3,200,060	99.9[a]

Source: Kodiak Chamber of Commerce 1989. Compiled by the Kodiak Island Borough, Department of Community Development.

[a] Does not equal 100 percent due to rounding.

The largest portion of Kodiak land is federally controlled. The Kodiak National Wildlife Refuge encompasses two-thirds of Kodiak Island, all of Uganik and Ban islands, and part of Afognak Island. The USCG Base controls an additional 23,000 acres of land in Women's Bay. Land selections by Native village corporations, the State of Alaska, and the Kodiak Island Borough have been a source of conflict. These selections have

created complex land inholding patterns within the wildlife refuge, mostly involving lands selected by or conveyed to the Native village corporations (Kodiak Island Borough 1988b; USFWS 1987). This has exacerbated conflicts between different resource user groups and has caused access, trespass, and resource management difficulties. For example, Koniag, Inc., the Native regional for-profit corporation, received land in Women's Bay. When Koniag has attempted to develop that land for marine-related uses, it has encountered opposition from the USCG (Kodiak Island Borough 1988b).

The limited availability of land held by private owners or by local government has limited the space available for housing(Hill 1986:372), municipal and industrial development, storage for shipping operations and fishing gear, and expansion of borough landfills. It also has increased tensions between Natives and non-Natives in Kodiak. The State and the borough have sold some land to private interests but primarily in more remote areas and not within the vicinity of Kodiak City.

Selecting land under ANCSA's provisions was particularly difficult for Koniag, Inc. ANCSA withheld from the regional corporations subsurface rights to national refuge lands and granted "in-lieu" subsurface selection rights to land on the Alaska Peninsula across from Kodiak. Koniag made in-lieu land selections on the Alaska Peninsula but was not able to obtain full mineral rights to those lands. In 1980, Congress approved a land exchange whereby Koniag would give up land on the Alaska Peninsula for surface and subsurface estate in lands located on Afognak Island. As part of that exchange, Koniag agreed to the formation of the Afognak Joint Venture Corporation, of which Koniag would become a major shareholder and to which it would convey ownership of

those lands. Eleven village corporations on Kodiak Island participated in the Afognak Joint Venture, but two have since given notice to partition from it. Selection of lands on Afognak Island that are rich in timber resources brought the Native corporations into conflict with several non-Native interests.

Koniag is to receive land, including the surface and subsurface estate, of approximately 629,000 acres and title to subsurface estate rights only on approximately 1,098,000 additional acres pursuant to ANCSA. By 1988, Koniag had received interim conveyance or patent to 160,092 acres of surface estate and 477,895 acres of subsurface estate. Koniag also owns about 180,000 acres of surface estate around Karluk and Larsen Bay because of its merger with those village corporations. These lands, which are important for bear habitat and for management of the Kodiak National Wildlife Refuge, are the focus of the land exchange being negotiated between Koniag, Inc., and the Federal Government (discussed more in Sec. III.B).

Old Harbor Native Corporation was entitled to select 115,200 acres of Federal land or the equivalent of five townships. Three townships could be selected in the Kodiak National Wildlife Refuge, and two had to be chosen elsewhere. In 1979, the corporation received patents to 475.29 acres of land and interim conveyances to 101,536 acres of land. When Old Harbor Native Corporation merged with Koniag, Inc., in 1980, the merged corporation obtained title to the Old Harbor Native Corporation's land. The two corporations were de-merged in 1984, and the village corporation regained control of the surface estate of the lands it had originally selected (Kodiak Island Borough 1989:6-7).

The Federal Government manages the lands under its control. Federal management of the Kodiak National Wildlife Refuge is governed by several international migratory bird and conservation treaties, Federal laws, and USFWS policies and resource management decisions. This restricts some activities that could occur on those lands (USFWS 1987:6-8). Native lands within the refuge are subject to ANCSA Section 22(g), which stipulates that refuge lands conveyed to Native corporations remain subject to the laws and regulations governing use of the refuge. The public participates in reviewing refuge policies, but the decisions on how the refuge will be managed reside with the USFWS. The Federal Government imposes additional regulations on the USCG Base and other lands under its control.

Kodiak Island Borough land use controls apply to borough, Native, and private lands. The borough's land use regulations are included in the Comprehensive Plan, Kodiak Island Borough Zoning Ordinance, and Subdivision Regulations. The Kodiak Island Borough gained greater control over local land use and over State and Federal actions in the area under the Kodiak Island Borough Coastal Management Program. The Coastal Management Plan is a coordinated effort of local, State, and Federal Governments and the private sector to manage coastal resources. This plan covers virtually all land in the Kodiak Archipelago--no community is more than 15 miles from the coast. The plan promotes compatible, multiple use of coastal lands and water. The Kodiak Island Borough Community Development Department reviews proposed private and local government activity to determine consistency with the plan. Federal and State agency actions must be consistent with the plan, but determinations of consistency reside

with the State of Alaska. The Kodiak Island Borough is pursuing changes to the Alaska Coastal Management Program to place authority for all consistency determinations at the local level (Kodiak Island Borough 1988b).

Resource Management: Kodiak Island has a variety of habitats in a small area that make it home to numerous species of saltwater, freshwater, and terrestrial plant species; saltwater and freshwater fish; marine invertebrates; marine mammals; land mammals; and bird species. Salmon, halibut, herring, bottomfish, crab, shrimp, and scallops are the principal seafoods that are harvested commercially. The main marine mammal species found near Kodiak include sea lion, harbor and fur seals, sea otter, harbor porpoise, and gray and humpback whales. Kodiak Island is home to land mammals such as the Kodiak brown bear, fox, and land and river otters. Deer, elk, mountain goat, and rabbits have been introduced in the 20th century. There are approximately 120 species of birds, including ducks, geese, puffins, loons, cormorants, terns, murres, ptarmigan, and bald eagles (Kodiak Island Borough 1989; USFWS 1987; KANA and ADF&G Subsistence Division 1983).

The State manages fish and game on all lands, regardless of ownership (Federal, State, or private). Congress transferred management of these resources to the State under the Statehood Act. The State manages commercial fisheries from shore to 3 miles out for all species except halibut. The Alaska Board of Fisheries and the Board of Game regulate resources managed by the State. The ADF&G's westward regional office and a Fish and Wildlife Enforcement Division of the Alaska Department of Public Safety are located in Kodiak.

The U.S. Government reserves the power to direct states in the management of resources covered under international treaties or laws passed by Congress. The International Halibut Commission and the International North Pacific Fishery Commission manage halibut and groundfish under such treaties. In 1976, the Magnuson Act created the North Pacific Fishery Management Council--the regional Federal regulatory body responsible for managing fishery resources in the fisheries conservation zone from 3 to 200 miles from shore. The North Pacific Fishery Management Council has the authority to set seasons, gear, and other regulations to manage the fishing industry (Langdon 1986:7,17).

Resource management is an important issue in a State where the economy is almost entirely dependent on the extraction of renewable and nonrenewable resources. This issue was a focus of the KI interviews in 1989, 1990, and 1991. The differences in the Key Informants' views of resource management between 1989 (before the Exxon Valdez oil spill) and 1991 indicate that there was increasing opposition to Federal Government and Native management of resources.

All 1989, 1990, and 1991 Kodiak AOSIS KI interviewees (100%) believed that resources can be managed by institutions. Moreover, they believed that institutions need to manage resources to prohibit resource depletion and to mediate the competition for those resources. Several interviewees complained that resource management is "too political," meaning that management is too vulnerable to local, special-group, or even personal interests. These respondents said that there is a need to "get the politics out of it," implying that institutions are inherently neutral arbitrators of conflicts between

different interest groups. Some interviewees commented that government provides equity, balance, and insurance that all community members follow the rules.

Most 1989 Kodiak KI interviewees (57%) favored resource management by the State of Alaska or (43%) by a combination of State, Federal, and/or local (including Native) agencies. In 1991, 66 percent of KI's thought ADF&G was the institution best equipped to manage most or all resources. Other KI's favored combined management by ADF&G and Natives or by ADF&G and "local people"; one KI wanted a combination of "everyone but the Feds." The KI's believed that State agencies best understand the situation in Alaska and are more responsive to local needs and concerns. Some Kodiak interviewees even wanted the State to have control over marine mammals, which are currently managed under Federal law. They thought that the Federal Government was too far away and was generally more responsive to Seattle-based fishing interests. Yet Kodiak interviewees recognized the need for strong Federal enforcement against foreign encroachment in U.S. territorial and Alaskan waters. In this regard, some of them felt that Federal agencies are understaffed.

Among 1991 KI's there was a definite bias against resource management by the Federal Government. For species that occur in several states or internationally, such as halibut, marine mammals, or migratory birds, KI's conceded that management interests go beyond the State; but generally they had the most trust in the State to have an objective understanding of local needs.

In 1991, reasons for opposition to Federal management were related to recent increased Federal intervention in both subsistence and commercial harvesting in Alaska.

As a result of the Alaska Supreme Court McDowell v. Alaska decision of December 22, 1989, which ruled that the rural preference maintained in Alaska's current subsistence law was unconstitutional (ADF&G 1990), the Federal Government assumed management of some subsistence harvests. In commercial groundfishing, State observers were replaced in early 1990 by observers working under Federal contract. One KI--a commercial fisherman--said that, in general, "They should have the state do the surveying, not the Feds." In spring 1991, several Kodiak residents also expressed concern about the Federal North Pacific Fishery Management Council's proposed imposition of an individual fish quota system on the sablefish and halibut fisheries.

Kodiak interviewees expressed a desire for more local and Native input into resource management decisions, but few wanted local or Native control over resource management. In 1989, over 70 percent of the Kodiak interviewees felt that ADF&G did a better job of managing natural resources than Native organizations would; 30 percent thought that the State's ability to manage resources is equivalent to Natives' ability to do so. None--not even those who thought that Natives understand the resources better than non-Natives--felt that Natives would do a better job of managing all resources than would the State.

In 1991, in response to the question about whether ADF&G did a better or worse job of managing resources than Natives could, 66 percent of KI's thought ADF&G did a better job. These KI's thought ADF&G was more objective than Natives and had better access to the means to do scientific studies. One person said, "We're not dealing with just Natives using it. It's in a commercial industry, too." No KI's wanted Natives to

manage all resources; but some thought Natives should manage some resources, such as marine mammals or birds, for noncommercial use only. One non-Native KI commented, "The people should manage. The Natives got enough control, and I'm not wild about Fish and Game." Some KI's found it difficult to compare ADF&G management with that of Natives, saying that their interests were in different places.

Interviewees in 1989 offered several reasons for their opinion that Native management of resources would not be better than State management. Some interviewees, primarily non-Natives, identified Natives as just one interest group and feared that Natives would manage resources for their own benefit. Others said that Natives are not as well educated and would not be able to conduct the research that ADF&G does. Some recognized the political realities--that Natives would have trouble governing non-Natives and that Natives do not have the funds necessary to control and enforce regulations. Even though many interviewees admitted that Natives managed resources well in the past through values that admonished waste or use of resources for personal gain, they saw younger Natives as less knowledgeable and more greedy. Some interviewees thought that the only resources Natives should manage are subsistence resources (e.g., walrus or seals), upon which primarily Natives depend.

In 1991, even though KI's did not have much confidence in Natives' ability to manage resources (one person said, "Natives have gut feelings but no management skills."), they did credit Natives with a better grasp of both knowledge and use of resources than scientists. Many KI's agreed that Natives and scientists both had knowledge but in different areas. The KI's said that Natives' knowledge was based on

long tradition, continued practical use of resources, and their stake in the perpetuation of species. A non-Native hair salon operator said, "I get a lot of the older Native gals in here. They've been here 70 or 80 years; they've been doing it all their lives. They know what their grandmother used to do with these things. Scientists would laugh at that stuff. Those scientists learn from a book."

As in past years, some 1991 KI's were careful to specify that some Natives, i.e., those "still embedded in their culture" or those who do a lot of hunting and fishing, were more knowledgeable than others. Other KI's thought Natives knew about some species but not others: "Deer and stuff have been introduced by Fish and Game. But bears, Natives understand those better." Or: "Sea mammals--so many are close to being extinct. [It's] more of a study for scientists than for Natives."

One of the reasons that people in Kodiak prefer State resource management is because they believe Kodiak has political influence over ADF&G decisions. Kodiak KI interviewees in 1989 were quite optimistic about their degree of political influence on resource management. Nearly 64 percent responded that local people frequently influence ADF&G decisions, and none responded that they had no influence. Some interviewees identified the Kenai Peninsula and Cook Inlet as areas having greater political influence, primarily in regard to sports fishing issues, because of the influence of wealthy doctors, lawyers, and politicians who fish there. In 1991, almost all KI's (94%) thought local people had at least some influence over ADF&G decisions. One person thought that although there was opportunity for frequent influence, people in Kodiak did not use the opportunity well.

When asked how people in Kodiak exercise influence over ADF&G policies, 1989 interviewees mentioned local participation in meetings, committees, and fishermen's organizations, and on the State Board of Fisheries and Board of Game. Examples were cited of personal connections between some Kodiak residents and State officials and of "knowing the right people." Kodiak's Representative Cliff Davidson co-chairs the Resources Committee of the Alaska House of Representatives, and Kodiak's Senator Fred Zharoff sits on the Alaska Senate's Resources Committee. One interviewee related that in the previous summer (1988), the State closed the Shelikof Strait because people from Cook Inlet areas complained that Kodiak fishermen were intercepting their fish. Kodiak people protested and the strait was reopened within a week. It is clear that people in Kodiak have a sophisticated understanding of the political process and how to use it. Kodiak fishermen's organizations have a history of being involved in State and Federal politics and of successfully defending their interests (Langdon 1986:88).

The KI's in 1991 also suggested several methods by which Kodiak residents could influence fish and game-board policy. Several KI's emphasized that it was important to make one's views known. One said, "They're obviously looking for opinions. I get surveys all the time." Other comments were: "You have to be up on the regulations to get into the system"; "If you make enough noise, they'll do what you want"; "Call Fish and Game, bug them, report violations." The KI's also suggested that people should attend fish and game-board meetings, and "watch who they elect."

There was some cynicism, however, about the informal approach to influencing the fish and game boards. One KI said, "Those guys will say 'Yes, you're right' and then

do the opposite of what they say." Another said that the fish and game boards listen to people about game animals more than they do about sea life. These KI's thought a more formal approach was necessary, although one said, "I myself would never sit on a board." Two KI's specifically referred to the formation of lobbying groups or to working within those that already exist.

Some KI's mentioned a "good-old-boy" network in Kodiak that allowed some powerful figures to influence fish and game board decisions. One person observed wryly that investing in a processing plant probably would ensure getting some political clout. However, there was respect for those who had put years into working in the fishing industry in Kodiak: "Those who have been here all these years have fought for a lot."

In terms of knowledge about resources, 1989 Kodiak KI interviewees gave the most recognition to scientists' understanding and the least to Natives' understanding, although most respondents recognized that both groups had some understanding of resources, albeit of a different nature. This may be due partly to the small percentage of Native respondents in the sample but probably has more to do with the fact that Kodiak is a center for marine research. This research is conducted by personnel of the National Oceanic and Atmospheric Administration (NOAA); the University of Alaska's Fishery Industrial Technology Center, Cooperative Extension, and Marine Advisory Program; and the regional offices of the USFWS and ADF&G. Local residents are very aware of these research efforts, particularly because this research is geared toward aiding the fishing industry.

In terms of understanding resources by use, 1989 respondents gave ADF&G the most credit and Natives the least credit of any AOSIS region. Respondents tended to interpret use in terms of commercial fishing and species conservation, and ADF&G was considered most knowledgeable because it is in charge of managing resources for these purposes. The complaints that interviewees had about ADF&G dealt with allocation of fisheries resources. Several respondents felt that local people, but not necessarily Natives, knew best how to use these resources.

In 1991, KI's credited scientists with more unbiased knowledge than Natives. One comment was, "Natives understand how it balances their lives, but not what the water is made up of. Scientists are into the hatcheries. Natives are not involved with building the species." Typically, KI's thought understanding of use was quite different from simply having knowledge; and most KI's credited Natives with better understanding of use.

In terms of acquiring knowledge about an area, Kodiak KI's generally thought it took less time than did people in other AOSIS regions. In 1989, most of the Kodiak respondents (64%) thought it took less than 5 years, or enough time to "live through several seasons" as some of them said. Only 21.4 percent thought it took the accumulated experience of a lifetime. In 1991, 22 percent of KI's said it would take about 1 year, 44 percent thought it would take 1 to 5 years, 28 percent thought it would take 6 to 20 years, and 6 percent thought it would take a lifetime. None said that a person would never get to know an area.

There may be several reasons for these responses. Most people on Kodiak Island live in the road-connected areas and generally do less hunting and fishing than people in

small villages, and that which they do is usually closer to their homes. Also, the increase in technology that has accompanied the high capitalization in the Kodiak fishing industry has meant a reduction in the amount of knowledge and skill perceived as necessary to engage in this occupation. Older fishermen give more credence to the accumulation of knowledge and tell stories that poke fun at relying too heavily on technology or at feeling too confident at sea.

Some 1991 KI's specified that it wasn't enough just to be in a place for a certain amount of time; one had to actively seek knowledge. For example, one KI said that learning about an area would take "years and years. . .that's with wanting to and paying attention to oldtimers. You could also learn by book or whatever." Another person said that while it would take only a year to be able to harvest, it would take 15 to 20 years to be really knowledgeable.

Infrastructure and Administrative Services: The road-connected area of Kodiak Island has a well developed infrastructure. Infusion of Federal and State monies for infrastructure development occurred during World War II, after the 1964 earthquake, and after oil monies started flowing to the State in the 1970's. Government funding for improvement projects in Kodiak has focused on providing facilities and services that support the fishing industry. Several large public construction projects were undertaken in the early 1980's, even as the fishing industry entered a relatively depressed state (Hill 1986:354). Kodiak wants additional infrastructure to increase its role as a regional support center in order to profit from the activities that have increased at alarming speed during the 1980's with Southwest Alaska's bottomfish boom.

Most of the infrastructure that the Federal Government directly maintains supports the fishing industry and commerce in the North Pacific Rim. Kodiak Island is home to the world's largest USCG Base, which, in 1971, took over the U.S. Navy Base built during World War II. This 23,000-acre complex employs about 1,155 personnel with 1,500 dependents and is home port to four USCG cutters (Kodiak Chamber of Commerce 1989). The USCG Base has expanded considerably since the early 1970's (Hill 1986:358). The USCG patrols the seas, enforces fishing regulations, conducts search and rescue missions, aids navigation, and inspects and registers ships (Payne 1980:79). Kodiak has a NOAA office that monitors and researches the weather and fisheries, and a Federal Aviation Administration air traffic control facility. The Alaska District of the U. S. Army Corps of Engineers has been involved in harbor and port developments on the island.

The State of Alaska also has provided support for Kodiak's fishing industry. The University of Alaska Fairbanks School of Fisheries and Ocean Sciences maintains the Fishery Industrial Technology Center in Kodiak. The center's mission is to provide scientific and technical support to Alaska's seafood industry. The center's current activities include research on minimizing incidental catch, developing energy conservation measures to make seafood processing more cost effective, developing alternative product forms for the area's abundant pink salmon, utilizing seafood-processing wastes more profitably, optimizing protein retention in the surimi-manufacturing process, and identifying sources of microbial contamination to help processors meet seafood quality standards.

The State of Alaska has funded several large infrastructure projects in Kodiak over the last decade. The Terror Lake hydroelectric power project was built between 1982 and 1984 to reduce energy costs on the island and provide electric power for industrial expansion. The limited availability of low-cost energy and adequate freshwater supplies were two of the main constraints on the fish processing industry. With completion of the Terror Lake hydroelectric project, energy prices were no longer tied to increasing fuel costs (USFWS 1987:122).

The Saint Herman (Dog Bay) Boat Harbor, on Near Island, was built with State funding in 1981-1982. This harbor more than doubled the moorage capacity for small boats in Kodiak. Construction of this new boat harbor was followed by construction of the Near Island Bridge, which provides access to Dog Bay Boat Harbor and to 275 additional acres of city-owned land on Near Island. This land is being developed for industrial, institutional, and recreational use (Near Island Task Force 1987). A new Fishery Industrial Technology Center opened on Near Island in early 1991, and KANA is preparing to build a museum there. A breakwater project, scheduled to go out to bid in September 1991, was funded with $10 million from the State legislature in 1991 and an anticipated $2 million from the City of Kodiak (Kodiak Daily Mirror, 6-4-91:1).

The State of Alaska also assists Kodiak with transportation, courts, public safety, and parks. The State maintains the highways and airport through the Department of Transportation and Public Facilities and the ferry terminal through the Marine Highway System. The Alaska State Court System handles all civil and criminal cases, the Alaska Department of Law provides Kodiak with a District Attorney, and the Alaska

Department of Corrections administers adult probation and parole. Through the Alaska Department of Public Safety, Kodiak is provided with the services of the Alaska State Troopers, Search and Rescue teams, patrol vessels, and the Protection Division of the USFWS. The Southwest District Office of the Department of Natural Resources, Parks Division, maintains three parks on the Kodiak road system: Fort Abercrombie, Buskin River, and Pasagshak (Kodiak Chamber of Commerce 1989).

The Kodiak Island Borough and Kodiak City provide general municipal services in the road-connected area. The second-class borough has assumed area-wide powers of assessment and taxation, education, health, and planning and zoning. Nonarea-wide powers assumed by the borough include parks and recreation; animal control; solid-waste collection and disposal; and service districts for road, water, sewer, and fire protection. These services are administered by the borough's 12 departments (Kodiak Island Borough 1988a).

The Kodiak Island Borough assesses real property taxes of 4.5 mills, personal property taxes of 4.5 mills, and various road and fire service district taxes, but no sales or visitor's room tax. Kodiak Island Borough taxes are among the lowest in the State (Alaska Department of Community and Regional Affairs 1988c:22-23), and the mill levy has stayed virtually level for 7 years in spite of considerable decreases in Federal and State funding during the last 4 years (Kodiak Island Borough 1991).

The City of Kodiak provides various municipal services. Marine facilities include a ferry dock, city dock, container terminal, two small boat harbors, and mooring buoys in Saint Paul and Saint Herman harbors--all administered by the harbormaster. The city

supplies water and sewer services in and around the city and operates a small municipal airport with a gravel runway and no tower services. The Kodiak City Police Department, in addition to the Alaska State Troopers and Village Public Safety Officers, provides police protection for the island. Kodiak City provides fire protection along with Bayside Fire Department and the Women's Bay Fire Department, both operated by the borough, and also joins the borough in providing animal control services. The city also maintains a public library, nine developed public parks, an outdoor amphitheater, and a campground with shower and restroom facilities. Taxes assessed by the City of Kodiak include a property tax of 2.0 mills, a sales tax of 5 percent, and a lodging/accommodation tax of 5 percent. Of the city sales tax, 1 percent is devoted to roads and sewer and water, another 1 percent to harbor and port improvements, and 3 percent to general city operations. The city assesses tariffs on goods transferred over the municipal docks and user fees for dockage, which help finance port improvements and maintenance.

Much of the focus of local government has been on providing docks, ports, support facilities, services, and marketing for the seafood industry. As one local public official said, "We see our role as providing a platform for private business." The borough has conducted a study to determine whether it should develop airport terminal facilities to encourage more air carriers to provide service to Kodiak Island, "as a transportation hub for Southwest Alaska" (Kodiak Island Borough 1991). This would aid in marketing fresh seafood. At present, air carriers provide their own terminal facilities and there is little competition in air service. Borough officials consider airport facilities equally as

important as dock facilities or water and sewer facilities, which have been provided for seafood harvesters and processors.

A pressing local problem is the rate at which the Kodiak Island Borough Sanitary Landfill is filling up. Waste disposal has been a major problem for Kodiak fish processors and Kodiak must accept waste from ships that stop in port. In 1990, the Kodiak Island Borough implemented a recycling program for aluminum, paper, and glass in order to extend the life of the landfill. Recycling may not prove to be economically feasible because recyclable items must be shipped to Seattle, although paper recycling has been assisted by Sealand and Alaskans for Litter Prevention and Recycling. The borough recently hired an environmental engineer to develop a solid waste management plan (Kodiak Island Borough 1991).

Following are two recent examples of how local government underwrites a large portion of fishing industry costs. First, the Kodiak Island Borough spent $55,454 in 1989 as part of its economic development program to contract NOAA's National Marine Fisheries Service to conduct site-suitability studies for possible rehabilitation and enhancement of king crab (Kodiak Daily Mirror, 11-29-89:9). The final report was expected in June 1991. Second, the City of Kodiak sold $5 million worth of general obligation bonds to add 400 feet of dock space to Pier 2 to accommodate the largest trawlers and crab boats operating in Alaska. Indirectly related to the fishing industry, the newest and largest city development is on Near Island, where road, sewer, and water services are being extended to Saint Herman's Harbor. The land benefitted by this infrastructure is owned by the city and will be used primarily for fishing-related industries

and commerce. The City of Kodiak gave 16 acres of land on Near Island to the University of Alaska for the new Fishery Industrial Technology Center--another public contribution to the fishing industry.

Infrastructure and administrative services in Kodiak villages are quite different from those in Kodiak City and the areas connected to it by roads. For the past 25 years, rural communities on Kodiak Island have concentrated on rebuilding basic infrastructure--housing, schools, roads, water and sewer systems, utilities, and communication systems--destroyed in the 1964 earthquake (KANA 1985). All Kodiak villages have airports, but only Port Lions has public docks. Village infrastructure generally is limited. Some facilities have deteriorated because of meager funding for maintenance. Most canneries located in or near the villages that were destroyed in the earthquake were not rebuilt, while some were relocated to Kodiak (Roppel 1986). Thus, Kodiak villages suffer from little private-sector development and employment. The main issues currently confronting the villages are employment, transportation, port facilities, and economic development.

Most of the assistance provided to Kodiak villages has come from the State and Federal Governments; and much of this has been funneled through KANA, a regional nonprofit corporation formed in 1966. The KANA, the dominant public-sector institution for the Kodiak area, administers a wide range of Federal and State contracts and grants to provide services to Kodiak Natives. Traditional councils recognized by the Bureau of Indian Affairs as the official tribal governing bodies for the villages have assigned their Federal contracting authority to KANA. The KANA assumes other quasi-

governmental functions, providing advocacy, development, planning, training, and technical assistance to Natives.

The KANA is comprised of four departments: Community Development, Culture and Heritage Programs (discussed in Sec. V.C below), Health and Social Services (discussed in Sec. III.C below), and Finance. The Community Development Department was reorganized in 1987 and now includes economic development, tribal government, and education programs. In 1988, KANA received a planning grant from the Economic Development Administration for Native communities to develop plans for capital improvements. A goal was to assist Native communities in attracting businesses.

One of KANA's economic development projects pursued under the 1988 planning grant was the Village Mariculture Project to determine the feasibility of developing first scallop and, later, oyster farming in the villages. The project received financial support from State and Federal Governments and the Japanese Overseas Fishery Cooperation Foundation. Economic development projects initiated prior to the 1988 grant were the Agriculture Program to promote subsistence gardening and the Karluk River Study to plan for tourism development in Karluk. The KANA also assists traditional councils with administration, tribal enrollment, community development, and grant proposals (KANA 1985, 1986, 1988).

KANA funding has come primarily from the Federal Government. While the total amount of Federal funding for KANA increased over the past 10 years, the proportion of revenue from the Federal Government has declined since the early 1980's under the Reagan and Bush administrations. Increased Federal spending for defense

occurred at the expense of domestic social programs, including Native institutions such as KANA. State and other (primarily fee-for-service) revenues have assumed a greater role in supporting the organization, as shown in Table 8.

Table 8

KODIAK AREA NATIVE ASSOCIATION
SOURCES OF REVENUE, 1979-1988

	Percent Federal	Percent State	Percent Other	Total Revenue
1979	95.5	0	4.5	$2,116,605
1980	94.1	0	5.9	2,780,339
1981	86.4	3.2	10.4	3,607,844
1982	79.4	7.3	13.3	3,241,818
1983	72.8	14.7	12.5	3,261,990
1984	75.5	10.8	13.7	3,390,475
1985	74.5	14.5	11.0	3,921,044
1986	71.8	16.9	11.3	4,133,459
1987	72.5	10.7	16.8	4,130,580
1988	75.2	13.1	11.7	5,086,626

Source: Kodiak Area Native Association, Directory of Services, and 1988 Annual Report.

The State provides most assistance to Kodiak villages--either directly to their city councils or through the Kodiak Island Borough. Kodiak communities depend on State support derived from revenue sharing, municipal assistance, capital improvement grants, or contracts for services. State revenues also have declined in the 1980's, and these declines have had the greatest impacts on Alaska's smaller communities. Lack of a

strong private sector and little taxable property make it difficult for these communities to raise revenues locally (Alaska Department of Community and Regional Affairs 1988b).

The decline in State revenues has not impacted Kodiak villages as badly as it has communities in the Yukon-Kuskokwim Delta, Bering Straits region, Northwest Arctic Borough, and the Doyon region (Alaska Department of Community and Regional Affairs 1988b). Since Kodiak Island villages are part of the Kodiak Island Borough, the borough performs some functions for these communities that the State performs in unincorporated areas of the State. The Kodiak Island Borough administers schools in all of the villages and controls planning, platting, and zoning through the Community Development Department. The borough helps villages with grant applications; and it also manages some of the grants awarded to villages and includes their Capital Improvement Project (CIP) lists with those of the borough. The borough performs other public services for the villages, such as preparation of comprehensive plans and assistance with CIPs, which include fuel delivery, electrical systems, water and sewer systems, roads, landfills, and community buildings and schools.

The disparities between community improvements in Kodiak City and the deterioration of infrastructure in the villages lends credence to complaints often heard from village residents that the borough has not been looking out for their needs. Economic conflicts between the villages and the borough were mentioned by several interviewees, and reference to these conflicts is occasionally made in letters to the editor published in the local newspaper. Problems between villages and the city and borough

also were highlighted during the oil-spill cleanup, when village residents objected to their lack of participation in or control over the Kodiak area oil-spill response.

III.B. *Commerce and Industry*

Kodiak City differs from most other communities in the Social Indicators Study in terms of its size and level of development. Kodiak is Alaska's fifth-largest city (after Anchorage, Fairbanks, Juneau, and Ketchikan) and its most diversified fishing port. Because of its location in the western portion of the Gulf of Alaska, Kodiak provides a commercial link between the Pacific Northwest and the Far East. It is the hub of transportation and shipping routes in the Gulf of Alaska and is a service base from which many vessels fish the Gulf of Alaska and the Bering Sea (Kodiak Chamber of Commerce 1989).

The private-sector economy is well developed in and around Kodiak City and is related in one way or another to the fishing and tourist industries. While the private sector is related in many ways to the public sector, including the USCG, Kodiak City is less dependent on public-sector revenues than cities in other regions; thus, it has not been as heavily impacted by declining State and Federal revenues as communities in many other areas of Alaska. This is not true, however, for Kodiak villages.

Economic Diversification: Even though Kodiak City is primarily a fishing port, it has a diversified economic base. Kodiak City's employment in 1988 was distributed among various sectors of the economy, as indicated in Table 9.

Table 9

KODIAK CITY EMPLOYMENT BY ECONOMIC SECTOR, 1988

Industry	Number Employed	Percentage of All Employed
Construction	180	4
Manufacturing (includes fishing)	1,479	30
Transportation, Communications, Utilities	230	5
Trade	842	18
Finance, Insurance, Real Estate	116	2
Services	848	18
Government	1,112	23
Federal	(193)	(4)
State	(248)	(5)
Local	(670)	(14)

Source: Alaska Department of Labor 1989.

Fishing is the main sector of the local economy. It accounts for nearly all of the manufacturing employment and affects most other sectors of the economy. According to a local saying, "Everyone in Kodiak is affected by fishing in one way or another." During the 1980's, Kodiak was consistently among the top three U.S. ports in terms of the value of fish landed, ranking second in 1987 and first in 1988 (Southwest Alaska Municipal Conference 1989:12). Kodiak is home port to over 800 commercial fishing vessels, while about 120 additional vessels are moored in communities close to Kodiak. Salmon seiner boats are the largest part of Kodiak's fleet; 387 seine permits are available in the area. Kodiak also is the center for Alaska-based large-trawl, longline, and crab vessels. Nearly 120 of the vessels in Kodiak are 80 feet or larger (Kodiak Chamber of Commerce 1989).

Between 1977 and 1987, the ex-vessel value of seafood deliveries to Kodiak's 11 seafood-processing plants averaged $96.3 million. The 1988 ex-vessel value of various marine species for the Port of Kodiak is listed in Table 10 (Kodiak Chamber of Commerce 1989).

Table 10

EX-VESSEL VALUE OF MARINE SPECIES
PORT OF KODIAK, 1988

Species	Ex-Vessel Value ($ million)	Percent of Value
Salmon	$ 99.36	57.7
Groundfish	25.35	14.7
Crab	21.94	12.7
Halibut	21.60	12.5
Herring	3.14	1.8
Other	.77	.4
TOTAL	$172.16	99.8[a]

Source: City of Kodiak and Kodiak Island Borough Community Profile, prepared by the Kodiak Chamber of Commerce for the Southwest Alaska Municipal Conference.

[a] Does not equal 100 percent due to rounding.

The salmon harvest has been a steady contributor to Kodiak's economy both by average value and by weight, and salmon is the most researched and managed resource. King crab and shrimp are still scarce following their decline in the 1980's and show few signs of recovery. However, in November 1990, there was a brief king crab fishery in Kodiak for the first time since 1982; the quota was filled in 12 days. Greater importance

has been placed on groundfish (sablefish, pollock, cod), halibut, herring, and *opilio* tanner crab in recent years (Langdon 1986). By 1991, the value of groundfish had increased considerably above 1988 levels reported in the preceding table. In fact, groundfish trawling may be the main reason why the king crab fishery has not been restored--because of the trawlers' damage to seafloor ecology and incidental crab catches in trawl nets.

In 1989, Kodiak's fishing economy was generally doing well following the slump earlier in the decade (Payne 1986:406-407; Southwest Alaska Municipal Conference 1989), at least prior to the Exxon Valdez oil spill. The recovery was based on further diversification within the fishing industry as fishermen and processors responded to changes in fishery stocks. With the transition to groundfish, fish harvesting and processing have become year-round activities in Kodiak. Herring, halibut, and crab have added other fishing seasons in the past; but the transition from these low-volume, high-priced fish to high-volume, low-priced groundfish has truly established the year-round nature of Kodiak's fish processing operations and brought greater stability to Kodiak's economy (Alaska Business Monthly, March 1990:57).

Kodiak now has two surimi-production plants that process groundfish. In 1985, Alaska Pacific Seafood, a subsidiary of Seattle-based North Pacific Processors, Inc., was the first Alaskan processor to produce surimi--an odorless, tasteless, jelly-like product made primarily from pollock and used in imitation seafood. In October 1988, Western Alaska Fisheries became the city's second and the State's fourth surimi producer (Alaska Business Monthly, March 1989:36).

Government is the second-largest sector of the Kodiak economy, with local, State, and Federal Governments contributing to employment in that descending order. Local government includes employees of the Kodiak Island Borough, Kodiak City, Kodiak Island Borough School District, and Kodiak Island Hospital. Several regional offices for State and Federal Government agencies are located in Kodiak. The USCG does not appear in the Kodiak City employment figures listed in Table 10, so the Federal Government's role is understated. The USCG has been a stable economic factor in Kodiak, even if the transience of its personnel has added instability to Kodiak's population and social structure. USCG spouses also have added to the labor force in Kodiak. Kodiak, along with Anchorage and Fairbanks, benefits most from military spending in the State (Griffin 1989b). As part of the Federal Government's cost-cutting procedures, services at the USCG Base (mess hall, cleaning, etc.) recently were contracted to a private firm, which reduced the number of jobs on the base.

Timber and tourism expanded in the 1980's, adding further diversification to Kodiak Island's economy. Logging takes place on Afognak Island, which is approximately 700 square miles and contains substantial stands of virgin old-growth Sitka spruce and high-grade hemlock timber. Afognak has two logging operations--Koncor Forest Products and Ben A. Thomas--that are exporting logs to the Pacific Rim (primarily Japan, China, Korea, and Taiwan) and developing markets in other countries. Each operator is harvesting about 25 million board feet per year, with annual gross sales revenues ranging between $8 and $30 million. Koncor Forest Products is a joint venture of several Native corporations (Ouzinkie Native Corporation, Natives of Kodiak,

Chenega Native Corporation, and Yak-Tak Kwaan). Koncor not only harvests its own timber but also contracts to harvest and market timber for other corporations. Ben A. Thomas is a contract logger for the Afognak Native Corporation (Kodiak Island Borough 1989; Alaska Business Monthly, March 1989:37).

In spring 1991, there was increased concern among Kodiak fishermen and conservation groups that proposed logging around the Kitoi Hatchery on Afognak Island would cause damage to salmon. Representatives of the Native corporations contracting with the two timber companies saw these concerns as "aesthetic" or "moral" and pointed to their record of clean logging, including voluntary compliance with the 66-foot buffer zone around salmon streams stipulated by the Forest Practices Act. They also pointed out that salmon runs are good in the Karluk and Red Rivers, both located in the treeless southern part of Kodiak Island.

At the instigation of the Kodiak Environmental Network, a public forum held in March 1991 included representatives of the timber companies and Native corporations; regulatory agencies; the Kitoi Hatchery manager; and a member of the Coastal Coalition, an environmental group that has worked to forestall logging in parts of Kachemak Bay by proposing to buy timber lands with Exxon settlement money. Only Ben A. Thomas, the timber company under contract to Afognak Native Corporation, took part in the forum; Koncor declined to participate.

Several representatives of regulatory agencies (ADF&G and the U.S. Forest Service) presented data on other areas but admitted that they did not yet know what the effects of logging would be around the Kitoi Hatchery. At the forum, the Afognak

Native Corporation land manager said the corporation would not shut the door on proposals to buy the land. More recently, the Afognak Native Corporation, with Afognak Joint Venture, has investigated the possible sale of timber lands to the State and Federal Governments (Kodiak Daily Mirror, 5-31-91:1). State officials have approved Koncor's planned logging operations around the Kitoi Hatchery, but there are unresolved conflicts between Koncor and the hatchery manager (Kodiak Daily Mirror, 6-4-91:1).

Another sector of Kodiak's economy is tourism. The visitor industry is expanding rapidly and becoming one of the major industries on the island. Tourism literature calls Kodiak the "Emerald Isle: Alaska's Brightest Jewel." The Kodiak Island Archipelago is a major State recreation and tourist attraction. Kodiak Island has astounding natural beauty, with rugged mountains, miles of rocky and picturesque shoreline, and stretches of deep green forests and tundra. The island supports a wide variety of wildlife, including fish and migratory birds. Founded in 1792, Kodiak City--Alaska's oldest community--has scenic and historic charm. All of these factors make Kodiak popular for hunting, fishing, camping, boating, sightseeing, and other outdoor recreation. The Kodiak Chamber of Commerce and the Kodiak Island Convention and Visitors Bureau have actively promoted tourism. They anticipated reaping the rewards from several years of concerted marketing effort during summer 1989 (inquiries were up 30% from the previous year), but the oil spill negatively impacted the local tourist industry.

Trade and services are the other two main sectors of Kodiak's economy. There are a large number and variety of marine-related businesses and service providers that

support the fishing industry. The tourist industry on the island is served by several hotels, bed and breakfast facilities, national car rental agencies, sporting goods stores, air taxi services, fishing and hunting guides, lodge operators, and taxidermists.

Private retail businesses located in Kodiak City include several large grocery stores (including Safeway, a national chain); gas stations; car dealers; lumber and building suppliers; furniture, computer, office supply, clothing, and book stores; florists; art galleries; and specialized gift and jewelry shops. There are numerous restaurants and bars and a fast food establishment. A wide range of services and productive businesses are available, including local beauticians, travel agents, accountants, attorneys, insurance brokers, real estate agents, contractors, construction companies, consultants, banks and credit unions, and private health professionals (physicians, dentists, optometrists). Kodiak City has businesses that are nonexistent in almost all Alaskan villages--such as 1-hour photo developing, computer stores (sales, service, consulting), and a Nautilus fitness center. Services available in Kodiak are used not only by the permanent population (about 6,400 in 1991) but also by thousands of other people from surrounding villages, or by people who travel from outside the region or State to work seasonally in Kodiak.

Construction employment has declined since 1983, when several major government projects were being built. At that time, there were nearly 400 more construction workers in Kodiak than in 1988; and construction constituted 12 percent of Kodiak employment. This peak in construction activity coincided with the decline in fisheries but did little to offset the impacts, because these large construction projects

were built by contractors from Anchorage and from out of State who used primarily nonlocal labor (Hill 1986:354-359).

The economic situation in Kodiak villages is quite different from that in Kodiak City and the areas connected to it by roads. Village residents are highly dependent on subsistence activities and Federal, State, and Native corporation transfers of all kinds. They obtain income from commercial fishing, fish processing jobs, and welfare programs (Alaska Department of Community and Regional Affairs 1988b). Village economies are more vulnerable to low fishing harvests and to "booms and busts" in the seafood market because they are not very diversified. Centralization of the canneries and fish processors in Kodiak City decreased employment opportunities in the villages. Aside from activities related to fishing, there is little private-sector development in the villages.

People in the Kodiak region agree that fishing should continue to be the foundation of the local economy (Kodiak Island Borough 1988b:1-6). Local politicians have become increasingly active in fishing issues (Payne 1986:454). They recently lobbied for greater allocation of various fish species for Kodiak Island fishermen. They were actively involved in responding to the Exxon Valdez oil spill and in representing the interests of Kodiak's fishing community to public and corporate officials.

Despite the emphasis on fishing, many Kodiak residents are interested in other options for future economic diversification and development (Kodiak Island Borough 1988b:Section 1.3). In 1989, Kodiak bid against Seward to become an Alaskan home port for two Navy frigates. Kodiak City and the Kodiak Island Borough both passed resolutions in favor of pursuing a Navy home port. In October 1989, the majority of

Kodiak Island Borough residents showed their support for this development when an initiative that would have prohibited the borough from pursuing a Navy home port was defeated. The business community and retired Navy and USCG people were most supportive of the idea. However, the initiative itself, the public debate about it, and the votes it did receive indicated that not all segments of the Kodiak population were in favor of a Navy home port.

The arguments for and against the Navy home port were interesting for what they revealed about people's values and concerns. Those in favor argued that the Navy had built Kodiak (roads, radio and TV, first airfield for commercial air transportation, fire protection) and had assisted with security and rescue after the 1964 earthquake. Proponents appealed to people's sense of patriotic duty; they emphasized the potential economic benefits and the fact that the Navy Base would be complementary to the already large USCG Base. Those against the Navy home port were concerned that the growth associated with military personnel would destroy the city's ambience, lead to increased crime, and negatively impact fishing (commercial, subsistence, and sport). They cited environmental abuse by the Navy in the past (e.g., polychlorinated biphenols [PCB's] poisoning on Long Island, Kodiak Harbor, or discarded fuel barrels in Kodiak's Women's Bay). They resented the State of Alaska having to pay close to $100 million to bid for the home port and thought this was a wasteful and unnecessary pork barrel project (Kodiak Daily Mirror, 10-2-89). In 1991, institutional and key informants thought the Navy was now a "dead issue"; the Navy is no longer pursuing establishment of an Alaskan home port.

Offshore oil development is a possibility around Kodiak Island. In 1981, the Federal Government leased 13 offshore oil and gas tracts in the Lower Cook Inlet/Shelikof Strait area known as Outer Continental Shelf (OCS) Lease Sale 60 (USFWS 1987:112). While oil and gas companies have been interested in exploring for reserves in the Shelikof Strait, no leasing for exploration or development has been proposed or allowed on land within the Kodiak National Wildlife Refuge.

Views concerning OCS development near Kodiak Island have changed over the past 15 years. In the late 1970's, OCS activities evoked strong opposition, particularly from fishermen concerned about potential threats to the fisheries and to the community of Kodiak (Payne 1980). But early in the history of OCS leasing (mid-70's), there was some mixed support for potential development, even in Kodiak villages (Davis 1979). In the mid-1980's, Payne perceived that the attitudes he had observed in Kodiak in the late 1970's had changed: people in Kodiak were more willing to talk about and cooperate with potential OCS development. Payne attributed this to (1) local peoples' 1982 experiences in working with Chevron to coordinate seismic tests with fishing in the Shelikof Strait, (2) greater familiarity between local residents and oil company representatives, (3) the downturn in the fisheries, and (4) erosion of interest in the issue (Payne 1986:423-431).

The 1988 and 1989 AOSIS KI data (pre-Exxon Valdez oil spill) reveals that Kodiak interviewees were the most optimistic about the local benefits that could accrue from OCS developments. They did not anticipate having control over those developments, but they believed that OCS activities would provide jobs for local people

and boost the Kodiak economy. Kodiak residents were not concerned about the possibly harmful effects that oil and gas development could have on the environment. Respondents felt that oil and gas development would have either no impact (57% of respondents) or both good and bad impacts (43% of respondents) on the environment. Their level of optimism was not shared by any other region in the study, making it ironic that Kodiak was the AOSIS community in the original (pre-spill) sample most impacted by the Exxon Valdez oil spill. Local attitudes were radically altered by the spill.

The optimism that Kodiak residents expressed about OCS development just prior to the oil spill seemed unwarranted for several reasons. One would expect that Kodiak's dependence on fishing would make residents more concerned about potential impacts on that industry. The large construction projects that took place on Kodiak Island during the early 1980's used primarily nonlocal labor (Hill 1986:354-359), so one would expect greater doubt about local job benefits from a similar large-scale project. In addition, the fishing economy had rebounded from its depressed State of a few years earlier; and one would expect people to be less interested in economic alternatives.

There are several factors that help to explain AOSIS KI respondents' views. Kodiak informants had faith in a capitalist democracy and in technology. Among the reasons that respondents gave for their lack of concern about potential oil development was their belief that oil industry technology had been perfected and that the risks were not that great. Concern for the environment was perceived as a trade-off for economic benefits, improved transportation, greater availability of goods and services, and better medical facilities. These views are, in part, a response to the oil industry's concerted

image and media campaigns of the past decade. These views also are influenced by the pro-development stance taken by the majority of local residents and the animosity felt by some local residents toward environmentalists--synonymously labeled "anti-development," of which there was an identifiable contingent in Kodiak even before the oil spill. A few people responded that "every Alaskan is in the oil business" and pointed out the contradiction in Alaskans accepting Permanent Fund-dividend checks and oil-generated State revenues while opposing OCS development.

Part of the explanation for support of OCS development in Kodiak lies in the residents' past experiences with oil and gas developments. Kodiak has a strong labor union history dating back to the years of World War II construction and later earthquake reconstruction. Many construction workers and skilled craftsmen from Kodiak obtained Trans-Alaska Pipeline jobs in the 1970's and thus have greater confidence in the potential job benefits from oil and gas development. The greater diversification of Kodiak's economy (particularly with a large, private service sector), greater dependence on wage labor, and less dependence on fishing and subsistence harvesting make community residents, on the whole, more receptive to oil and gas development.

For Kodiak Natives, the prospects of being involved in oil and gas development in the Arctic National Wildlife Refuge (ANWR) and obtaining revenues for their regional and village corporations makes them supportive of oil and gas development in general. Several potential staging sites for oil and gas activities--including one near Old Harbor--have been identified on Native lands within the Kodiak region.

In 1991, 2 years after the Exxon Valdez oil spill, Kodiak KI's were less positive about the prospect of oil development than were KI's in previous years. Their increased concerns about the potentially harmful effects of oil development may be largely attributed to their experience of the spill. In response to the protocol question about the effects of hypothetical oil projects on resources, none of the 1991 KI's thought any aspect of oil development would have a uniformly beneficial effect on any resource. Fifteen (47%) thought the effects would be mixed; seven (22%) thought there would be no effects, with one adding "unless they spill it." Another KI commented, "The effects that are there are deleterious. But there's not a lot of effects." Ten KI's (31%) thought the effects would be uniformly harmful.

In response to the question about local and outside benefits of oil development, sixteen KI's (50%) thought the benefits would be mainly external to the Kodiak community: "They'd probably bring their own people." Eight respondents (25%) thought there would be local benefits but external control. Three (9%) thought local and external control would be equal, and four (13%) said the benefits would be mainly local. Many KI's thought that there would be some local financial benefit from a hypothetical project but that the biggest profit would go outside. One KI pointed out, "In fishing the profit goes outside the community, and the same would be true for oil development."

There was feeling that some local people would benefit and others would not: "Benefits would come to the local power structure. Some few token people would be hired but probably mostly from Texas." KI's had specific ideas about groups that would benefit from oil development. One said that retail and real estate businesses in Kodiak

would do well. Another person, referring not to Kodiak but to the possible opening of ANWR, said, "The real money is in the royalties. The primary benefit will go to stockholders of Native corporations. Next will be royalties to State and Federal Government."

There were many comments about the potential social impact of an oil development project on the Kodiak community. Several KI's said there would be an increase in population, one complaining, "It's too big already." They noted that there would be a need for more schools. One said, "[A] boom town itself has an effect on the environment," and another, "The more people using the resources, the more negative effect it would have."

There was concern that oil development would bring more social problems, such as alcohol abuse, drugs, and crime, especially if there were an additional transient population. (One woman asked, "Have you noticed how most of the crimes here now are caused by transients?") One KI said there would be a need for additional resources "to cope with people whose lives are unstable." Another thought the problem would stabilize in a few years: "The first people who come in and do the drilling are a rough and transient bunch. After that it settles into a normal Alaskan community; they're committed to making a home and settling here."

Two KI's mentioned that there would be opposition in Kodiak to oil development in the area. In regard to the social effects of a hypothetical project, one said, "Probably beneficial--except they'd have a big fight in <u>this</u> community." In regard to the "fight," this

KI was referring to the environmentalists who have become stronger and more vocal in Kodiak since the oil spill.

The Kodiak Environmental Network (KEN), organized in early 1991, is an outgrowth of the Crude Women, a loosely defined group that formed in summer 1989 following the spill and served variously as a support and political activist group. The KEN is more formal, having as its purpose the dissemination of information to the public and the provision of a forum for discussion of local environmental issues. A subgroup of KEN, the Forest Practices Group, has done research on logging practices on Afognak. In March 1991, KEN sponsored a public forum to discuss the issue of logging around the Kitoi Hatchery. Another forum on waste management in Kodiak was held in May 1991.

Native Corporations: Koniag, Inc., the Kodiak regional for-profit corporation, is one of 13 Native regional for-profit corporations established under the requirements of the ANCSA. Of its approximately 3,400 shareholders, about one-third are residents of the Kodiak Island area, one-third live on the Alaska mainland, and one-third reside elsewhere, mostly in the U.S.

Koniag's major asset is the land it received under ANCSA, but conveyance of this land is not yet complete. As a result of its merger with several village corporations, Koniag obtained some critical bear-habitat-land holdings within the Karluk and Sturgeon River drainages of the Kodiak National Wildlife Refuge. These lands are subject to ANCSA Section 22(g) which gives the U.S. right of first refusal in the event the lands are sold and stipulates that those lands will "remain subject to the laws and regulations governing use or development of such refuge." Thus, although Native village corporation

lands conveyed under ANCSA are privately owned and no longer part of the refuge, FWS retains control over the use and development of those lands (USFWS 1987).

Because of Federal restrictions on its refuge lands, Koniag has attempted to exchange a portion of the affected lands for lands with greater economic potential elsewhere. The corporation has pursued a land exchange with the U.S. Department of the Interior wherein the corporation would trade the surface estate to 112,000 acres of critical-bear-habitat lands it owns within the Kodiak National Wildlife Refuge for oil and gas interests in ANWR. Koniag, not the only Native corporation to pursue such an exchange, has been joined by two village corporations in the Kodiak region--Old Harbor Native Corporation and Akhiok-Kaguyak, Inc.--and by Doyon Limited; Gana-a'Yoo Limited (a Doyon region village corporation); and the Native Lands Group (comprised of Cook Inlet Region, Inc., Aleut Corporation, and 11 village corporations) (USFWS n.d.). The total amount of land included in these Native corporation exchanges is 891,000 acres.

The ANWR land exchange has been approved by Koniag's shareholders but needs to be ratified by Congress and executed by the Secretary of the Interior. The exchange is conditional on Congress opening ANWR for oil and gas development. However, this land exchange caused controversy among Native shareholders because of the different ways in which people perceive land and the uses to which it is put. Some shareholders did not want to exchange lands on which they have extracted their subsistence resources for generations. To these Natives, these lands were their spaces--areas in which they gained their livelihoods and to which they had assigned significant symbols. The Native

corporations negotiated a stipulation in the ANWR exchange agreements that they would never lose subsistence rights on the refuge land that they were exchanging. Yet even with these assurances, some shareholders preferred that the land remain in Native ownership.

Koniag has worked to establish a national constituency of political and environmental support for the land exchange. Efforts to open ANWR had gained legislative momentum and bills were before Congress when the March 1989 Exxon Valdez oil spill occurred. The prospects of ANWR being opened for oil and gas development and the land exchanges being approved were very unlikely soon after the 1989 oil spill (Alaska Business Monthly, August 1989). However, the Persian Gulf war, which was occurring at the time the February 1991 research was conducted, again raised discussion of opening ANWR. Koniag has continued to pursue the ANWR land exchange and to develop support for it in Congress.

In terms of investing the funds it received from the Alaska Native Fund, Koniag has been unsuccessful, as have all but 2 of the 13 regional for-profit corporations. In the late 1970's, Koniag owned a fishing and navigation equipment store, 2 construction companies, an accounting firm, and a helicopter, and was part of a consortium with other regional corporations in a shipping company and petrochemical venture (Davis 1979:63). In 1979, Koniag entered into a partnership with 4 Native regional corporations and a major oil company and successfully bid on various oil lease tracts in the Beaufort Sea. Koniag took a loss and got out of this venture in 1988. The corporation also had interests in a seafood processing and marketing operation, a merchandise sales

operation, and commercial properties in Kodiak, all of which were discontinued or sold between 1982 and 1986.

Koniag suffered huge operating losses in the early 1980's that were compounded by costly legal suits. In 1980, Koniag merged with 6 of the 13 ANCSA village corporations; but 4 of those corporations subsequently sued Koniag and de-merged in 1984. Koniag is still party to 2 lawsuits in connection with agreements negotiated during the time of its merger with these village corporations and also is confronted with arbitration demanded by Sealaska Corporation that involves whether an energy lease option Koniag received is subject to ANCSA Section 7(i) sharing provisions.

Koniag has been rebuilding its financial position, has reported profits since 1985, and has even begun distributing small dividends to shareholders. Since 1985, its major source of income has from the sale of some of its net operating losses (NOLs) to companies interested in purchasing tax benefits. A provision of the 1986 Tax Reform Act allows ANCSA corporations to make their NOLs available to third parties that can use the losses to offset current or future earnings. Another major source of income has been energy-resource-option payments from certain oil companies for lease rights on ANWR property for which Koniag is negotiating the land exchange. Koniag also receives income from other regional corporations according to ANSCA Section 7(i) and from interest on investments.

Natives of Kodiak, the Native profit corporation for Kodiak City, was classified as an urban corporation under ANCSA. It has 620 shareholders, one-third of whom reside locally and two-thirds in other places. Natives of Kodiak has followed a conservative

investment strategy: major assets include a portfolio of liquid assets, investments in timber resource management (the corporation owns 25 percent of Koncor Forest Products Company), and 23,040 acres of land in the vicinity of Kodiak City, mostly near the USCG Base.

Economic Indicators: Kodiak is prosperous compared to other regions in Alaska. According to the 1988 and 1989 KI data, Kodiak had the highest overall annual household incomes of the seven regions included in the Social Indicators Study. In 1988, 68 percent of Kodiak KI households made over $40,000; in 1989, nearly 50 percent did so; and in 1991, 66 percent. In both 1988 and 1989, nearly 75 percent of KI households made over $30,000; and in 1991, 81 percent did so. None of the 1991 Kodiak KI's had an annual household income under $10,000, and only 6 percent had an income under $20,000. There is little dependence on government sources of earned income; and incomes are, for the most part, stable or predictably seasonal.

The Kodiak economy, buoyed by stable salmon harvest levels and high prices and by the growth in bottomfishing, had been good for several years before the Exxon Valdez oil spill. The city's port ranked in the top four U.S. ports in dollar value of product landed (Alaska Business Monthly, 1990:58). The Kodiak unemployment rate is one of the lowest in the State, and service industries must pay higher than minimum wage to attract workers (Alaska Department of Community and Regional Affairs 1988a:35). The Kodiak real estate market was robust in 1988, the strongest it had been since the king crab fishery crashed. Housing sales were strong, with prices slowly increasing. Apartment and rental housing was almost completely occupied in 1987, 1988, and 1989. Retail

and office space had zero percent and 5 percent vacancy rates, respectively, throughout 1988 (Alaska Business Monthly, March 1989:42-43) and 1989 (Alaska Business Monthly, March 1990:61).

There are several other signs of prosperity in Kodiak. One of the processing plants and many of the fishing boats, including several of the largest trawl vessels, are owned by local residents. Housing and other physical structures are generally in good repair, with some very nice homes in and around Kodiak City. The particular mix of products and services available in Kodiak reveals that the local population has a good deal of disposable income. For example, there is a local gold, silver, and platinum dealer; several hot tub stores; and a number of jewelry stores and art dealers. High-priced cocaine is purported to be available. Travel agents report that many local residents take fairly extensive and expensive vacations.

Yet there are economic disparities in Kodiak, both within Kodiak City and between Kodiak City and the outlying villages. The AOSIS KI income data indicate that there is a segment of low-income earners on the island who tend to be wage workers in fish processing and the service sector and people from the villages. There also are disparities in terms of standard of living, with the range of housing accommodations being one obvious indicator.

Housing in Kodiak has been a problem since the early 1970's due to the lack of land for development, inadequate financing, and limitation of the city water and sewer systems (Payne 1980; Hill 1986:372). The higher percentage of condominiums, duplexes, four-plexes, and apartments is related not only to these factors but is partly explained by

transience and income disparities. The situation of many people living in one apartment that Payne noted in relation to Filipinos (1980:129) appears to extend to other segments of the population as well, e.g., cannery and construction workers. There are several large government-subsidized housing projects for low-income households.

Homelessness is a problem in Kodiak City. Kodiak has had problems with "street people"; Kodiak was the end of the ferry line and a hope for a new beginning for many of them. Public building lobbies are closed at night to prohibit transients from sleeping in them. The lack of housing has forced transient workers to live in World War II Army bunkers and abandoned structures, vans and tents, and other makeshift housing, and to squat on public and private land (Payne 1980; Hill 1986:378). The Gibson Cove campground, created by Kodiak City and the Kodiak Island Borough to serve the needs of transient workers and summer visitors, became permanent living quarters for a number of people (Kodiak Daily Mirror, 11-10-89). It was closed during the winter of 1990-1991.

Kodiak Island villages primarily rely economically on the salmon fisheries and resemble Bristol Bay communities more than Kodiak City. The fishery is more seasonal and more vulnerable to variations in the salmon stock. Natives concentrate on the salmon fishery because it is conducted from smaller boats that fish closer to shore. The high price of salmon in recent years has driven up the price of limited-entry salmon fishing permits, especially in Southwest Alaska; and many fishermen have been alienated. The number and percentage of limited-entry salmon permits held by Natives living in Kodiak villages has declined since initial distribution, primarily due to permit sales to

non-Natives, with some migration (of the permit holders) contributing to the rural decline (Langdon 1986:54-78).

Problems that confront fishermen in general have had particularly dire consequences for Kodiak villagers who are less able to compete with the increasingly large commercial fishing operations and the spiraling costs of maintaining vessels and equipment (KANA 1985). High energy costs and transportation problems (few carriers, small planes) limit their marketing potential. Village fishermen generally have earned less than Kodiak City fishermen, particularly in the crab fisheries.

Consumer Prices: The cost of living in Kodiak is generally high. The housing market is tight and the most expensive among the AOSIS sample communities. A two-bedroom house costs between $75,000 and $135,000; a house with three or more bedrooms averages $125,000 to $185,000 (Kodiak Chamber of Commerce 1989). A one-bedroom apartment rents for $500 to $600 per month, a two-bedroom apartment for $850 to $950 per month, and an apartment with three or more bedrooms for $950 to $1200 per month. USCG personnel receive a housing allowance for living in town, which further reduces housing availability and inflates prices. Landlords reportedly prefer to rent to USCG people because landlords know they will pay and be there for 2 to 3 years, thereby guaranteeing more tenant "stability."

In the past, consumer prices and the cost of living in Kodiak City have been higher than prices in Anchorage, Seattle, and the U.S. in general. Prices in Kodiak villages have been even higher, although detailed price data documenting these comparisons is limited (Hill 1986:388-394). In 1983, KANA personnel estimated that

food prices in the villages were about 20 percent higher than in Kodiak based on a comparison of bread, flour, coffee, meat, eggs, canned vegetables, and sugar for a family of four for one meal. In 1985, construction costs were estimated at $90 per square foot in the villages and $60 per square foot in Kodiak (KANA 1985). Energy prices are also particularly high in Kodiak villages (Kodiak Island Borough 1988b:3-8). The differential in energy prices between Kodiak City and Kodiak villages increased after construction of the Terror Lake hydroelectric power project reduced the costs paid by residents of the road-connected areas. Port Lions is the only village that receives power from Terror Lake.

Tables 11 through 13 provide price data collected in Kodiak in the spring of 1988, 1989, 1990, and 1991 for the AOSIS project. Tables 11-A, 11-B, 11-C, and 11-D compare retail prices of food items for these 4 years. These tables indicate that food prices in Kodiak decreased by approximately 5 percent from 1988 to 1989, then increased by approximately 6 percent from 1989 to 1990. The decrease probably was due to increased competition between stores after the opening of a Safeway in Kodiak in 1987. It may also have been due partly to increased competition from large warehouse stores in Anchorage (such as Price Savers or Costco) that ship to rural areas, or to the introduction in Kodiak of lower-priced brands of some items. The increase in prices from 1989 to 1990 probably is attributable to local supply and demand factors resulting from the Exxon Valdez oil spill. There was little change in prices from 1990 to 1991; some residents thought that prices were inflated in Kodiak following the oil spill and had never come down.

Table 11-A

RETAIL FOOD PRICES IN KODIAK CITY, 1988

Commodity	Store A	Store B	Store C
White flour, 10 lb	$ 3.99	$ 3.45	$ 4.30
Evaporated milk, 12 oz	.75	.81	.78
Onions, 1 lb	.89	.59	.59
Cooking oil, 48 oz	3.19	3.93	3.94
Cola, 6-pack	2.69	2.69	2.69
Sugar, 10 lb	4.49	5.23	4.59
Cornflakes, 16 oz	2.25	2.39	2.91
White bread, 18 oz	1.55	1.55	1.49
Bacon, 1 lb	2.69	2.69	2.98
Coffee, 3 lb	9.59	10.05	9.46
Butter, 1 lb	2.99	2.97	2.19
Powdered milk, 12 qt	5.59	6.75	7.23
Punch mix, 24-26 oz	2.79	3.19	3.14[a]
Total Cost	$43.45	$46.29	$46.29

Source: Field data 1988.

[a] The 39-oz price adjusted to 24 oz. This figure was used in computing the total for this store.

Table 11-B

RETAIL FOOD PRICES IN KODIAK CITY, 1989

Commodity	Store A	Store B	Store C
White flour, 10 lb	$ 3.29	$ 3.35	$ 4.98
Evaporated milk, 12 oz	.63	.63	.67
Onions, 1 lb	.59	.79	.59
Cooking oil, 48 oz	3.09	2.79	3.85
Cola, 6-pack	1.99	2.99	2.79
Sugar, 10 lb	4.59	5.67	5.41
Cornflakes, 18 oz	2.45	2.35	2.75
White bread, 22-24 oz	1.55	.99	.99
Bacon, 1 lb	1.49	1.89	2.49
Coffee, 3 lb	8.59	9.65	9.15
Butter, 1 lb	2.15	1.85	2.19
Powdered milk, 12 qt	5.59	7.29	7.23
Punch mix, 24-26 oz	3.09	3.19	3.61
Total Cost	$39.09	$43.43	$46.70

Source: Field data 1989.

Table 11-C

RETAIL FOOD PRICES IN KODIAK CITY, 1990

Commodity	Store A	Store B	Store C
White flour, 10 lb	$ 3.85	$ 3.75	$ 5.30
Evaporated milk, 12 oz	.63	.75	.75
Onions, 1 lb	.99	.99	.69
Cooking oil, 48 oz	3.09	2.93	4.07
Cola, 6-pack	1.89	2.99	2.79
Sugar, 10 lb	4.99	5.01	5.60
Cornflakes, 18 oz	1.95	2.61	2.85
White bread, 22-24 oz	1.09	1.69	1.39
Bacon, 1 lb	1.89	1.69	2.09
Coffee, 3 lb	10.33[a]	10.18[a]	10.11[a]
Butter, 1 lb	2.43	1.69	2.19
Powdered milk, 12 qt	5.69	8.07	8.12
Punch mix, 24-26 oz	3.19	3.43	3.72
Total Cost	$42.01	$45.78	$49.67

Source: Field data 1990.

[a] The 39-oz price adjusted to 48 oz.

Table 11-D

RETAIL FOOD PRICES IN KODIAK CITY, 1991

Commodity	Store A	Store B	Store C
White flour, 10 lb	$ 3.39	$ 3.89	$ 5.31
Evaporated milk, 12 oz	.69	.73	.71
Onions, 1 lb	.99	.99	.79
Cooking oil, 48 oz	3.49	3.75	3.07
Cola, 6-pack	1.89	3.19	2.99
Sugar, 10 lb	4.99	5.15	5.99
Cornflakes, 18 oz	2.19	2.69	2.91
White bread, 22-24 oz	1.09 (.69)[b]	.99	1.09
Bacon, 1 lb	1.89	2.19	2.29
Coffee, 3 lb	8.60 [a] (9.35)[b]	10.77[a] (8.92)[b]	10.33[a]
Butter, 1 lb	2.45 (2.59)[b]	2.79	2.19
Powdered milk, 12 qt	6.91	6.59[c]	5.22[c]
Punch mix, 24-26 oz	3.99	4.23	3.58
Total Cost	$42.56	$47.95	$46.47

Source: Field data 1990.

[a] The 39-oz price adjusted to 48 oz.
[b] Sale price. Total costs do not include sale prices.
[c] The 20-qt price adjusted to 12 qt.

Tables 12-A, 12-B, 12-C, and 12-E compare the retail prices of nonfood items available at the same stores checked for food items. Few of these nonfood items are available at Stores A, B, and C; however, unavailable items generally can be found in specialized local hardware, camping, or boating stores (see Tables 12-D and 12-F).

Table 12-A

RETAIL NONFOOD PRICES IN KODIAK CITY, 1988

Commodity	Store A	Store B	Store C
D-batteries, 2 pk	$2.79	$ 4.07	$3.75
Blazo fuel, 1 gal	n/a[a]	5.99	n/a
Outboard, 40 hp	n/a	2,740.00	n/a
Pampers, 12 pk	5.49	5.23	5.29
Axe handle	n/a	7.00	n/a
Gas, reg., 1 gal	n/a	2.50	n/a
Motor oil, 1 qt	.59	n/a	1.49

Source: Field data 1988.

[a] "n/a" means the item was not available at that store.

Table 12-B

RETAIL NONFOOD PRICES IN KODIAK CITY, 1989

Commodity	Store A	Store B	Store C
D-batteries, 2 pk	$1.79	$2.07	$3.75
Blazo fuel, 1 gal	n/a[b]	6.03	n/a
Pampers, 12 pk	3.32[a]	3.37[a]	3.24[a]
Motor oil, 1 qt	1.09	1.64	1.39

Source: Field data 1989.

[a] Price for the 48 pk adjusted to 12 pk.
[b] "n/a" means the item was not available at that store.

Table 12-C

RETAIL NONFOOD PRICES IN KODIAK CITY, 1990

Commodity	Store A	Store B	Store C
D-batteries, 2 pk	$2.46	$2.13	$3.75
Pampers, 12 pk	5.59	5.55	4.47[a]
Motor oil, 1 qt	1.53	1.63	1.69

Source: Field data 1990.

[a] Price for the 16 pk adjusted to 12 pk.

Table 12-D

RETAIL NONFOOD PRICES IN KODIAK CITY SPECIALTY STORES, 1990

Commodity	Price
Regular gas, 1 gal	$ 1.48[a]
Blazo fuel, 1 gal	4.69
Outboard engine, 30 hp	2,648.00
Coleman lantern, 1 mantel	48.99
Axe handle for 2.5 lb axe	8.25
Skiff, 16-ft	7,000.00

Source: Field data 1990.

[a] Rounded to nearest cent.

Table 12-E

RETAIL NONFOOD PRICES IN KODIAK CITY, 1991

Commodity	Store A	Store B	Store C
D-batteries, 2 pk	$ 1.99	$3.49	$3.59
Pampers, 12 pk	3.19[a]	5.10[b]	3.87[b]
Motor oil, 1 qt	1.89 (1.69)[d]	n/a[c]	1.49

Source: Field data 1991.

[a] Price for the 18 pk adjusted to 12 pk.
[b] Price for the 14 pk adjusted to 12 pk.
[c] "n/a" means the item was not available at that store.
[d] Sale price

Table 12-F

RETAIL NONFOOD PRICES IN KODIAK CITY SPECIALTY STORES, 1991

Commodity	Price
Regular gas, 1 gal	$ 1.39[a]
Blazo fuel, 1 gal	4.69
Outboard engine, 30 hp	2,454.00
Coleman lantern, 1 mantel	48.99
Axe handle for 2.5 lb axe	7.29
Skiff, 16-ft	1,994.00

Source: Field data 1991.

[a] Price in June 1991; all others in March 1991.

Different items are included in the tables displaying nonfood-commodity prices in the first 2 years (1988 and 1989) and the last 2 years (1990 and 1991) of AOSIS research, because nonfood items were priced in specialty stores only in 1990 and 1991.

Tables 13-A, 13-B, 13-C, and 13-D present data on labor rate comparisons for Kodiak in 1988, 1989, 1990, and 1991. These tables show that each type of labor service is available in Kodiak, and there is a market price for that labor.

Table 13-A

LABOR RATES IN KODIAK CITY, 1988

Labor Category	Rate
Motor repair	$40/hr
Net hanging, 50 fathoms	$200
Spot-welding	$48/hr
Rough carpentry	$10-$18/hr; $24/hr (union)
Plumbing	$40/hr
Electrical	$50/hr

Source: Field data.

Table 13-B

LABOR RATES IN KODIAK CITY, 1989

Labor Category	Rate
Motor repair	$40-$50/hr[a]
Net hanging, 50 fathoms	$200
Spot-welding	$48-$53/hr[b]
Rough carpentry	$25-$35/hr[c]
Plumbing	$45-$50/hr
Electrical	$40-$60/hr[d]

Source: Field data.

[a] This charge varies depending on whether it is a boat, car, or plane engine. This price is for cars and some boats.
[b] This charge varies according to whether the service is in or out of the proprietor's shop. Out-of-shop repairs cost more.
[c] The lower rate is for residential construction and the higher rate is for commercial construction; both are union scale.
[d] Range of prices quoted by different contractors.

Table 13-C

LABOR RATES IN KODIAK CITY, 1990

Labor Category	Rate
Motor repair	$45-$48/hr[a]
Net hanging, 50 fathoms	$10-$31/hr[b]
Spot-welding	$48-$53/hr[c]
Rough carpentry	$25-$35/hr[b]
Plumbing	$45/hr
Electrical	$25-$50/hr[d]

Source: Field data.

[a] The lower charge is for small engines; the higher is for automobiles.
[b] Range of prices quoted by different contractors.
[c] The lower rate is for in-shop repairs; the higher is for out-of-shop repairs.
[d] The lower rate is for an electrical apprentice; the higher is for a journeyman.

Table 13-D

LABOR RATES IN KODIAK CITY, 1991

Labor Category	Rate
Motor repair	$48/hr
Net hanging, 50 fathoms	$31/hr
Spot-welding	$50/hr
Rough carpentry	$35-$41/hr[a]
Plumbing	$45-$50/hr[a]
Electrical	$50/hr

Source: Field data.

[a] Range of prices quoted by different contractors.

III.C. Health, Education, and Social Services

Health: Public and private health care services are available on Kodiak Island through various facilities and programs. Kodiak has a local hospital, several clinics, and a number of private medical practices. Health care is supported by the Federal, State, and borough Governments. The health care professionals that provide these services reside locally and include physicians, chiropractors, dentists, optometrists, pharmacists, registered nurses, public health employees, and various kinds of therapists. Most health concerns can be treated in Kodiak, but specialized surgeries and nonemergency hospital care for Natives and military personnel still require trips to Anchorage or Seattle.

Kodiak Island Hospital is owned by the Kodiak Island Borough and operated under a management contract by The Lutheran Hospitals and Homes Society of America management company (Kodiak Island Borough 1990b). The hospital is a 25-bed, acute-care facility with obstetrics, emergency care, surgery, and intensive and coronary care. A 19-bed intermediate-care facility connected to the hospital offers 24-hour nursing services. The hospital serves the entire region and treats Natives and military personnel, who have access to clinics and government hospitals, on an emergency basis. The hospital treats indigents and also houses inebriates overnight when no other facilities are available.

The Kodiak Island Borough has sought funding from the State legislature to build a new hospital facility with a hypothermia unit and greater radiology, surgical, outpatient, and records-storage capacity. A site on Rezanof Drive was purchased, and site work and design of the facility have been completed; construction of the building can begin on

receipt of State funding. The new hospital is the number one project on the borough's CIP list (Kodiak Island Borough 1991). The borough wants the State to contribute $14 million toward the estimated total cost of $18 million (Kodiak Daily Mirror, 1-3-90:3). The borough has proposed to convert the old hospital into a Pioneer Home--a State facility for elderly people who have lived in Alaska for 25 or more years (Kodiak Daily Mirror, 1-3-90:11).

The Kodiak Island Mental Health Center, a direct service agency of the borough, has 26 fulltime employees who provide out-patient counseling and training, psychotherapy, crisis intervention, referral and treatment plans, community education, and in-patient emergency service through the Kodiak Island Hospital. By 1989, the average monthly case load had increased more than 400 percent in a 7-year period (Kodiak Island Borough 1990b).

Following the Exxon Valdez oil spill, several respondents cited estimates that the demand for services at the mental health center had increased by as much as 700 percent (Hofmeister field notes 1990). An analysis based on caseload statistics provided by the mental health center reveals that during the 12 months preceding the oil spill (April 1988 through March 1989), 1,245 clients (103.50 per month average) visited the clinic a total of 4,609 times (384.08 per month average). Of these 1,245 clients, 521 were new, for an average of 43.42 new clients per month. During the 12 months following the spill (April 1989 through March 1990), a total of 2,176 clients (181.33 per month average) visited the clinic a total of 6,103 times (508.58 per month average). Of these 2,176 clients, 553 were new, for an average of 46.08 new clients per month. In a comparison of the postspill

period with the prespill period, the number of individual clients increased 78.4 percent, visits increased 32.4 percent, and new clients increased 6.1 percent. While the number of clients increased significantly after the spill, the number of visits per client decreased from 3.6 to 2.8. Nearly 75.0 percent of the postspill clients were returnees, suggesting that mental health problems predating the spill were exacerbated by the spill.

Data on emergency use of the facility are even more revealing. During the year preceding the oil spill, 259 clients (21.58 per month average) were treated on an emergency basis a total of 505 times (42.08 per month average), whereas for the year following the oil spill, a total of 636 clients (53 per month average) visited 1,112 times (92.67 per month average). The number of emergency clients and visits thus increased 145.6 percent and 120.2 percent, respectively, in the course of 1 year. Although these data do not support the higher percentages popularly circulated, they do substantiate respondents' claims that the Exxon Valdez oil spill increased emotional tensions in the community.

Mental health services also are provided by KANA. The Kodiak Alliance for the Mentally Ill works to promote better education, more services, and advocacy and research for the mentally ill (Kodiak Daily Mirror, 10-4-89:6).

The KANA, which contracts with the Federal Government through the Indian Health Service to provide health care for Natives in Kodiak and outlying villages, receives both Federal and State grants. The KANA operates the Alutiiq Enwa Medical and Dental Clinics in Kodiak, which support a regional health care network of six village clinics staffed by community health practitioners and aides. In addition, KANA

administers various other health-related programs for the villages, including Community Health Services (which has helped several villages get grants for suicide prevention projects), the Mental Health Program, and the Alcohol-Outreach Program (with a Drug-Free Schools component). A Women, Infants, and Children (WIC) Program and Senior Citizens Program administered by KANA help to meet nutritional needs in village communities. The KANA is continuing efforts to subcontract for local implementation and management of the Indian Child Welfare Programs and the Community Health Representative Programs.

Through the Alaska Department of Health and Social Services, the State operates the Kodiak Health Center, a public clinic. Through this center an itinerant public health nurse travels to Kodiak Island villages to provide prevention and education services. The Federal Government operates a medical and dental clinic and a pharmacy on the USCG Base for military personnel.

Education: The Kodiak Island Borough School District operates public schools throughout the Kodiak Island Archipelago. Located in Kodiak are one senior high school (Grades 9-12), one junior high school (Grades 6-8), and three elementary schools (Grades K-5), one of which includes preschoolers. The district operates village schools in Port Lions, Larsen Bay, Karluk, Akhiok, Ouzinkie, Chiniak, and Old Harbor. There is a one-room school at Danger Bay on Afognak Island, the site of a logging camp.

During the 1988-1989 school year, district student enrollment in Grades K through 12 was 2,294; 2,101 students attended schools on the road system, and 293 attended village schools (Kodiak Chamber of Commerce 1989). Total enrollment for the first

quarter of the 1989-1990 school year was 2,388 in Grades Pre through 12, with 294 students enrolled in village schools (Kodiak Island Borough School District 1990). In the first quarter of the 1990-1991 school year, total enrollment was 2,473, with 290 students in village schools. Table 14 shows the breakdown of village school enrollment by village and class size.

Table 14

VILLAGE SCHOOL ENROLLMENTS IN THE KODIAK ISLAND BOROUGH SCHOOL DISTRICT, 1989-1990

Village	Grades K-8	Grades 9-12	Total
Akhiok	21	2	23
Chiniak	26	3	29
Danger Bay	12	[a]	12
Karluk	16	2	18
Larsen Bay	21	8	29
Old Harbor	60	23	83
Ouzinkie	28	14	42
Port Lions	38	18	56
Total	222	70	292

Source: Kodiak Island Borough School District 1990.

[a] Grades 9-12 not offered at Danger Bay.

The school district sponsors a strong basic skills program, and vocational offerings also are extensive. The KANA has been working with the district to implement

an Alutiiq Studies curriculum. Japanese is offered as a foreign language in recognition of Kodiak's growing commercial connections with Japan. The district also has language programs to assist students who do not speak English.

School district funding comes primarily from the State of Alaska. Of $14,704,667 in revenues for the 1987-1988 school year, State funding of $12,610,444 accounted for 86 percent of revenues, local funding of $1,902,728 was 13 percent of revenues, and Federal funding of $191,495 was 1 percent of revenues. Declining revenues from the State necessitated increased school funding from the borough. Total projected revenues for the 1988-1989 school year were $15,571,370. The State contributed $12,170,500, while the local government contributed $3,150,870 and the Federal Government contributed $250,000 (Kodiak Island Borough School District 1989). Although enrollments increased by nearly 100 students, the district budget for the 1989-1990 school year was $15,481,264--$90,000 less than for 1988-1989 (Kodiak Island Borough School District 1990). A $16,100,000 budget for 1990-1991 sought to keep pace with continued increased enrollment. This included a State contribution of $12,429,000, local funding in the amount of $3,275,000, and a Federal contribution of $329,000 (Kodiak Island Borough 1991).

In addition to public education for Grades K through 12, the State maintains Kodiak College, a local campus of the University of Alaska-Anchorage, where students may obtain 2-year associate degrees. There are several private, church-operated schools in Kodiak, including Kodiak Christian School (Grades K-7), a Seventh Day Adventist school (Grades 1-8), and Saint Mary's Catholic School (Grades 1-8). Saint Herman's

Theological Seminary, the graduate educational institution of the Alaska Russian Orthodox Church, trains Russian Orthodox church leaders--mostly Alaska Natives--from all over the State.

According to AOSIS KI data, most Kodiak interviewees (86% in 1989 and 56% in 1991) think there is a strong association between formal schooling and success. This may be due partly to the fact that, as reported by some community officials, Kodiak has a well-educated population. Many interviewees reported that they stress "getting a good education" with their children. Several interviewees commented that having an education is more important now than in the past and that a person needs more knowledge to be a commercial fisherman. Yet even those who said education is important for success often cited examples of successful fishermen who have little formal education. Some interviewees said that book learning needs to be accompanied by common sense and "hands-on experience." It appears that people also recognize and respect the skills and knowledge that are acquired through work and through life in general.

Fewer 1991 KI's thought there was a strong association between education and success than was true in 1989. There was even an educator among the KI's who thought there was only an occasional association. One person said that informal education was more important, and another that everyone needs a basic education but beyond that it depends on the individual. Two KI's said that education probably was less important than it used to be. Another said that what a person needs to learn is to "buy low and sell high." Despite the apparent decrease of confidence in the value of "a lot of"

education, however, 1991 KI comments indicated that most had high respect for both formal and informal education.

Social Services: Divorces, domestic violence, alcohol and drug abuse, and mental health problems are not new phenomena in Kodiak (Payne 1986:437-447). Several explanations have been offered for these problems. Relationship problems are thought to be linked to the disproportionate numbers of males to females, to the high degree of transience, and to the dependence/independence problems associated with fishing communities and lifestyle (Payne 1980). Reasons given for alcohol and drug abuse include social interaction patterns associated with fishing (i.e., bars are places to obtain jobs, celebrate fishing success, or relax after long and intense periods at sea), involvement in high-risk occupations, and the high-risk consequences of prosperity (e.g., cocaine abuse). Mental health problems have been associated with depression, anxiety and personal crisis, isolation, long periods of inclement weather, and fluctuations in the economy (Alaska Consultants 1979; Payne 1986:437-438; Cultural Dynamics 1986).

Alcohol and drug abuse continue to be the major social problems in Kodiak. The Kodiak police chief estimated that 80 percent of the department's requests for service, excluding minor traffic violations, are alcohol-related (Kodiak Daily Mirror, 11-29-89:1; see also the 4-part series on Kodiak public inebriates, Kodiak Daily Mirror, 11-29-89:1, 12-1-89:1, 12-6-89:1, 12-8-89:1).

Kodiak City and the Kodiak Island Borough have sought to establish a detoxification center for public inebriates as part of the Kodiak Council on Alcoholism's (KCA's) program (Kodiak Daily Mirror, 12-27-89:1). Initially, the detox center was to be

placed in the Saint Francis homeless shelter now under construction. Currently the KCA is working to obtain approval from the borough's planning and zoning office to open the facility in one of its existing buildings in downtown Kodiak (Kodiak Daily Mirror, 6-4-91:3).

One 1989 interviewee, who had lived and worked in Kodiak for years, indicated that there is a good deal of drug traffic in Kodiak and said, "The money isn't in the fish, it is in the drugs." Several interviewees thought that cocaine use had increased as a direct result of shorter fishing openings, which require a more intense and nonstop work effort for the entire opening (often 36 or 48 hours). Recovering alcoholics and drug users are often encouraged to stay away from fishing because of the associations with alcohol and drug use, although use of these substances is not limited to the fishing segments of the Kodiak population.

Domestic violence, divorce, mental illness, and other social indicators of stress also are present in Kodiak. One interviewee commented that Kodiak suffers from some of the problems associated with port towns throughout history and that it has its share of people who are "on the run, either running from the law or from themselves." Another interviewee described Kodiak as "Mayberry by day, Lower East Side by night" (which fits, in a way, with Payne's earlier description of Kodiak as a town of extremes [Payne 1980:79]).

The wide variety of social services available to Kodiak residents is, in part, a response to these various social problems. These services are well publicized through

brochures, newspaper articles and advertisements, and radio announcements. Most of the service providers have permanent offices in Kodiak and are quite visible.

There are several alcohol and drug treatment programs in Kodiak. The KCA is a city agency that receives grants from the Alaska Department of Health and Social Services and the Federal Government. The council operates Hope House, a 30-day residential treatment program that provides counseling and assistance for people with alcohol and drug problems, and "Wings," a residential youth treatment program (Kodiak Daily Mirror, 9-19-89:10). The KCA is the official referral agency for the courts and the police. South Central Area Alcohol Training (SCAAT), housed at Saint Herman's Seminary, provides substance-abuse-counselor training and educational workshops in Kodiak and villages in the region. An alcohol program is administered by KANA, and alcohol counseling also is available through local churches. Self-help groups in Kodiak include Alcoholics Anonymous, Al-Anon, Narcotics Anonymous, Adult Children of Alcoholics, and Alateen. The Dry Dock club, a place for recreation and relaxation in a nonalcoholic atmosphere, has been operated by volunteers since early 1990.

A sobriety movement on Kodiak Island gained momentum in 1988 and 1989 among some segments of fishermen and in some of the villages. Several study participants reported that some owners were hiring only sober people. The sobriety movement in the villages was spurred, in part, by a conference held by elders from the Alkali Lakes Program and the Four Worlds Development Conference, a Native American alcohol recovery program based in Alberta, Canada. The sobriety movement has suffered some setbacks since the March 1989 Exxon Valdez oil spill; for example,

some thought that in Akhiok the stresses caused by the spill cleanup, combined with the influx of a great amount of money, had contributed to some residents' slipping out of sobriety.

In response to the problem of homelessness, the community of Kodiak is working to establish a Brother Francis Shelter in Kodiak. The Catholic and Baptist Churches have been instrumental in getting the shelter started, but it has become a community-wide project. The shelter will be funded by Catholic Social Services, a volunteer organization that sponsors money-raising activities. In March 1989, according to a Brother Francis Shelter board member, a site had been selected, $90,000 had already been raised or committed, and a grant application for $100,000 was pending. By February 1991, the building was nearing completion.

Two local organizations specifically serve the needs of women. The Kodiak Women's Resource and Crisis Center is a non-profit membership corporation begun in 1976 and dedicated to the prevention and elimination of domestic violence and sexual assault. The center provides emergency shelter, counseling, assistance, information, and referrals to women and children who are victims of violence. The center sponsors community outreach and education programs, a 24-hour Crisis Line, a Mothercare Program, and a library. The other organization, the Kodiak Crisis Pregnancy Center, offers pregnancy testing and counseling.

Special services are available for senior citizens. Senior Citizens of Kodiak, Inc., a nonprofit organization that operates the Kodiak Senior Center, coordinates activities and services for senior citizens and supports seniors' needs for health care, nutrition,

homemaker and chore services, housing, transportation, information and referral services, and recreation. Senior Citizens of Kodiak, Inc., was instrumental in obtaining funding for the 54-unit Bayview Terrace apartment building for seniors that is located next to the senior center. The KANA operates a senior citizen program in the villages that includes a meals program and activities.

The KANA administers several service programs for Natives in addition to health care, discussed previously. These programs include Village Public Safety Officers, Johnson O'Malley education assistance funds, Job Training Partnership, housing improvement (through the Department of Housing and Urban Development), and various education and employment programs. Family services are provided through funding from an Indian Child Welfare Grant and a social services contract. The KANA assists Natives with social service enrollments and contracts with Alaska Legal Services to provide legal assistance for Natives.

AOSIS KI data indicate that residents are generally familiar with the goals and availability of the various service programs. (Differences between 1988, 1989, 1990, and 1991 in the distribution of KI responses to AOSIS Question K35 relate to administration of this question and the programs about which people were queried.) More residents avoided using social services altogether or used fewer services than in other regions included in the Social Indicators Study. Some Kodiak City KI's said they did not use service programs because of eligibility requirements that are tied to income or ethnic identity. In addition, use of social services may be generally lower because of the importance placed on self-reliance (Payne 1986:444).

Of the social services utilized, Kodiak residents rely less on public health services than people in other regions, probably because a smaller percentage of residents are eligible for health services through KANA, the Native nonprofit organization, and because there is more private health care available in Kodiak. However, Kodiak residents rely more on family and social services than people in other AOSIS regions. While this does not necessarily mean that Kodiak residents have more problems, at least it indicates a greater willingness to seek institutional help. This is understandable with a more transient population that is less connected through kinship with other members of the community to whom they might otherwise turn for help. The figures concerning reliance on financial services are incomplete due to variations in reporting the receipt of energy assistance, subsidized housing, and State loans (primarily for boats).

Most (69%) of the 1991 KI's thought that social services in Kodiak were locally controlled. One woman even saw the services of the women's crisis center as "personal rather than local" (i.e., personal rather than impersonally professional). Some KI's commented that although funding is external, control over the services provided is local. One person said, health, we have very little control. We have some influence, but very informal. There's no formal process like [for] Fish and Game."

It is interesting that although no 1991 KI's said they presently use Native healers, 38 percent (including 3 of the 4 Native respondents) said they would go to a Native healer if one were available. One non-Native woman had actually been looking for one and had called KANA, with no success. Another non-Native KI specified that he would try Native herbal remedies but not a shaman.

III.D. Sodalities, Associations, and Community Activities

In addition to the service organizations mentioned in the preceding section, Kodiak City has many voluntary organizations that distinguish it from most of the communities in the Social Indicators Study. Most of these organizations are active and community residents have a fairly high rate of participation in community affairs. Of the AOSIS KI interviewees, nearly 57 percent of the 1989 households and 50 percent of the 1991 households had two or more sodality memberships (1989 data). Many households had multiple memberships.

Several community organizations are geared toward promoting and advocating the economic interests of Kodiak islanders. Kodiak has a very active and organized Chamber of Commerce that in 1991 had 285 members (individuals and businesses), representing about 25 percent of the business community. The chamber markets Kodiak as a travel destination for tourists and conventioneers and targets opportunities for international trade and investment. It supports development of Near Island and additional harbor and port facilities, use of Kodiak as a Tustumena (ferry) change port or refueling/supply port, and shorebased processing preference. Several community-wide events held annually in Kodiak are sponsored by the Kodiak Chamber of Commerce: ComFish, the largest commercial fishery trade show in Alaska (1990 was its 10th year); the Home Show (1990 was its 6th year); and the Crab Festival (1990 was its 40th year). The chamber also organizes community beautification projects, sponsors a scholarship program, and hosts a lunchtime forum twice a month that features guest speakers who

address topics of interest to the business and professional community (Kodiak Chamber of Commerce 1989).

The Kodiak Island Convention and Visitors Bureau, which shares a building downtown near the docks with the Kodiak Chamber of Commerce, is funded largely by an annual allocation from the Kodiak Island Borough and a portion of the bed tax collected by Kodiak City. Its main goal is to bring off-island dollars into the local economy. The bureau estimates that in 1989, more than $330,000 was brought into the local economy (Kodiak Daily Mirror, 1-5-90:5). In 1989, membership in the bureau had grown 25 percent and the schedule of conventions to be held in Kodiak was up 20 percent. Kodiak ranked fourth or fifth in the State in terms of local bureau membership. The director of the Kodiak bureau is on the Board of Directors of the Statewide Alaska Visitors Association.

The Kodiak Island Borough belongs to the Southwest Alaska Municipal Conference (SWAMC), a regional organization founded in 1986 that represents municipalities, nonprofit organizations, school districts, and businesses of Bristol Bay, the Aleutians, Kodiak Island, the Alaska Peninsula, and the Pribilof Islands. The Kodiak Island Borough mayor was president of the SWAMC in 1989 and 1990. The goal of the organization is to promote policies that lead to healthy and sustainable resource yields, lobby for Federal and State funding for the region, and ensure orderly economic development. The SWAMC assesses markets for new business ventures, acts as a clearinghouse for information on the region, and represents municipal concerns in political debates over public policy issues.

The Kodiak Island Borough, Kodiak City, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions also participate in the state-wide Alaska Municipal League, a voluntary, nonprofit, nonpartisan organization that provides a forum for local government officials to assist each other in solving municipal problems and to express their common concerns to State and Federal officials. Both the Kodiak Island Borough mayor and clerk have held office in this organization.

There are many organizations in Kodiak that represent local fishermen. Most of these organizations lobby politically for fishermen's interests, represent their members in marketing negotiations, and/or provide group insurance and vessel coverage. These groups include the United Fishermen's Marketing Association, Alaska Draggers Association (formerly the Alaska Shrimp Trawlers Association), Kodiak Halibut Fishermen's Association, Kodiak Island Setnet Association, Kodiak Longline Vessel Owners Association, Moser Bay-Olga Bay Setnetters Association, and Alaska Coastal Community Alliance. The Alaska Groundfish Data Base works on behalf of trawlers. The interests of Native fishermen are sometimes represented through KANA (Langdon 1986:90). The Fisheries Industry Network is an organization for communication between fishermen's organizations in Kodiak.

The Alaska Fishermen's Union represents fish processing workers and the Kodiak Seafood Processors Association represents the processors. Other fishing organizations include the Kodiak Fishermen's Wives Association and the Women's Fisheries Network-Kodiak Chapter. The Kodiak Seiners Association was organized in response to the

Exxon Valdez oil spill and has continued beyond its original task of securing Exxon charters for seiners to work on issues affecting the seine fleet.

Kodiak has several local chapters of national fraternal, service, and nonprofit organizations. Included among these are the American Legion Post No. 17 and American Legion Auxiliary, Elks Lodge No. 1772, Kodiak Jaycees, Kiwanis, Lions Club, Masonic Temple, Order of Eastern Star, Rotary International, Veterans of Foreign Wars, American Association of University Women, American Heart Association, Audubon Society, Daughters of the American Revolution, Ducks Unlimited, American Red Cross, Pioneers of Alaska, Salvation Army, Special Olympics, Young Life, Youth Scouting Programs, and 4-H.

Community, social, and cultural organizations in Kodiak are the firefighters' associations, dance groups, various outdoor and sports associations, and Kodiak Crime Stoppers. The Kodiak Arts Council produces the historical drama "Cry of the Wild Ram," which has been performed every summer since 1966. The council also annually sponsors several concerts and stage plays that are held in Kodiak's beautiful, large auditorium--a State Capital Improvements Project constructed next to the high school in Kodiak. The Kodiak Historical Society is responsible for maintaining the Baranov Museum--Alaska's oldest non-Native structure--owned by the City of Kodiak. The society saved the building from demolition and had it declared a National Historic Landmark by the Secretary of the Interior on June 13, 1962. The Baranov Museum houses a collection of Russian and Native artifacts.

In contrast to Kodiak City, Kodiak villages have few organized sodalities or associations. Community life in most villages centers around activities of the Russian Orthodox Church, the public schools, and the senior citizens' group. Because of the high degree of familiarity among local residents, community interaction is high but not patterned around formal organizations. For instance, residents frequently engage in fishing and hunting; but they do not join sportsmen's clubs.

III.E. Trends of Political-Economic and Social Change

The main trends of sociopolitical change in Kodiak at the present time have to do with the following: (1) changes in the nature of the fishing industry; (2) responses to the decline in Federal and State aid to local communities; and (3) impacts from the March 1989 Exxon Valdez oil spill.

The Fisheries: The major concern in Kodiak is the status of the fisheries and the effect this has on the local economy. The nature of the Kodiak fishery has changed dramatically in the last decade, largely in response to Americanization of the Alaskan fishing fleet, a rapidly evolving international seafood market, and changes in the resource stocks. As a consequence, the Kodiak fishing industry has become more diversified, competitive, and capitalized.

The Kodiak fishermen who survived the king crab crash in the early 1980's did so by diversifying their operations in two ways. First, some fishermen changed fisheries. Those with larger crab boats became groundfish trawlers and/or salmon tenders and engaged in joint-venture fishing. Diversification has been somewhat easier for the small- to medium-sized catcher-processor vessel owners, some of whom have switched to

halibut, sablefish (black cod), and Pacific cod (grey cod or "cod"). This fleet has grown with more fishermen, newer and bigger boats, and greater financial independence from the processors due to State and Federal loan programs instituted after passage of the Magnuson Act (Langdon 1986:118-119). Kodiak fishermen are unique in their ability to switch fish stocks and use the same size boats because, due to the nature of the continental shelf in the Kodiak Archipelago, they can fish near the shore. This has allowed them to stake more of a claim in bottom fishing than other Southwest Alaska communities (Griffin 1989a:32).

The second way in which Kodiak fishing has become more diversified is that some Kodiak fishermen move around to different areas in an attempt to piece together a year-round income. Those with larger, more mobile vessels now harvest in the Gulf of Alaska, the Chignik and Dutch Harbor areas, Bristol Bay, and the Bering Sea (Langdon 1986:113,116). Negotiations are currently underway between the U.S. and the Soviet Union for American access to U.S.S.R. waters for crab and groundfish. One alternative proposed for conducting this fishery would use U.S. catcher vessels to deliver to U.S. mother processing ships. Kodiak fishermen hope to capitalize on this possibility, which would give them even greater geographic diversification.

Kodiak also has become a highly competitive domestic fishery. With the decline in joint ventures, competition within Alaskan waters has become more intense between domestic gear types and between different American user groups. The rapid growth of the Seattle-based factory-trawler fleet has meant increased competition for Kodiak fishermen. Some of Kodiak's larger catcher boats have lost their markets, and the

current surplus of catching power (trawl and longline fishermen) has increased competition between them. Some have returned to crab fishing while others have left Alaska and returned to their original fisheries off the Washington, Oregon, or California coasts (McGinley 1989).

Kodiak seafood processors also face increased competition. In the early 1980's, there was a whirlwind of investment in seafood processing as bottom fishing became the Pacific Northwest growth industry. Millions of dollars were spent on factory trawlers and investment in onshore plants in Kodiak and other ports. Harvesting and processing capacity has been expanding at a time when pollock stocks (the main commercial groundfish species) are declining.

Alaskan shorebased processors fear they are losing out in the competition with factory trawlers and with other ports. In a westward shift in Alaskan seafood processing over the years, the center of the industry has moved from Petersburg to Sitka to the Gulf of Alaska to Kodiak and now down the Aleutian Chain. The current building boom in Dutch Harbor and Unalaska has Kodiak processors concerned that those communities will get more of the seafood from other areas (Bristol Bay, Bering Sea, Chignik) currently being processed in Kodiak (Langdon 1986:91-92). This increased competition has been offset partly by foreign investment in Kodiak's onshore processing operations, primarily by Japanese, and by the virtual elimination in 1989 of foreign-joint-venture processing in Alaskan waters.

Kodiak seafood processors have confronted this competition in several ways. The processors have lobbied for special protection, such as a quota system that will guarantee

a portion of the catch to shorebased plants. Kodiak's city and borough governments support such efforts because it is in their interest to protect shorebased fisheries.

Kodiak's Eagle Fishery attempted to develop other resources by running a prototype flatfish operation (rex, flathead, rock, and dover sole) to see if flatfish processing in Alaska was feasible (Pleschner 1989). Unfortunately, the plant went bankrupt in 1990. Most seafood processing in southwest Alaska stops at the "primary level," with finishing and packaging done in Seattle or other places (Southwest Alaska Municipal Conference 1989:11). Kodiak processors are interested in expanding into more of the final processing.

Kodiak fish harvesters and processors together face two other sources of competition. The first is high seas interception, or the illegal taking of Alaska-bound salmon on the high seas, principally by Asian (Japanese, Taiwanese, and Korean) squid boats. Some Taiwanese fish merchants have been heavily involved in trading immature salmon caught on the high seas in international markets. Increased foreign catches from the "donut hole," an area of international water in the North Pacific surrounded by various nations' 200-mile limits, have heightened suspicions of poaching in U.S. waters. Domestic fishing interests have demanded increased surveillance of incursions into U.S. waters (Alaska Commercial Fisherman, 5-24-91:16).

The other source of competition is the explosive growth in aquaculture around the world, which is cutting into the demand for wild fish stocks. Norway and Japan, leaders in this trend, are raising various stocks including salmon, bivalve shellfish, cod, halibut, flounder, tuna, and lobster. In the U.S., aquaculture is a large business in Washington

and Oregon. However, aquaculture (except for raising bivalve shellfish from wild-caught juveniles to market-size adults) is illegal in Alaskan waters; and the State has shown no interest in it (Southwest Alaska Municipal Conference 1989). There is considerable opposition to "farmed fish" among Kodiak salmon fishermen.

Diversification and competition in the fisheries has been accompanied by increased capitalization. Vessel owners who engage in various fisheries have had to invest in different types of gear. As ADF&G attempts to conserve threatened stocks, openings in certain fisheries have become shorter and more intense, particularly for cod and halibut. This has fueled capital investment, since vessel owners are forced to be highly efficient during openings. Harvesting technology within the groundfish sector of the industry has become so advanced that there is concern that the ability to harvest Alaskan groundfish will soon outstrip the ability of the resources to be sustained (Southwest Alaska Municipal Conference 1989:17). Over-capitalization is particularly high in groundfish and halibut harvesting. The major cause of the halibut-stock decline is the increase in bycatch by the trawl fleet in Alaska. This problem, along with the king salmon bycatch and the issue of sea lions caught in trawl nets, has exacerbated conflicts between trawlers and other gear-type operators.

Kodiak processors have invested heavily in the technology necessary to process different species of fish. They are now under pressure to maintain consistent, year-long deliveries of product to pay for their investments and to keep their work forces employed. Kodiak processors have become very flexible; they can get orders, send out boats, change over, and deliver within a day or two. As one local person described the

situation, "The fishing industry in Kodiak has become a fast-paced, hard-edged game. It is a highly capitalized industry, the debts are high, and people are pressured just trying to stay in the industry."

Intense competition has fractionalized the domestic fishing industry. Political alignments based on specific issues have increased and become more complex, adding to traditional divisions among fishermen based on gear type, fishery, size, or geographic area. These divisions within the domestic fishing industry have prevented agreements that would freeze harvesting and processing capacity and forestall the depletion of certain fish stocks.

These trends are leading toward various measures to limit the fishing effort in Alaskan waters. The North Pacific Fishery Management Council is considering ways to institute some form of limited entry in the Gulf of Alaska/Aleutian Islands groundfish fisheries, particularly with halibut. The council has discussed (1) license limitations, which guarantee certain people the right to fish; (2) individual transferable quota systems; and (3) annual fishing allotments.

Some fishermen support some version of individual transferable fishing quotas, which could reserve a portion of the resource for specific communities and reduce the cost of entry into a fishery by allowing the purchase of incremental quantities of the quota. At present, quotas are set for a particular fishery or district. Factory trawlers from Seattle often take the whole quota before locals have much chance to fish, and then the fishery is shut down.

In spring 1991, the council supported a proposal to establish transferable individual quotas to sablefish and halibut fishermen based on past deliveries. There is considerable opposition to this proposal in Kodiak. Small boat fishermen say the result would be that large boats or corporations would buy up all the quotas. They also are concerned that the proposed 20-percent "open-access" part of the allotted Kodiak region fish would all go toward trawler bycatch.

Many Kodiak fishermen fear that limited entry would force out the small operators and limit their flexibility in a rapidly changing industry (Kodiak Daily Mirror, 11-24-89:1). They feel that license limitation would benefit primarily Seattle interests. Some fishermen support gear, season, and hull restrictions to manage groundfish harvesting instead of limited entry.

The Kodiak fishing industry generally supports proposals aimed at inhibiting over-capitalization and maintaining control of the fisheries in the hands of local fishermen and processors. They are fighting for measures that give preference to local fishermen and shorebased processors as a way to get factory trawlers out of the area. One such measure is promoting full resource utilization (e.g., using the by-products, like carcasses from roe-stripping), since shorebased processors are better able to engage in this type of processing than factory trawlers, which tend to be the most wasteful. Another measure is a domestic-observer program that would place observers on U.S.-based factory trawlers, as was done with foreign-joint-venture ships. This would enable the monitoring of bycatch and increase the amount of information available for research and management. Some Kodiak fishermen have voluntarily fished in ways that reduce bycatch and have

allowed observers on their boats to show that Kodiak fishermen are more concerned about conserving the resource.

The changing nature of the Kodiak fishery has had several social repercussions. The trend, pointed out by Payne, toward increased competition and conflict between different processors and different segments of the fishing community within Kodiak has continued. Payne also found an association between the economic downturn in the fisheries in the early 1980's and stress-induced social problems in Kodiak, such as substance abuse or domestic violence (Payne 1986:440). The types of stress Payne noted have remained high, and they appear to be related to pressures associated with the increased competition within the fishing industry.

By 1989, Kodiak fishermen were being forced to take greater risks in an already high-risk occupation. With diversification to other species, especially to species for which high volume makes up for low prices, fishermen began working for longer periods of time and at greater distances from home (Payne 1986:411-415). Pressures to make boat payments, combined with shorter openings, have meant fishing in ever more dangerous conditions. Several AOSIS KI interviewees complained about financial pressures and the failure of ADF&G to adjust openings to account for bad weather. The AOSIS researcher arrived in Kodiak in March 1989 during an extremely bad storm in which four boats were lost. Some interviewees commented that fishermen never used to go out in weather like that. Several older fishermen thought that the increased size of boats with more computerized technology had given some fishermen a false sense of security and allowed boat owners to hire people with less experience and skill, which contributed to

more fishing accidents in recent years. There is increasing concern, particularly about bad weather during the pre-set 24-hour halibut openings that force halibut fishermen to fish under conditions that usually would deter them.

Increased occupational risks have led to greater stress and tension within families and within the community of Kodiak. Part of the stress is related to underlying tensions within the Kodiak fishing industry between those who see fishing as a lifestyle versus those for whom fishing is a highly capitalized business venture. These tensions are very similar to those that have afflicted small family farmers throughout the Midwest, a subject of much media attention several years ago. Letters to the editor have appeared in the Kodiak Daily Mirror addressing the concerns of small fishermen, or the "Alaskan family-fishing operations" and often denouncing the fact that the fishing industry is becoming dominated by bankers rather than fishermen. One such letter closed with an appeal to preserve a unique lifestyle, "which is as important as conservation of a fish species" (Kodiak Daily Mirror, 3-7-1989:3).

Declining State and Federal Revenues: Another main trend of sociopolitical change affecting Kodiak communities is the decline in State and Federal revenues. All Kodiak communities--particularly the smaller villages--depend heavily on this type of funding. These reductions have forced Kodiak communities to find ways of generating more revenue locally, for example through fish taxes, or to reduce services offered to local residents. Several of Kodiak's smaller villages have been forced to reduce services, which has contributed to recent population movement to the larger villages or Kodiak City.

The Kodiak Island Borough and Kodiak City have responded to declining revenues in two ways. First, in March 1989, the Kodiak Island Borough annexed a long strip of land on the Alaska Peninsula and the Shelikof Strait, thereby more than doubling the total area of land and water under control of the borough. The annexation would enable the borough to raise more raw-fish-tax revenues and exercise more regulatory control (through licensing and other means) over Seattle-based catcher and processor vessels that frequent the rich fishing grounds of Shelikof Strait. It also would enable the borough to have more say in the management of spawning streams on the Alaska mainland. Borough officials believe it would give local fishermen a better chance to harvest in their own backyard and keep more money in the local economy. The borough also would have taxing authority over potential mineral and gas developments in this area.

The motivation for Kodiak's annexation petition was that the Lake and Peninsula Rural Education Attendance Area (Upper Alaska Peninsula) was in the process of forming a new borough that wanted to tax fish at the point of catch along the coast of the Alaska Peninsula across Shelikof Strait from the Kodiak Archipelago. There are no communities along this coastline, which is an area normally fished by people from Kodiak's fleet. The Kodiak Island Borough argued that since Kodiak City services that fishing fleet (e.g., trash and waste oil come back to Kodiak), and since the area is on the boundary of Kodiak's fishing district and related to Kodiak's economy, it should be included in the Kodiak Island Borough. The State Boundary Commission approved Kodiak Island Borough's petition.

The Kodiak Island Borough annexation is part of a general trend toward borough formation occurring in Southwest Alaska. In 1987, the Aleutians East Borough was incorporated. In 1989, the Lake and Peninsula Borough was formed. The impetus for this trend comes from the decline in State funding for CIP projects at a time when Southwest Alaska communities are trying to improve their infrastructure in order to capitalize on the Americanization of Alaska's fishery and the boom in bottom fishing. The Southwest Alaska region missed out on the oil monies that financed port, airport, and other infrastructure improvements in other parts of Alaska (Griffin 1989a). Now they are pressed to find funding for projects that are necessary if they are to keep more of the money that flows to Seattle within the region. A University of Alaska study of Alaska's commercial fishing industry indicated that Southwest Alaska's income multiplier is the lowest in the State, indicating that much of the economic activity that takes place there does not benefit the region (cited in Griffin 1989a). The boroughs have taxing and regulatory power over economic activities that occuur within their jurisdictions, such as commercial fisheries and oil wells from which revenue can be generated.

The second response of the Kodiak Island Borough and Kodiak City to declining State and Federal revenues has been to look into various options for government consolidation. In 1987, a nine-member Consolidation Committee was set up to explore the issues involved in revamping Kodiak's government. The committee investigated the effect of consolidation on government efficiency, taxing abilities, and delivery of services to determine potential savings (Kodiak Consolidation Committee 1989). The committee found several areas where savings could be obtained after the initial transition period,

but found the total amount of savings difficult to quantify. They recommended that the issue be placed before the voters. Two consolidation questions were to appear on the October 1989 ballot but were withdrawn due to a conflict between the borough and the city over extension of a service district (Kodiak Daily Mirror, 12-13-1989:1). The issue of combining the Kodiak City and Kodiak Island Borough Governments was raised back in 1978, but at that time proposed government consolidation was defeated in a ballot proposition (Payne 1980:52). The issue of government consolidation was addressed again in the 1990 election, and voters again rejected it.

IV. HOUSEHOLD ORGANIZATION AND KINSHIP

IV.A. Kinship Organization

Early sources report that the Koniag had matrilineal descent with temporary matrilocal postnuptial residence (Davydov 1977:182; Merck 1980:108). In Old Harbor in the mid-1980's, Davis observed matrilineal-like features of present-day household compositions, crew compositions, and childrearing practices, particularly the importance of the mother's brother to his sister's children (Davis 1986:186). There is no clear pattern of matrilocality, as about equal numbers of men and women have married and moved into Old Harbor (Davis 1986:182). This also is true in other Kodiak villages, although in the early 1960's, Taylor (1966) noted there was a pattern of female outmigration in Karluk that left a number of unmarried men in the village.

One of the dominant features of Kodiak villages is the extensive and complex kinship relations between community members. In 1960, Befu observed of Old Harbor that "There is scarcely anyone in the village who is not related to someone else there by

blood, marriage, or adoption. In fact, most villagers are related to one another in more than one way" (Befu 1970:36). Befu also pointed out that the Russian Orthodox practices of not selecting close relatives as godparents and of parents and godparents forming fictive kinship relations strengthened the weaker bonds between distant kin or nonkin. He noted that the Russian Orthodox Church also religiously endorsed "cross siblingship," a fictive kinship relation that could be contracted between individuals (Befu 1970).

Davis has documented not only the extensive kinship connections within but also between Kodiak villages, and between the southern villages on Kodiak Island and the Pacific Coast side of the Alaska Peninsula (Davis 1986). Because of this inter-relatedness, most marriages in Old Harbor are exogamous, with one spouse from Old Harbor and the other from outside (Davis 1986:182). In contrast, there are few extensive kinship relations among Kodiak's non-Native population.

IV.B. Household Structures and Economic Functions

According to AOSIS KI data (1988 and 1989), the nature of Kodiak households differs in some respects from other regions included in the study. Kodiak households have the least number of members of any region and are among the most stable. Household heads are generally older than in any other region.

The mean age of 1991 KI's was 40 years. None were under 25, 44 percent were 25 to 40, 53 percent were 41 to 55, and only one (3%) was 56 or over. The average household size was 3.7 people. Forty-four percent of KI's lived in households of 1.0 to

3.0 people, 50 percent in households of 4.0 to 6.0, 6 percent in households of 7.0 or 8.0, and none in households of over 8.0.

The age and household-size profiles of the 35 questionnaire respondents randomly selected in 1991 were somewhat different. The mean age was similar (42); but among respondents, 14 percent were under 25, 46 percent were 25 to 40, 20 percent were 41 to 55, and 20 percent were 56 and older. Four of the new respondents were in their 70's. The mean household size was 2.6 people, with 74 percent living in households of 1.0 to 3.0 (9.0 people lived alone), 26 percent in households of 4.0 to 6.0, and no households of over 6.0 people.

The discrepancy between the samples may be partly explained by reference to the nature of the Kodiak population. The 1991 KI's had been contacted at least once before in previous years of the study. Young or elderly people living alone or with one other person represent some of the most transient or seasonal segments of the Kodiak population. The people most available to be contacted again were people in their 30s and 40s who had been established in Kodiak for a number of years and were likely to live with spouses and children in permanent households.

There is a wide variety of household structures in Kodiak City and Old Harbor. Nuclear families are the dominant household form. Extended and intergenerational-family households are more common among Natives in the villages and among the Filipino population in Kodiak City. Because of the demand for housing and the high price of the housing that becomes available, a significant number of households in Kodiak City are composed of persons unrelated to one another. Single-member

households are not uncommon in Kodiak City. Table 15 shows the average household size for each Kodiak community.

Table 15

AVERAGE HOUSEHOLD SIZE IN THE KODIAK REGION, 1980

Community	Persons per Household
Kodiak Borough	3.01
Kodiak City	2.97
Akhiok	3.89
Karluk	4.57
Larsen Bay	3.51
Old Harbor	3.86
Ouzinkie	3.04
Port Lions	3.26

Source: U.S. Census 1980.

Native households are more fluid than non-Native households, and there is more fluidity of households in the villages than in Kodiak City. Village residents often stay with relatives in Kodiak or Anchorage for extended periods of time. Many children in Kodiak villages live with or are adopted by relatives, and personnel at the Old Harbor school commented on the pervasiveness of this phenomenon. Teachers reported that they had often been asked if they would like to adopt village children.

There are distinct patterns of sharing that connect households to one another and are influenced primarily by length of residence in the community and ethnicity.

"Newcomers" reported more often than long-term residents that there is more sharing now than in the past, but this pertained to their household as they became more integrated into the community. The more long-term residents, however, indicated that there is less interhousehold sharing at present than in the past. Some attributed this to "the different type of people" that have come to Alaska in recent years. One interviewee related the change to the pipeline years, "when people came to Alaska to earn money and take it home and had more of an 'all for me' attitude." Some of the older Natives attributed this change to the younger generation not adhering to traditional values.

There is fairly widespread sharing among households on Kodiak Island, particularly with resources and labor. Part of this has been attributed to the nature of living in smaller, isolated communities where there is a greater degree of familiarity and people come to depend on each other more than in urban areas (Payne 1986). Many Kodiak non-Natives, who migrated to Alaska as adults, have few or no kin in Kodiak but place a high value on sharing and exchange with friends and neighbors. Yet there are discernable differences between Native households and non-Native households in the nature of their sharing.

Among Native households, traditional kinship ties continue to inform economic patterns for harvesting resources. Our research supports the findings of other studies that interhousehold and intervillage sharing of resources and labor, and traditional distributive mechanisms persist (Barsch 1985; Davis 1979, 1986; KANA and ADF&G Subsistence 1983:57-75). In Karluk, for example, five or six households were responsible

for most of the deer harvest and only one household went without in 1985 (Barsch 1985:35).

There are other distinctive characteristics of Native sharing. Native sharing often involves subsistence resources or preferred foods that are hard to procure; thus, the giver is parting with something that is scarce and of great value. In addition, sharing between Natives frequently involves "redistribution," wherein someone receives part of what the giver received from someone else. There are few defined expectations of return with Native sharing. The Native pattern of sharing is distinct enough from the non-Native pattern that in every AOSIS KI interview in which a non-Native's description of his/her sharing practices seemed to fit the "Native pattern," it was discovered that the spouse was Native. The main way in which non-Native sharing differs from Native sharing is that there are more defined expectations of return with non-Natives. Non-Natives tend to view sharing as exchange and often talk about it that way, referring to what they swapped with one another.

In 1991, non-Native KI's also referred to exchanges of equipment or labor as "trade-offs." One man said, "I've been offered to do it, but never got into sharing labor." Going hunting or fishing together was not usually considered sharing labor. Examples people gave of their sharing included loaning someone else a truck in exchange for firewood, helping someone with a job in their house for help in return, or exchanging babysitting favors. Non-Native interviewees gave various indications that they view sharing as exchange: they tend to agree verbally with others on their expectations; they remember who still owes them a favor; they voice some displeasure when reciprocity has

not been received; and they share with people who have done favors for them in the past.

Even when non-Natives do not view their sharing as exchange, they seem to give more out of a desire not to waste when they have more than they can use than out of recognition of responsibilities toward others. They give out of abundance, not out of scarcity. Non-Natives show humanitarian and civic concern for others, engage in neighborly and friendly gifting, but are less involved in "communitarian" sharing with extended kin and elders.

Non-Native sharing also tends to be more institutionalized than Native sharing. For examples, non-Natives' response to homeless people is to build a shelter for them. There are no homeless people in Native villages. Several non-Native interviewees perceived their offerings to the church as sharing of income. Older people are referred to as senior citizens, not as elders; and when asked about the concern that is shown for their needs, non-Native older people almost invariably refer to the senior center, the housing, the health care, and the activities and services that are provided for them through government programs. Interviewees also mentioned benefits that people over 65 receive, such as not having to pay property or sales taxes; paying less for water, sewer, and garbage; enjoying senior entertainment discounts; and receiving the Alaska Longevity Bonus.

In 1991, Native and non-Native KI's mentioned several sharing patterns that can be seen as typical of Kodiak. Many regularly send fish and other wild foods to relatives outside Alaska. Some people said they regularly receive items from relatives outside

that cannot be purchased in Alaska, e.g., apples and raspberries from Washington or sausage from Pennsylvania.

Some 1991 KI's also give financial support to relatives outside Alaska, usually to children or ex-spouses. The two Filipino households included in the sample regularly send money to family members in the Philippines. One man, a member of an evangelical religion, supports a niece in the Philippines who is studying for the ministry. A Native woman said she gives loans of money to relatives in emergencies, and three other KI's said they give occasional emergency loans. One man said he gives "loans" to relatives that are really gifts.

IV.C. Socialization

In traditional Kodiak Native society, children were raised permissively but were taught stoicism. Gender distinctions were reinforced in their upbringing. The avunculate was not a formally developed institution but boys learned to hunt under related adults, usually an uncle (Clark 1984b:192). Women were sequestered during menarche and, in pre-contact periods, tattooed on the chin to signal puberty (Merck 1980:103). According to oral tradition, confinement during menarche and postpartum periods continued until several decades ago. Stories continue to be told about the polluting power of menstruating women on fishing boats and their responsibility for poor fishing seasons (Mulcahy 1988).

Some traditional childrearing and adoption practices persist, although little documentation of adoption rules exists. Through oral tradition, people continue to tell stories about the importance of listening to the elders and watching the natural world,

revealing an integrated worldview not immediately apparent to outside observers (Mulcahy 1988). Davis (1986) noted the continuing importance of a woman's brother in the raising and training of her sons, particularly in the southern Kodiak villages.

Native parents often treat their children with permissiveness or indulgence. It is not uncommon for Native children to exercise their own prerogative and change households, which they oftentimes do in an effort to seek out the most permissive environment. This adds to the fluidity of Native households. Old Harbor parents have complained to school personnel that they do not know what to do with their children. Non-Native school personnel are often surprised by the lax nature of Native child-rearing practices, by what they see as impudence on the part of Native children, and by the amount of independence that even very young children exercise.

In recent times, formal institutions such as the Russian Orthodox Church and the schools have become important in the socialization process. Through KANA's cultural programs, the schools have recently served to transmit traditional skills and knowledge previously passed through extended kin networks. In several villages, elders are regularly invited to the classrooms to share stories and arts and language skills. Some non-Native teachers have taken the initiative in innovating traditional craft programs, such as kayak building. This sometimes has been a point of tension because lack of Native role models in the schools is a major problem on Kodiak. While there are a number of Native teachers' aides on Kodiak Island, there are only two Native teachers--one in Kodiak and one in Akhiok.

Perhaps the most important context for traditional socialization practices is through subsistence activities. One Native KI interviewee took exception to these activities being called subsistence, which implies that their importance lies in people's dependence on the foods that they procure. This person explained that "Subsistence is not just having something to live on but having the foods that we prefer." He said that he would take seal meat over a T-bone steak any day. He went on to explain that "the process, not just the product, is important." As he sees it, engaging in subsistence activities is an important time for a family to be together and work together, and for children to learn the skills necessary to continue living as their people have always lived. To him, "subsistence" is an important way for Native people to maintain their culture and social organization. Among the significant cultural values attached to subsistence that were identified in a 1979 KANA report (cited in Davis 1979:172-176) was that success at hunting or fishing is based on skills learned in the village and that there is a great deal of independence associated with a subsistence way of life.

V. IDEOLOGY

V.A. Religion

In the City of Kodiak, many religious denominations have proliferated during this century. There are currently over 17 active churches representing many denominations and a diversity of religious faiths. These include Russian Orthodox, Catholic, Baptist (several different ones), Church of Jesus Christ of Latter-Day Saints, Episcopal, Evangelical, Lutheran, Assembly of God, Baha'i Faith, Christian Science, Church of the

Nazarene, Kodiak Bible Chapel, Kodiak Community Church, Seventh-Day Adventist, Pentecostal, and Unification. Most of these churches support full-time clergy.

The numerous divisions of Baptists together form the religious group to which the greatest number of people in Kodiak belong. The Catholic Church has the most Filipino adherents, and Russian Orthodoxy has the most Native adherents. The Russian Orthodox Church retains a place as the most historically significant and symbolically important religion in Kodiak. It is, for example, the Russian Orthodox priest who blesses the fishing fleet during the annual Crab Festival. The letterhead design on the Kodiak Island Borough stationery, in which a Native profile is juxtaposed against the onion dome of the Russian Orthodox Church, also indicates the church's symbolic place in Kodiak life.

The Russian Orthodox Church's critical role since the arrival of the first Russian monks in 1794 has been well documented (Afonsky 1977; Davis 1970, 1979, 1986; Smith 1980; Oleksa 1982, 1987). As already discussed, Native Orthodoxy has developed as a synthesis of traditional religious and distinctly Native practices and beliefs. There are Orthodox churches in every village, and holidays are celebrated according to the Orthodox calendar, marked by festivities such as "starring" (a syncretic Russian/Native caroling tradition). Services are infrequently conducted by traveling priests and more commonly by Native lay readers, a role increasingly held by women in Kodiak's villages (Mason 1988). Since the establishment of Saint Herman's Theological Seminary on Kodiak in 1974, there has been a resurgence of interest in and attendance at services in the villages (Davis 1986:355).

Despite the Russian Orthodox Church's importance, other denominations have gained converts among the Native population. The Baptist Church has held a central place since the establishment of a mission on Woody Island in 1893. Further, these two churches have maintained a symbiotic and sometimes tense coexistence in Ouzinkie since 1896. Other Christian denominations, such as the Bible Chapel in Port Lions, are strong in certain villages.

While a majority of Native elders are Russian Orthodox, some younger people influenced by the recently emergent Native consciousness are questioning and reinterpreting religious beliefs. For them, Russian Orthodoxy is more of a tradition than a religion. There have been greater changes in religious attitudes as more mixed (Native/non-Native) marriages occur. Several Native KI respondents in Kodiak City who had married non-Natives and who were raising their children as Christians indicated that Orthodoxy had become part of "tradition" for them (Mulcahy field notes 1988b).

Ministers and priests from the local churches participate in the Ministerial Alliance, formed to coordinate religious response to issues of community concern. The Russian Orthodox Church is trying to adjust to recent problems on Kodiak, among them village suicides (in 1988). Priests cannot serve funerals or give full burial rights because of church teachings against suicide; however, they have tried to offer counseling and support to victims' families.

V.B. Worldviews and Values

The AOSIS KI data (1988 and 1989) suggest that, in general, Kodiak Island residents have the most westernized viewpoint of the seven regions included in the study.

Kodiak KI interviewees placed the greatest emphasis on personal responsibility for attainment and the least emphasis on sharing with a wide circle of kin and neighbors. The greatest number of 1991 KI informants (44%) thought a person was primarily responsible for his or her own success, with success often defined as happiness, self-respect, or independence. However, most KI's also thought the family and others shared responsibility for teaching or showing by example the value of personal attainment. Several KI's professed to believe in self-reliance, but in practice they gave much to their children and other relatives and depended on them in return. Some KI's, especially those who were very involved in church activities, saw service to the community as an important indicator of an individual's success.

In terms of placing greater emphasis on competition versus cooperation, 63 percent of the 1991 Kodiak interviewees responded that it depends on the circumstances. Most said that cooperation was more important but thought that both cooperation and competition have a purpose. One man said he had been raised to be competitive, but he wished that he had learned cooperation instead. Two KI's commented that there is more emphasis on competition in a fishing community like Kodiak.

Western enculturation and gender distinctions are practiced by the greatest percentage of households (88% of 1991 KI's). Several KI's said they were raising their children in essentially the same way they had been brought up, although one man said, "I'm louder than my parents were." Some KI's considered themselves "traditional" parents, by which they meant that they were strict and directive. One woman said that

she was nondirective with her children but that, especially since she has stopped drinking, she has found it necessary to set rules of behavior.

Prior to 1991, Kodiak interviewees were much more apt than persons in other regions to view the environment and resources in commodity terms, with no interviewees viewing the environment primarily in spiritual terms. However, most posttest KI's in 1991, as well as most re-interviewees, were loath to view the environment as purely commodity-based. They were quick to point out their spiritual ties to the environment. Fifty-three percent of KI's said they had a combined spiritual and commodity view. Typically KI's said they had no problem with the use of resources as commodities, as long as they were used wisely or managed properly. Several commented that a commodity view does not contradict a spiritual view. One man said that even commodity uses have a spiritual quality: "Even that part is interconnected." One woman said that she believed we are "caretakers of the planet, here to take care of it and not deplete it. My church goes along with that, too." Some KI's said that commodity use of resources is something that has to take place. They thought environmentalists were too extreme in their opposition to development. A Native woman said, "[It's] naive to think that something can stay 100 percent pristine." As an example of spiritual and commodity views coming into conflict, two KI's mentioned the current controversy over logging on Afognak.

For the most part, values held by people in Kodiak are shaped by commercial fishing and the lifestyle associated with that occupation. In general, Kodiak fishermen have a strong work ethic and abhor laziness. Most Kodiak fishermen are small

entrepreneurs, and many have worked hard and saved their money in order to buy their own boats. Kodiak fishermen can be described as ambitious, aggressive, innovative, politically astute, adaptable, straightforward, and self-reliant (Payne 1980).

Kodiak fishermen are independent, yet interdependent. Their occupation requires cooperation, yet it entails fierce competition. People say that members of fishing communities are drawn closer together and cooperate more because of the shared tragedy and high risk that are part of the nature of their occupation. Commercial fishing is a high-risk venture, not only because it is physically dangerous but because it is an economic gamble. And in the economic gamble, people generally believe that competition is good because it motivates people to achieve.

Kodiak Natives have the longest history of contact, trade, and cultural mixing with non-Native (Russian and European) peoples. Even early ethnographers noted the decline in Native religion and beliefs (Davydov 1977; Holmberg 1985). Kodiak's Native culture was disparaged by many as having been "decimated." While there has been a tragic loss of knowledge of certain traditions and of the Kodiak Alutiiq language, the persistence of less visible Native values has been recognized by some people.

In 1970, Befu observed that Old Harbor Eskimos did not identify with American society and its value system, even though they had participated in a capitalistic economic system, had been exposed to white man's education and values, had their material culture changed, and had Native beliefs supplanted by the Russian Orthodox Church. He wrote (Befu 1970:41-42):

> In short, these Eskimos participate in a Western economic market without the requisite values and attitudes necessary for its successful operation. The point I wish to make is that the American concepts of money, payment, debt, etc., as social concepts are not completely internalized by the Natives, although they understand what these entail as economic concepts. Nor do they cherish the ideas of thrift and industry in the way Americans do. . .. It is because the Natives have a different orientation toward money, saving, thrift, social mobility and related values so important for the majority American that they prefer their way of life. In the final analysis, then, we may conclude that Eskimos of Old Harbor recognize themselves as Eskimos and not as Americans, and that this self-identification is based upon a value orientation toward life which is fundamentally different from that of the majority American.

Values of traditional Koniag culture and the moral strictures of Russian Orthodoxy continue to inform village life and socialization processes. These values include respect for authority and elders, modesty, noncompetitive attitudes, and working for the benefit of a social group. These values continue to cause conflicts for villagers who are attempting to maintain traditional values and to accommodate the pressures of a global economy ruled by a competitive ethos. While families continue to try and inculcate traditional values at home, Western patterns of individual success and greater assertiveness are stressed in the schools and larger social arenas. This is particularly marked on Kodiak Island because of the lack of Native teachers as role models. Further, as intermarriages with other religious groups increase, shifts from the Native values integrated with Russian Orthodoxy are occurring.

In terms of values about the environment and its resources, Kodiak non-Native residents attach some symbols to the environment; but they generally do not attach many

symbols that have accumulated over two or more generations. This is understandable given the more transient nature of the population. It may be another indicator of the transience of the Kodiak population that only one KI, a Native, said her family had accumulated many significant symbolic places over generations. Three KI's (9%) had many special places, 24 (75%) had a few special places, and 4 (13%) had none. One of those who responded "none" said, "We just like to go out a lot," i.e., drive around on the road system or go out in a rubber raft. Most of those who had favorite places said they were originally shown them or told about them by other people in Kodiak. One person said he had some favorite recreation places that are different from those he goes to with his wife. The places usually mentioned were beaches, coves, streams, or Kodiak landmarks, such as Barometer Mountain. Typically, KI's went to these places for hunting, fishing, picnicking, hiking, or camping.

People have several identifiable perspectives about the environment. There is the "mariner's viewpoint," wherein people who live and die by the sea learn its landmarks and signs. The significance they attach to various aspects of the environment are practical. They need to learn and know where the bays are in which they can find shelter and hide until bad weather improves, where the best places to fish are, where the reefs to avoid are, and so forth.

One old fisherman talked about how seamen used to keep intricate logs of points, landmarks, and lighthouses, and about how mariners have passed on knowledge through navigation charts. There are remnants of spiritual meanings that the earth may have held for these people in figures of speech (e.g., "that sea, she is unforgiving"). Several

other fisherman talked about people who have computerized boats that hardly require looking out the window and do not involve manual steering. It appears that technology has taken much of the skill and experience out of being a ship's skipper. If this is the case, over time technology also may reduce the significance that boat captains attach to aspects of the environment.

There also is the commercial fisherman's viewpoint. Some fishermen reported that certain areas have special meaning for them because that is where they usually find the most fish or because that is where they go fishing. This meaning is tied to the economic value of the resources in a given location.

Finally, there is the "aesthetic or environmental viewpoint." Many people like a certain area, or Kodiak in particular, because it is peaceful, pretty, uncrowded, picturesque, etc. Kodiak has a recognized group of environmentalists and also a good number of artists who live there because of the values they place on the environment. One woman said that she likes Kodiak because of its historic significance as the first Russian settlement in Alaska.

V.C. Ethnicity and Tribalism

Several features need to be considered in any analysis of ethnicity and tribalism in the Kodiak region. First, Kodiak has been a juncture of cultural and commercial exchange and clashes for centuries because of its strategic location. Contact with other Native groups and the gradual integration of Russian, Scandinavian, and American influences have marked Kodiak Native identity. While this pattern is not unlike other regions of Alaska, what distinguishes Kodiak are the shifts in emic and etic definitions of

Native identity that continue to the present time. Ethnicity has been a fluid and evolving feature of identity among Kodiak Natives.

While scholars group the Koniag with the Pacific Eskimo, local Natives refer to themselves as Aleuts, adopting the term the colonial Russians applied to all Pacific Eskimos in the mid-19th century. Since the 1970's and implementation of the ANCSA, attempts to differentiate Kodiak Natives from other groups have led to the use of alternate terms, including Sugpiaq, Koniag, and Alutiiq (Clark 1984b:196). "Alutiiq" is now the term preferred by linguists and anthropologists. Even today, however, many Kodiak Natives continue to consider themselves Aleuts and want to be called Aleuts by other Natives and non-Natives. In a recently implemented RURALCAP (Rural Alaska Community Action Program) project, Port Lions was selected as the representative "Aleut" village. "Aleut" is the term of self-reference that persists throughout the island.

Second, and perhaps linked to the categorical confusion surrounding Native identity, there is a paucity of previous documentation. Historical ethnographies provide fragmented information, but no complete ethnography of the region exists. Most current ethnographic work was conducted for government projects (see especially Davis 1979, 1986; Payne 1980). Even government-funded work on the Kodiak region has been sparse compared to work on other areas of the State.

Lastly, the revitalization movements that have been documented for other areas of the State emerged more recently on Kodiak (see McNabb 1987; Fienup-Riordan 1983), perhaps due to the widely held perception of the Kodiak Native culture as "lost." This cultural renewal is an important feature of a newly reformed Native identity. The

restructuring of KANA under new leadership in the past decade and the role it has played in increasing awareness of Native culture has contributed to the rise in Native consciousness on Kodiak.

In addition to providing health and social services and educational and economic assistance to the villages, KANA is dedicated to promoting pride on the part of indigenous people of the Kodiak Island area in their cultural heritage and traditions and to preserving Native language, customs, folklore, and arts. The KANA has engaged in efforts to reclaim the Native cultural heritage because many of its leaders believe that the disintegration of traditional cultures is linked to the social problems (e.g., alcohol abuse, domestic violence, suicides) that are devastating Alaskan villages, and that Natives' sense of identity and self-esteem is part of the solution to these problems.

The Adaq'wy Cultural Heritage Program, developed by KANA to preserve the Native culture of Alutiiq-speaking people, is directed by a Culture Committee and administered by the Culture and Heritage Program Coordinator. The program has several projects. The Oral History Project is trying to preserve the rich knowledge of Native lifeways still possessed by Native elders through taping and transcribing interviews. The Alutiiq Language Project, which grew out of the oral history project, is recording and preserving Kodiak's Native language and producing educational materials for the schools. The Culture Heritage Library is building a collection of books on Alaska and Native history. The Educational Outreach Project is educating the public about Native culture and producing educational materials to share with other villages in the Alutiiq-speaking culture area. Finally, the Village Anthropologist Program is training

local villagers to oversee their cultural resources and is coordinating the visits of outside researchers.

The KANA and the Alaska Humanities Forum sponsored the first Kodiak Island Culture and Heritage Conference on March 28-30, 1988. Forty scholars from the U.S., Canada, Finland, Great Britain, Sweden, Germany, and the U.S.S.R. participated in this international conference, which was devoted to Native culture of the Kodiak Island Area. In 1989, KANA sponsored a second conference focused on kayaks and has plans to sponsor future conferences.

The KANA is working to construct a 17,000-square-foot Native Museum and Culture Center in Kodiak to serve as a repository for art and artifacts and as a research and educational center. In 1987, Koniag, Inc., donated land to be traded with the City of Kodiak for a 2.5-acre parcel on Near Island. The KANA is securing funding for the museum's construction and for a trust fund to support operating expenses. In 1986, KANA entered into a joint venture to form Lucky Strike Bingo in Anchorage, funds from which will go to benefit the construction and operation of the museum.

The KANA and the Kodiak Tribal Council are trying to start Kodiak Native Crafts, a nonprofit corporation, to provide employment and vocational rehabilitation to Kodiak Island Natives. The aim is to provide Native people with something culturally relevant to do and to create profitable work that can be done in homes. Kodiak Native Crafts would market this work. The KANA and the Kodiak Tribal Council are seeking startup funds from State vocational rehabilitation and private enterprise (Kodiak Daily Mirror, 10-4-89:3).

Filipinos in Kodiak have an organization dedicated to working in their interest. The Filipino American Association was started in 1983 but has existed under different names since 1972. The purpose of this group is to give assistance to its members and organize social activities for the Filipino community. The organization became politically active after the Exxon Valdez oil spill, representing the interests of the many Filipinos that work for the processors. The head of that organization was elected to the Kodiak City Council in October 1989.

VI. EFFECTS OF THE EXXON VALDEZ OIL SPILL

The Kodiak Archipelago was one of the areas most affected by the Exxon Valdez oil spill. The oil slick that drifted southwest from Prince William Sound began washing up on Kodiak beaches on April 17, 1989, within 3 weeks after the oil tanker Exxon Valdez struck Bligh Reef and spilled nearly 11 million gallons of crude oil. Much of the oil that drifted out of Prince William Sound passed through Shelikof Strait between Kodiak and the Alaska Peninsula, which has rich fishing grounds frequented by members of the Kodiak fishing fleet. All of the communities in the region experienced economic, social, cultural, and institutional impacts as a result of the oil spill.

VI.A. Results of the 1989 Research

The research on which this section is based took place in September 1989, over 5 months after the oil spill had occurred and during the time that Exxon was winding down its cleanup operations and pulling its representatives out of Kodiak. Even though the delay in getting into the field hampered our ability to document and record impacts as they occurred, our research team had several advantages. Data that had been gathered

in Kodiak over the previous two years as part of the Social Indicators Research Project provided useful baseline information. Dr. Joanna Endter spent the first 2 weeks of March 1989 in Kodiak and completed the second wave of this research just 10 days prior to the oil spill. One member of the research team, Ms. Rachel Mason, lived in Kodiak and had been able to observe firsthand the community's response to the spill over the course of the succeeding 5 months. Dr. Endter subscribed to the local newspaper, which provided good coverage of events having to do with the oil spill and which started a special "Oil Watch" column soon after the Exxon Valdez oil spill occurred. All three members of the research team--Dr. Endter, Ms. Mason, and Mr. Jon Hofmeister--spent several weeks in Kodiak during September 1989 conducting in-depth interviews with community residents and public officials. During this time, community residents were preparing for Exxon's withdrawal, working on winter cleanup proposals, and summarizing their experiences to date in dealing with impacts from the oil spill.

The previous chapters of this report provide a background for understanding the impacts that the oil spill had on the Kodiak region and the responses of local residents. Kodiak's experience with the oil spill can be understood partly in terms of its history. Kodiak was impacted by two major natural disasters in the past--the eruption of Mount Katmai in 1912 and the Great Alaskan Earthquake in 1964. Memories and stories of these disasters, of the reconstruction that followed, and of the way in which communities united to respond to these disasters remain alive. The Exxon Valdez oil spill was not the same. Uncertainty about the extent of oil-spill impacts and when they would cease made it difficult for local residents to overcome the disaster and put their lives back together.

Exxon's actions inhibited community mobilization similar to that which took place after the previous natural disasters. Furthermore, the oil spill was a manmade disaster that people believe could have been avoided, which resulted in deep anger that was not easily dissipated.

The trends of political, economic, and social change already occurring in the community also are important to an understanding of the Kodiak region's experience with the oil spill. The entire region had long been dependent on natural resource-based economic activities (fishing, timber production, tourism) and on government programs that aided these industries and managed and regulated natural resource use. Faced with increased national and international competition, particularly in fishing, and with declining State and Federal revenue sharing, Kodiak communities were attempting to position themselves to be better able to compete and to capture more local economic benefits from these extractive industries. Kodiak City was fighting to maintain its position as one of the top U.S. fishing ports and as a major regional shore-based fish processing center. The fishing industry generally had become more diversified, competitive, capitalized, and risky. These changes had increased the divisions among fishermen and had increased the disparities within and between communities of the region. The oil spill exacerbated the existing pressures on and tensions in the Kodiak region.

In addition to understanding the existing conditions in Kodiak, we must understand the way in which the oil-spill response unfolded. The effects of the oil spill occurred later in Kodiak than in coastal areas more proximate to the spill. By the time

oil reached Kodiak, Exxon already was attempting to limit its responsibilities, cleanup costs, and liabilities. Exxon's handling of the oil spill response resulted in differential impacts on individuals and segments of the Kodiak population, which led to some internal community factionalism. Exxon's control over the oil-spill cleanup and the way it responded to Kodiak area residents' concerns added to local frustrations and inhibited community involvement and cooperation in responding to the oil spill.

Institutional Responses and Impacts: Kodiak benefitted from the disaster plans already put in place by the Emergency Services Council that was formed after the 1964 earthquake. The council consisted of the Kodiak City mayor, the Kodiak Island Borough mayor, the Kodiak City manager, and the local USCG commander. The council was activated on April 3, 1989, when oil approached the archipelago.

The Emergency Services Council directed initial community efforts and mobilization to respond to the spill. They initiated contingency planning for deflection booming in the event that the oil slick reached Kodiak, started identifying the most critical hatcheries and tributaries, and sought funding to help finance oil-spill-cleanup preparations. They worked with local representatives of the USFWS, ADF&G, and the Alaska Department of Natural Resources to determine priorities on which sites to save. Parks, preserves, fish hatcheries, commercial fishing areas, subsistence beaches, and other key sites were identified on a map; and then practicality and judgment calls were used to determine priorities.

The Emergency Services Council remained active in oil-spill response throughout the summer. It kept Kodiak residents informed through public oil-spill meetings held

daily at first and later three times a week, through public-radio broadcasts, through television coverage of all the public meetings, and through FAX communications with the six outlying villages. Kodiak City was the only community impacted by the Exxon Valdez oil spill that held ongoing public meetings through September 1989.

Kodiak residents also mobilized before the oil spill hit. People worked to document baseline conditions on Kodiak beaches (Kodiak Daily Mirror, 4-7-89:1). Fishermen began transporting boom material to critical bays. Others assembled a volunteer armada that attacked the leading edge of the oil slick as it approached Resurrection Bay on April 11, 1989 (Kodiak Daily Mirror, 4-6-89:1; 4-11-89:1). A group of people began the "Typar Project," which produced a geotextile boom that was to be used in getting oil out of the water.

Federal agencies and the Exxon corporation--without offices in Kodiak--were not as quick to respond. The Bureau of Land Management "incident command team" did not arrive until the fifth day after oil actually had hit Kodiak beaches, and Exxon representatives were not there until the tenth day. Initially, Exxon had no plans to help Kodiak, believing that the slick would dissipate before reaching the archipelago (Kodiak Daily Mirror, 4-5-89:1). After Exxon did arrive, however, Exxon and the USCG took over control of the cleanup operations, and local governmental entities were put in a reactive position.

According to local public officials, Exxon thereafter directed the cleanup effort by controlling the purse strings. Cleanup expenditures had to be justified to Exxon's representatives, who decided which costs the corporation would assume. Local

governments first had to present Exxon with cleanup plans that it could approve or reject, and then had to assume the financial costs of responding to the oil spill and submit claims to Exxon for reimbursement. Oftentimes Exxon rejected cleanup suggestions from local people, citing safety, health, liability, and coordination as reasons for not doing more. As one interviewee remarked, the irony of the situation was that Exxon was responsible for the oil spill, yet people had to beg them for the money to clean it up (Endter 1989).

Many interviewees thought the Federal Government made a mistake by not federalizing the cleanup and sending Exxon the bill. Others were not so sure that the Federal Government would have been any more responsive. It appeared to many local residents that the USCG was lenient with and sympathetic to Exxon. Yet some people felt that at least dealing with Exxon was better than dealing with another oil company that may have walked away or may not have had the same financial capabilities to respond to a spill of the magnitude of the Exxon Valdez.

Burdens Placed on Local Governments: The three major burdens placed on local governments as a result of the Exxon Valdez oil spill were adverse financial impacts, disruption of existing programs, and strain on local public officials.

Adverse Financial Impacts: Kodiak Island Borough communities were forced to expend additional time and money on oil-spill response, which became the immediate priority of their staff in the spill's aftermath. Public employees had to handle correspondence and billings to Exxon and other spill-related documentation, which took time away from normal community and borough business. Virtually every

department of the Kodiak Island Borough was affected. Exxon would not reimburse communities for straight (regular) time put in on spill-related activities--only for overtime put in on spill-related activities (Endter 1989). Some people left their public jobs due to strain caused by oil spill response or to accept higher paying cleanup jobs--a cost to communities in terms of valuable staff experience and training.

The Kodiak Island Borough and its communities were affected financially in other ways, according to local officials. For example, these communities lost tax revenues from various sources, including raw fish tax, income tax shares, and property tax revenues due to decreased property values. Borough revenues decreased due to reduced water and sewer usage because most of the fish processors--the major consumers of those services--did not operate during summer 1989. The Kodiak Island Borough lost interest when it had to use some of its long-term investments to pay spill-related bills. These lost revenues were not compensated by Exxon but had to be documented and become part of the borough's and communities' claims against Exxon.

All Kodiak Island communities experienced increased costs in community and social service programs as a result of the sudden increase in local unemployment and the rapid in-migration of oil-spill-cleanup workers. Police, mental health agencies, and social service providers were strained in their attempts to meet the increased need and demand for services.

Disruption of Existing Programs: During spring and summer 1989, Kodiak communities had to substitute oil-spill-response activity for community improvement projects. Spring and summer are normally the time when Alaskan

communities undertake major infrastructure and construction jobs, such as roads, bridges, docks, buildings, and water and sewer projects. Such projects have been crucial for Kodiak's competition in the rapidly evolving international seafood trade. Most of the projects Kodiak had planned for 1989 were put on hold because people were occupied with oil-spill cleanup. Sufficient labor was not available to work on community improvement projects, and government officials did not want to bring in contract labor from outside the region.

The offices of State and Federal agencies located in Kodiak were similarly affected. ADF&G and USFWS personnel and resources were deployed to assist with oil-spill activities, causing many existing programs to be placed on hold or cut back. The existing programs of these agencies primarily aid the fishing and recreation industries, which are the backbone of Kodiak's economy.

Community improvements and services provided to Kodiak villages already had been declining for several years. Regional fish processing had become concentrated in Kodiak City, and funding of facilities and support services for the fishing industry was hard for villages to obtain. The oil spill exacerbated this trend and increased the disparities between Kodiak City and the outlying villages (Endter 1989).

Strain on Local Officials: The oil spill was a tremendous strain on Kodiak's public officials. Dealing with the oil spill required a great deal of time and energy over an extended period of time. These officials were constantly attending meetings and traveling, which made it difficult for them to maintain a normal home life. While representatives for Exxon and the State of Alaska were rotated in and out of

Kodiak, local officials never had a break from the pressures of dealing with the oil spill. By the end of the summer, several of the mayors and city council members from other impacted communities in southcentral Alaska had resigned from their positions. Most of Kodiak's public officials remained in office. By the time they were interviewed as part of this research in September, the strain that they had been under was clearly visible.

The public meetings that Kodiak officials chaired throughout summer 1989 became a mechanism for releasing anger and expressing grief, which increased the strain on these local officials. Kodiak residents were united on the need to do something, but they were frustrated with not being able to do much. Having little or no control over Exxon or the involved State and Federal agencies, their anger was vented on local officials. One Kodiak public official admitted that he dreaded the public meetings, but he said they kept holding them because Exxon representatives hated the meetings even more than the local officials and it was a way to keep Exxon accountable and the public informed (Endter 1989).

Part of the strain on local public officials was due to differences of opinion within Kodiak communities on how to deal with Exxon. Community residents were angry with Exxon; but because Exxon was in charge of the spill cleanup, local officials had to find a way to work with Exxon representatives. Several local officials reported that they were accused of being traitors and themselves became objects of community criticism.

Local-Government Difficulties in Dealing with Exxon: Local communities faced numerous difficulties in dealing with Exxon during the course of the cleanup. The problems most often mentioned by Kodiak officials who were interviewed concerned

defining the problem, obtaining uniform treatment from Exxon, and preventing Exxon from circumventing environmental regulations and processes.

Defining the Problem: A major difficulty local governments had in dealing with Exxon was defining the problem, both the geographic extent of the oil spill and the nature of the impacts. At first, Exxon tried to limit its sphere of responsibility through denying problems in areas outside of Prince William Sound. In early May, the Commissioner of Alaska's Department of Environmental Conservation called Exxon "reluctant and myopic, characterized by stalling techniques, disinformation, and a refusal to pay real attention to damage outside of Prince William Sound" (Kodiak Daily Mirror, 5-8-89:4).

Once the oil spill spread and Exxon was forced to admit the obvious impacts, Kodiak residents felt Exxon was slow to respond. As oil approached Kodiak Island and the Alaska Peninsula, residents of various communities asked for assistance to protect critical areas before oil actually hit the beaches. Exxon was reluctant to expand cleanup efforts and did not respond until areas actually were oiled. For instance, Exxon and VECO ignored pleas from residents of Larsen Bay for assistance as oil approached that community. These people tried to contain incoming oil with boom and began cleaning their beaches without help from Exxon (Kodiak Daily Mirror, 5-11-89:1; 5-12-89:7). As oil approached the Chignik area communities, local residents were told that preparations for the arrival of oil were "premature" and the community should remain "on hold." Chignik residents then tried to obtain funds from the State Department of

Environmental Conservation so they could initiate their own cleanup efforts (Kodiak Daily Mirror, 5-1-89:1).

Kodiak government officials reported that they continually had to counter Exxon's reports about the extent of oil-spill impacts (Endter 1989). For instance, in late May 1989, Charles Sitter, Senior Vice-President and spokesperson for Exxon, was interviewed on the National Public Radio show "All Things Considered." He stated with authority that the effects of the oil spill had been overestimated and that only 300 oiled birds had been collected to date. That same day the Kodiak Daily Mirror reported that the dead-bird count had reached 8,465 (Kodiak Daily Mirror, 5-25-89:7). This minimization of the impacts outraged Kodiak residents and prompted a response from the Kodiak Island Borough and Kodiak City mayors. In responding to Charles Sitter's statement, the Kodiak mayors noted that not only was the environmental damage far worse than Sitter admitted, but "people's livelihoods had been put in jeopardy, their families' futures were at peril, and their mental health had been disrupted" (Kodiak Daily Mirror, 5-25-89:2).

Another problem was that Exxon would recognize only immediate environmental and direct economic impacts. The corporation would not recognize social or indirect impacts from the oil spill and was even more reluctant to look at the potential long-term impacts. Exxon paid for some spill-related needs of Kodiak communities, such as extra police, garbage, and medical personnel; but they would not pay for other costs such as costs associated with extra mental health, alcohol, and drug services; child care for cleanup workers; direct economic-impact damage studies; and mitigation of labor shortages (Kodiak Daily Mirrow, 7-27-89:2). Exxon rejected the Kodiak Island Borough's

proposals and requests for reimbursement of additional costs in these areas. Local officials reported that they had to fight even to get Exxon to pay for the oil-spill-related costs that the company acknowledged. According to one local official, "We have had to drag Exxon forward kicking and screaming" (Endter 1989).

Exxon also fought with the State and local communities over definitions of what constituted a clean beach. After a while, the term "clean" was no longer used to describe a beach; beaches where cleanup crews had worked were considered "treated" or "cleared" (Kodiak Daily Mirror, 6-5-89:2; 6-23-89:4). Exxon continually focused on the amount of debris taken (bag counts), the amount of area covered (miles of beach), and the amount of money spent instead of the amount of oil that remained or reappeared after beaches had been treated. Beginning in late July, Exxon started scaling back Kodiak cleanup operations in preparation for a mid-September departure date and these definitional battles were important for justifying its reduced efforts. By the time Exxon pulled out, they declared that the beaches were "nearly free of oil" and "environmentally stable" (Kodiak Daily Mirror, 9-15-89:7).

Despite Exxon's claims, surveys conducted by the Department of Environmental Conservation indicated that recoverable oil remained on most impacted beaches while wildlife deaths and fisheries damage continued. The department criticized Exxon's plans to pull out without a firm commitment to continue addressing the impacts, and criticized its winter cleanup plan (Kodiak Daily Mirror, 8-21-89:8; 8-25-89:8; 9-7-89:1).

Local residents and cleanup workers also testified that there were still significant amounts of oil around the island toward the end of the summer. They criticized Exxon's

plans to scale back the cleanup operations, saying it was more of a public relations effort than anything else. They claimed that Exxon was concerned about meeting quotas on the number of beaches "cleared," but the quality of the cleanup was bad. Oil left on the beaches was being camouflaged by wind and waves that covered it with sand and gravel; people could not see the oil from the air. Thus, VECO cleaned only the surface without addressing the buried oil. Some workers, many of them from the Lower 48 states, said that VECO supervisors actually discouraged them from doing a more thorough cleanup job (Kodiak Daily Mirror, 6-5-89:2)

Once Exxon pulled out of oil-spill cleanup in September 1989, local governments had to search for other sources of reimbursement for expenses incurred as a result of the oil spill. They sought alternative means to fund fall and winter cleanup programs, such as through the State of Alaska's Department of Community and Regional Affairs grant program and Trans-Alaska Pipeline contingency funds.

Obtaining Uniform Treatment from Exxon: Another problem that local community officials had in dealing with Exxon was obtaining what they considered uniform and fair treatment. Exxon attempted to deal with communities on an individual basis, resulting in significant differences in how each impacted community was treated. For example, one Kodiak public official reported that initially the Kenai Peninsula Borough received a $2 million grant from Exxon, while the Kodiak Emergency Services Council received only a $500,000 reimbursement contract (Endter 1989; Kodiak Daily Mirror, 5-5-89:1). In Prince William Sound, Exxon hired all community residents who

were willing to work on the cleanup; but in the Kodiak region, Exxon chartered only with some vessel owners and limited the number of people hired for beach-cleanup crews.

When the mayors from nearly two dozen communities that suffered consequences from the Exxon Valdez oil spill learned of discrepancies in Exxon's treatment, they formed an organization that became known as the "Oiled Mayors." This organization attempted to negotiate with Exxon in a united manner and became an important forum for local community officials to discuss similar problems and frustrations (Kodiak Daily Mirror, 5-5-89:1). Kodiak City assumed administrative responsibilities for the Oiled Mayors, which met every 2 weeks. Kodiak City was in a better position to do this than other communities because of the administrative structure provided by the Emergency Services Council, the financial resources Kodiak City had as one of the nation's largest fishing ports, and the political influence that the region previously had been able to exert in State politics.

The Oiled Mayors engaged in a number of activities aimed at protecting the interests of communities affected by the Exxon Valdez oil spill. Most importantly, they fought what they perceived to be Exxon's "divide-and-conquer strategy" and negotiated with Exxon for a formal reimbursement plan that would provide equal treatment to impacted communities (Kodiak Daily Mirror, 5-26-89:1; 6-6-89:2; 6-19-89:3). This was not an easy task because up until their departure, Exxon representatives continued trying to negotiate informally and individually with each community (Endter 1989). In addition, the Oiled Mayors distributed information to impacted communities, lobbied for State and Federal legislation that would provide more local input for oil planning decisions

and greater protection against future disasters, and sought State assistance once Exxon pulled out in September 1989. In October 1989, Alaska's Oiled Mayors traveled to France, where they met with officials from the communities that had been impacted by the 55-million-gallon Amoco Cadiz oil spill nearly a decade before.

Within the Kodiak region, there were discrepancies between Exxon's dealings with Kodiak City and the Kodiak Island Borough and its dealings with the six outlying villages. For instance, while Exxon representatives dealt daily with Kodiak City and Kodiak Island Borough officials, they were slow to involve the villages in spill-response operations and did not contact the tribal councils in those communities (Kodiak Daily Mirror, 4-20-89:3). The wages offered to villagers for cleanup work were lower than those paid in other areas, and villagers had to fight for equal pay (Kodiak Daily Mirror, 5-12-89:7; 6-8-89:1).

Boat charters were a source of inequity and contention. As Exxon reluctantly expanded cleanup operations, they hired Kodiak vessels first and sent them to do cleanup near the villages, angering village boat owners (Kodiak Daily Mirror, 5-1-89:1; 5-12-89:7; 6-8-89:5). Chignik fishermen fought to obtain local charters but were offered substantially less than Kodiak boat owners were getting and had to seek legal assistance from the Bristol Bay Native Association to obtain equal contracts (Kodiak Daily Mirror, 5-5-89:4). At one point, Exxon attempted to reduce all vessel contracts by about 25 to 50 percent from those originally developed by Exxon and the Kodiak Emergency Services Council. Exxon claimed that it wanted to make contracts throughout the oil-impacted areas consistent and competitive and used the argument that it had a fiscal responsibility

to its stockholders to reduce cleanup costs. When Kodiak fishermen fought the reduction, Exxon tried to get Kodiak fishermen to back down on their demands by threatening to bring in cleanup people from outside the area (Kodiak Daily Mirror, 6-27-89:1; 6-29-89:1).

The Kodiak Island Borough and the Kodiak Area Native Association (KANA) tried to moderate the issues and unite regional communities in dealing with Exxon. For instance, the Kodiak Island Borough provided villages with legal counsel on the winter cleanup contracts Exxon was trying to negotiate (Kodiak Daily Mirror, 9-5-89:1) and submitted a joint proposal for State funding of winter cleanup covering all the communities. Exxon had dealt with each village individually, offering them $70,000 to conduct their own winter cleanup operations; but those communities would have had to accept the liability that went along with overseeing the operations. KANA and the Kodiak Island Borough worked together to keep Exxon from putting a wedge between the Native and non-Native population of the region when it proposed to distribute canned salmon to replace lost subsistence foods.

Preventing Exxon from Circumventing Environmental Regulations: According to one Kodiak official, Exxon not only violated environmental regulations by failing to be prepared to respond to an oil tanker accident, it also attempted to circumvent environmental regulations in its cleanup operations. Exxon officials admitted that environmental laws probably would need to be bypassed to burn or bury sludge recovered in cleanup operations (Kodiak Daily Mirror 5-2-89:1). The prime example in

the Kodiak region was Exxon's attempt to locate an incinerator near the community of Port Lions.

Exxon claimed that it needed a way to dispose of accumulated oil and trash and that disposal problems were hampering cleanup operations. The corporation attempted to get two offshore floating incinerators approved to burn spill waste; one was to be located in Viekoda Bay near the village of Port Lions. Advanced Environmental Technology from Louisiana had been a low bidder on the project and was going to operate the incinerator. Exxon, Alaska's Department of Environmental Conservation, and Advanced Environmental Technology claimed that the incinerator was state of the art and safe; but Kodiak area residents were not convinced.

Kodiak officials claimed that there was no waste disposal problem. Exxon had been shipping spill waste to Oregon, and these officials thought that Exxon wanted a local incinerator in order to save money. Kodiak Island residents opposed the incinerator, voicing concerns at public meetings and holding protests in front of the Exxon Command Center in Kodiak. Kodiak residents were particularly upset that they had not been consulted and that the incinerator had been moved from Kukak Bay under pressure from the U.S. National Park Service over wildlife concerns, only to be located 8 miles from the community of Port Lions and 3 miles from the origin of its watershed (Kodiak Daily Mirror, 8-15-89:1; 8-18-89:1; 8-29-89:1).

Approval of the incinerator was delayed, and Exxon and the Department of Environmental Conservation exchanged allegations about who was holding up the process. Kodiak public officials were angered at the way Exxon played to the media;

Exxon claimed that it was doing its best to clean up the oil spill and blamed the State for hampering its progress. According to these local officials, Exxon never held public hearings or consulted with the people who were going to be affected by the incinerator. One interviewee reported that Exxon representatives wanted to do things their own way and acted as if they did not need to follow any rules in trying to clean up their mess (Endter 1989).

Advanced Environmental Technology finally received a permit from the State to operate the incinerator, but the State had failed to allow the Kodiak Island Borough to hold public hearings and to prepare a consistency determination as required by its Coastal Management Plan. The Kodiak Island Borough eventually held hearings, local residents objected to the incinerator, and the borough passed a resolution calling for the Department of Environmental Conservation to void the incinerator permit, which it finally did (Kodiak Daily Mirror, 9-8-89:1; 9-11-89:1). One local public official said, "Exxon thinks it is above the law and above a silly, local permit process. It has been a nightmare dealing with them" (Endter 1989).

Economic Impacts: Some general points need to be made about the economic impacts of the Exxon Valdez oil spill on the Kodiak region before the specific effects on various sectors of the economy are discussed. First, the economic impacts were unequally distributed: some people experienced financial losses while others experienced a short-term boom. There were several reasons for these discrepancies. First, not all of the fisheries were closed, and some businesses that normally support the fishing industry were able to service the oil-spill-cleanup operations instead. Second, by the time cleanup

operations got under way in Kodiak, Exxon was already trying to minimize its costs and thus limited the number of vessels it chartered and people it hired to work on the cleanup. Third, some people were adequately compensated for their losses while others were not. The claims process lagged behind actual need. Several groups of people "fell through the cracks" and were not eligible for claims despite the fact that they had been impacted.

A second general point is that Exxon's required documentation of adverse economic impacts and claims procedures focused on short-term effects on individuals. Of primary concern to many Kodiak residents were general, long-term impacts that would be hard to document but that could have serious implications for the future of the Kodiak economy. One of these was the impact of the oil spill on the future reputation of wild Alaskan salmon, which already faced fierce competition from pen-reared salmon. Another was the lasting effect of the oil spill on bottomfishing, southwest Alaska's growth industry, should the oil sink because little was known about the effects of sinking oil on fishery resources (Kodiak Daily Mirror, 6-12-89:1). Such impacts threatened Kodiak City's ability to maintain its position in the international seafood trade and its long-term growth potential.

Fisheries: Kodiak's salmon and herring fishermen were the hardest hit by the oil spill. The entire Kodiak salmon management area was closed to fishing, except for two districts at the southern tip of the island that were opened to setnetters (Kodiak Daily Mirror, 3-23-90:10). The herring fishery opened on April 15, 1989, only to be

closed later that day in some sections due to the presence of oil (Kodiak Daily Mirror, 4-17-89:3). The herring fishery was closed on May 8, 1989, for the rest of the season.

As mentioned previously, salmon seiners constituted the bulk of Kodiak City's fishing fleet and nearly all of the fishermen in the outlying villages. Salmon was the largest contributor to Kodiak's processing sector in terms of both weight and market value. Numerous meetings were held throughout the spring to discuss potential salmon management scenarios for the 1989 season. The ADF&G and Exxon pushed to have a salmon season. For liability reasons, the State needed to demonstrate an "appreciable likelihood" that fishing gear and fish would become contaminated or that it would be impossible to operate an orderly fishery before it could shut the fishery down (Kodiak Daily Mirror, 6-14-89:3). Some interviewees felt Exxon wanted the salmon fishery to open in order to reduce losses and potential claims against the corporation. Alaska's Lt. Governor suggested Exxon had shifted to a "litigation posture" and was seeking "ways to avoid paying fishermen for losses as a result of the spill" (Kodiak Daily Mirror, 6-14-89:3).

Fishermen and processors were against opening the fishery, primarily out of equity considerations and because of concern about altering consumers' perceptions of Alaskan seafood and losing established markets. Claims procedures against Exxon reportedly would be simplified if there were no fishing season (Kodiak Daily Mirror, 6-12-89:1; 6-14-89:3). "Kodiak fishermen wanted to take their chances in court rather than risk losing credibility on the market" (Kodiak Daily Mirror, 6-14-89:3)

The salmon fishery was finally closed for several reasons. First, there were concerns about contamination. Fishermen feared contaminating their boats and gear and worried about the additional time that would have been required to deliver contaminated fish to separate tenders. The problem of what to do with contaminated fish was never solved. The main proposal was to grind it up and dump it 3 miles from shore, but this could have had negative impacts on the crab and halibut grounds. Second, quickly changing conditions in regards to the movement of spilled oil made it hard to determine which areas could be fished. Third, there were insurmountable difficulties entailed in trying to manage a very competitive fishery involving several different gear types in more limited areas when it had already taken decades to develop the current management regime and arrive at some equity between the gear types (Kodiak Daily Mirror, 5-23-89:1; 5-30-89:7; 6-5-89:1; 6-15-89:1).

Fishermen and processors who had diversified their operations in recent years were not affected as adversely. Those fishermen and processors who had diversified into other fish stocks benefitted from the fact that the cod, halibut, and groundfish fisheries were opened in the Kodiak area. Fishermen who had diversified by increasing the size and mobility of their vessels were able to leave Kodiak and either fish in areas that were unaffected or charter with Exxon to work on oil-spill cleanup in Prince William Sound.

Differences in the impacts on fishermen were exacerbated by the manner in which Exxon negotiated charters with boat owners. Initially, larger boats were chartered by Exxon. These generally were owned by fishermen who had more diversified operations and had less to lose from the closing of the salmon and herring fisheries. Salmon and

herring fishermen had to prepare to fish in case these fisheries were opened in order to be eligible for compensation and, thus, were unable to charter with Exxon until the decision was made to close those fisheries. It took longer for some groups of fishermen, such as salmon purse seiners and setnetters, to negotiate cleanup work with Exxon. These fishermen were thus left without a fishing season, without cleanup work, and without certainty about compensation from Exxon.

Kodiak Island residents had similar experiences with obtaining work on beach-cleanup crews. Even though Exxon and VECO had promised to hire local people first, people from outside the area ended up working on beach cleanup. Kodiak setnetters had to convince Exxon to establish the Kodiak setnetter beach-cleanup program, which concentrated on cleaning beaches between Kupreanof and Karluk (Kodiak Daily Mirror, 5-24-89:1; 9-29-89:17). In the villages, Exxon hired only a certain number of individuals--not all who were willing to work.

Compensation was difficult to obtain for several groups of people who were nonetheless adversely affected. One such group consisted of able-bodied crew for whom the claims documentation process was much harder if they had not been attached to a specific vessel in the past and had not signed on with a captain for the 1989 season. Some captains did not hire crew in 1989 because they were not sure of having a fishing season, or they hired family members to avoid having to share their compensation (Endter 1989; Kodiak Daily Mirror, 7-17-89:1). Another group of people who "fell through the cracks" consisted of boat owners and operators who did not own a Limited Entry permit but who generally were partners with a permit owner for the fishing season.

These people lacked adequate documentation of past participation in the fishery because fish harvests were recorded against the Limited Entry permit (Kodiak Daily Mirror, 8-8-89:2). Cannery workers, particularly those who worked at Eagle Fisheries, a bottomfish processor, were another group that had to fight for compensation. Exxon claimed that Eagle Fisheries' workers had not been affected by the oil spill since bottomfishing remained open, yet two of the four draggers under contract to that cannery stopped fishing to work on oil-spill cleanup (Kodiak Daily Mirror, 7-26-89:1; 7-28-89:1; 7-31-89:1). Crew, boat operators without permits, and cannery workers were less likely to be adequately compensated because they were generally more transient and because final settlement was, most likely, years away.

Fishermen generally were concerned about the long-term impacts of the oil spill on the fishing industry. When fishermen lose a season, they hope to make up for it the next year; but the oil spill threatened numerous future seasons. Kodiak fishermen were concerned about the biological effects of the oil spill on the resource base, yet they also were concerned about the reputation of Alaskan seafood and about maintaining market share in an increasingly competitive environment. The oil spill put the fishermen in a double bind. As some of them pointed, their attempts to prove that Alaskan seafood was unaffected in order to protect their markets could favorably enhance Exxon's legal position.

Tourism: The tourism and convention business, which the Kodiak Chamber of Commerce and the Kodiak Island Convention and Visitors Bureau had been building up for several years, was directly impacted by the oil spill just when strategic

advertising looked like it was about to pay off. Inquiries about Kodiak had increased 300 percent from the previous year. After the oil spill, many people who had made summer reservations with local lodges, guide services, and summer camps canceled (Kodiak Daily Mirror, 5-24-89:6).

For people still wanting to visit Kodiak, there were few hotel rooms, rental cars, charter planes, and vessels available because VECO had contracted to use most of them for the cleanup operations. Lodges and guides had difficulty transporting clients and obtaining fuel and supplies. Hotel rooms were so scarce that several local people set up temporary bed and breakfast operations in their homes to deal with the housing shortage (Kodiak Daily Mirror, 5-24-89:6; 8-11-89:1; Endter 1989).

Several of the villages had tried in recent years to attract more sport fishermen and hunters in order to help diversify their economies and lessen dependence on commercial fishing. For instance, KANA had been working with Karluk to develop tourism. Karluk had, in recent years, provided some of the best sport fishing in Alaska. Soon after the oil spill, cancellations from sport fishermen already had cost the community thousands of dollars (Kodiak Daily Mirror, 5-12-89:1), and Karluk's development efforts were set back.

Service and Support Industries: Most of Kodiak's private-sector economy is tied in one way or another to the fishing and tourist industries. Businesses that service or support fishing and tourism were indirectly affected by the oil spill in varying ways. In terms of sales, some businesses such as grocery and retail stores, hotels, or car rentals did a booming business in 1989 in connection with the oil-spill cleanup. Other

businesses that were more directly tied to fishing or tourism per se, like guides and net menders, were adversely affected.

Many businesses suffered from disruption of the labor market in Alaska coastal communities due to the high wages paid by Exxon and VECO for cleanup workers (Kodiak Daily Mirror, 4-20-89:12). Beach-cleanup-crew members could earn $17 per hour, so many people left their existing jobs. Fish processors, restaurants, fast-food establishments, gas stations, and other labor-intensive businesses had trouble finding and retaining enough help. Air taxis had trouble keeping pilots. The help that these businesses were able to get was generally less experienced and less efficient. Several restaurants in Kodiak reduced their hours of operation or closed altogether due to lack of employees.

State loans were made available to assist business, such as retail suppliers who were indirectly affected by the oil spill. Under State law, Exxon was not required to compensate people for indirect damage. To establish an oil-spill claim, a person had to show that he or she suffered a loss or damage due to the oil spill or a net loss of income. Fishermen, spotters, processors, crew, and suppliers were among the potential claimants (Kodiak Daily Mirror, 4-18-89:1).

The overall impact of the oil spill on the Kodiak economy was hard to discern due to the infusion of cash from oil-spill cleanup, which was referred to as the biggest boom since the Trans-Alaska Pipeline (Kodiak Daily Mirror 4-20-1989:12). Exxon and VECO purchased supplies and leased equipment from local businesses and sales tax revenues reportedly were up from the previous year. Local bank officials were generally

optimistic and pointed to signs of economic stability and growth, such as new housing, the fact that the fuel and garbage company bought new equipment, and construction of a small mall. They reported that some people had money and were paying off their loans. Bank deposits were up and the banks were continuing to make consumer loans.

The infusion of cash into the local economy had an inflationary effect. Prices rose and some commodities were in short supply or not available. Kodiak's housing market became even more tight and expensive than it had already been prior to the oil spill (Endter 1989).

Social, Cultural, and Psychological Impacts: The social, cultural, and psychological impacts of the Exxon Valdez oil spill are harder to document than institutional and economic impacts. Yet the disruption of daily lives and the emotional toll caused by the oil spill were the most pervasive themes running through the interviews with local residents and the newspaper accounts of events. Kodiak City, being one of the nation's largest fishing ports, was accustomed to population fluctuations and transience, to cycles of boom and bust in the fisheries, and to many of the problems associated with high-risk occupations, such as fishing. But the residents of Kodiak City, as well as the other communities in the region, had difficulty dealing with the oil spill due to the nature of the disaster itself, the way in which cleanup was handled, and the pressures and strains people already were under because of changes occurring in the fishing industry.

Conflict and Cooperation: One of the most serious problems faced by people in the Kodiak region as a result of the oil spill was community factionalism

caused by the way in which Exxon controlled the cleanup operations and dealt differently with various segments of the population. Spill-related circumstances in Kodiak justified a massive cleanup effort; but as the oil spill spread to Kodiak and other areas outside Prince William Sound, Exxon attempted to limit cleanup costs. Instead of putting every vessel on charter as they did in Prince William Sound, Exxon hired only a limited number of boats and people for cleanup in the Kodiak region.

As mentioned previously, Kodiak residents had started mobilizing on their own before the oil reached the shores of the archipelago. Kodiak fishermen had assembled a volunteer armada to fight the approaching oil slick as soon as it seemed likely that the area would be impacted (Kodiak Daily Mirror, 4-6-89:1; 4-11-89:1). Villagers started to clean beaches before they were hired by VECO. People wanted to clean up the oil as soon as possible to limit economic and environmental impacts. After Exxon took over the cleanup operations, volunteers' hands were tied. Instead of allowing or encouraging these types of community response efforts, Exxon inhibited them. Anger, which for some people could have been dissipated by working to ameliorate the situation, was intensified.

In response to the outpouring of volunteer efforts, Senator Frank Murkowski proposed that Exxon be required to buy back oiled debris collected on designated beaches. This would enable more cleanup by local people other than employees and contractors of Exxon and VECO and ensure that they were compensated (Kodiak Daily Mirror, 6-8-89:4). But Exxon continually declined to consider a bounty program that would have paid anyone willing to participate in the cleanup effort for work

accomplished. Exxon cited concerns about safety, liability, and waste material accumulation and stated that they thought an organized effort was best (Kodiak Daily Mirror, 6-20-89:1).

People were upset about the inequities in local hiring practices and about the hiring of people from outside the State. Some tensions were reported between local people and Norcon (the union arm of VECO) workers from Texas and Louisiana. Because residents did not feel they had equal opportunity for cleanup work, jealousies and resentments between Kodiak residents resulted. The system also appears to have increased and exacerbated existing economic differentiation within Kodiak communities. While cleanup work helped to ease the economic disaster that confronted Kodiak, many people thought it had been a bandaid and had left residents fighting among themselves. Ouzinkie's Native Corporation President said, "We've witnessed what Exxon has done to our communities. They've turned friend against friend, village against village" (Kodiak Daily Mirror, 8-29-89:1).

One reason obtaining cleanup work was so acrimonious was due to the increased competition within the fisheries in recent years. Those who lost the fishing season and did not obtain cleanup work were angered to see others make big money, buy new boats, and come back better able to compete in the fisheries in the future.

Another reason for the tension was that the cleanup work violated the local people's sense of fairness. Fishermen generally believe that the way to get ahead is by working hard, taking risks, and developing skills. But these were not the criteria used to get cleanup jobs. Many of the people hired for cleanup work were considered almost

unemployable in the fishing industry, and some unemployed people obtained cleanup jobs. Fishermen perceived cleanup work as typical of work in the oil industry--characterized by ease, big money, good food, and few personal expenses.

Despite the conflicts generated by Exxon's cleanup program, there were instances in which groups coalesced to have representation before Exxon and to fight for their interests. Salmon seiners formed the Kodiak Seiners Association, which proposed a program that would incorporate them into cleanup efforts. When Exxon agreed to charter 20 seiners out of a list of 85, this association figured out a way to avoid rift through democratically rotating the work allocated to the seine fleet. The Filipino-American Association, which had been a social group, became politicized and negotiated for compensation for fish-processing workers. The president of that association was elected to the Kodiak City Council in fall 1989. A crewman's association also coalesced and organized to press for compensation from Exxon. Some crew members had received a portion of their captains' compensation monies while others did not.

Subsistence: The oil spill disrupted traditional subsistence activities, particularly in Kodiak villages. The toxic effect of oil on subsistence foods was of particular concern to Alaskan Natives and village residents. People were not prohibited from obtaining subsistence foods, but skepticism about the safety of doing so significantly reduced subsistence activities. Some people said that they would never again eat food from oiled beaches. Villagers were very concerned about the loss of their subsistence and their destroyed livelihoods (Kodiak Daily Mirror, 4-17-89:1; 5-12-89:1; 6-27-89:4; 8-4-89:1).

Alaska Natives expressed several concerns over the loss of subsistence resources. Subsistence offered security in the villages where commercial fishing operations generally were small-scale and not diversified and where there were few jobs. Natives feared and resented returning to the dependency of the Bureau of Indian Affairs days. They also were concerned that the inability to engage in subsistence activities, even for a few seasons, would impair the transmission of subsistence skills to younger generations. As noted in Section IV.C, subsistence activities provide one of the most important contexts for traditional socialization practices in Native communities.

Some people felt that the overall significance of subsistence losses was minimized. Not only are subsistence foods particularly important to the livelihoods of Native people, subsistence activities also help strengthen cultural identity, self-esteem, family and community ties, and cooperation. These activities also provide spiritual sustenance and enjoyment for Native people. As one interviewee put it, "The process, not just the product, is important" (Endter 1989). Native people missed the joy of catching, cleaning, and smoking fish; they missed going upstream, taking their families, setting their nets, and helping each other to split and dry and preserve. Oil-spill work did not provide the same level of satisfaction, family and community unity, or cooperation and sharing as did subsistence activities. Instead, it fostered competition for high-paying jobs and exacerbated petty jealousies and rivalries among villagers (Kodiak Daily Mirror, 8-4-89:1).

Local residents perceived biases in Exxon's compensation procedures. Some interviewees pointed out that whereas commercial losses from the oil spill were

compensated, compensation for subsistence losses was difficult to claim and was not forthcoming. People had few written records of subsistence catches, which were necessary to make a claim. This same bias toward written documentation had guided the distribution of Limited Entry salmon permits in the 1970's. Additionally, the claims procedures did not account for the cultural value of the lost subsistence experiences.

Toward the end of the summer, Exxon and village leaders worked out an agreement to hold a special subsistence fishery to harvest salmon in Olga Bay and the upper end of Karluk Lagoon. Several boats harvested the fish. All Alaska Seafoods, Inc., fresh-froze 30 percent of the catch and Alaska Pacific Seafoods, Inc., canned the remaining 70 percent (Kodiak Daily Mirror, 9-1-89:1). Exxon requested that KANA distribute this subsistence fish, but KANA and village leaders consented to have the Kodiak Island Borough handle the distribution because not all subsistence users were Native and the borough represented all of the people on the island. KANA feared that if it accepted responsibility for distributing the fish, this subsistence compensation would become a Native/non-Native issue, and it wanted to avoid further community divisions in the Kodiak region. The borough worked out a plan to distribute salmon--first to the infirm and elderly--in all six villages (Talbe 1, Sec. II.A.) and Kodiak City (Kodiak Daily Mirror, 9-12-89:1).

Disruptions in Customary Habits and Patterns of Behavior: In a number of different ways, the oil spill disrupted people's normal rhythms and caused changes in the social processes that structured and patterned Kodiak life.

The oil spill disrupted the existing patterns of interaction among fishermen. As one interviewee put it, there was suddenly a "new game, new rules, and new players" (Endter 1989). Instead of the normal competitive fishing game, people had to compete in a new realm where they did not understand the rules. The common occupational status that many residents shared as fishermen, which cut across the divisions based on gear and size, was no longer a binding community force in the context of oil-spill cleanup.

The nature of the fishing enterprise and of captain-crew relationships was altered. The Internal Revenue Service alerted Kodiak fishermen that in leasing their boats to assist with oil-spill cleanup, they were engaging in a new business. If their contract stipulated that they had to provide the crew, they became an employer, which was different than paying crew members with a share of the catch. Fishermen were instructed that they must obtain an Employer Identification Number, withhold taxes, make Federal tax deposits, and, among other things, file different tax return forms (Kodiak Daily Mirror, 5-11-89:4). In addition, fishermen and crew members were used to getting paid at the end of the summer, after which they would pay their debts and use the rest of their money to get through the winter. Those who went to work for VECO received weekly paychecks, and some blew their money before the end of the summer.

Another disruption had to do with the fact that the corporate culture of Exxon clashed with the culture of Kodiak's fishing community. One Kodiak official said that Exxon's formal, inflexible, corporate hierarchy was not successful at dealing with a small rural community of independent business people. The two groups have very different

ways of doing business and different approaches to purchasing and spending. As another person explained, "If the oil industry wants something money is no object, because they know they will get it back later. Expediency is what is important. Fishermen are more calculated in spending and think over their purchases for a long time. Credit is carefully arranged through long associations and loyalties to canneries" (Endter 1989).

During the cleanup operations, Exxon tried to spread money around to various businesses in affected communities; but it apparently was not prepared to deal with all the paperwork. Exxon was used to dealing with a limited amount of vendors, placing large-scale orders, and having 90-day invoicing periods. The corporation's paperwork procedures included a myriad of requisitions, purchase orders, and invoices, which was cumbersome for making many small purchases and was not the way in which people do business in Kodiak. VECO had spent about $35 million in Kodiak within 2 months, but payment was very slow; a lot of local businesses had to take out loans to make their payments while they waited for payment from VECO (Kodiak Daily Mirror, 6-22-89:2). People wondered why Exxon and VECO, two large corporations, seemed unable to get their act together and pay their bills.

Spring and summer are normally busy and exciting times for members of fishing communities as they prepare for, anticipate, and engage in fishing activities. Being outdoors and getting exercise are particularly important for Alaskans who are less active through long, dark winters. Kodiak's normal, seasonal activities and rhythms were disrupted by the oil spill (Kodiak Daily Mirror, 8-3-89:1). Interviewees repeatedly stressed that life was not normal. Fishermen were unsettled and uncertain. Community

residents missed beachcombing and walking along the beach with children and pets, which they were unable to do because of the oil and concerns about health effects. One person wrote in the Kodiak paper, "Some things you cannot put in a claim for because money won't buy missed moments and the serenity of uninterrupted lives" (Kodiak Daily Mirror, 5-26-89:12).

Emotional Impacts and Stress-Related Disorders: Residents of Kodiak communities affected by the Exxon Valdez oil spill experienced an increase in stress-related behaviors and dysfunctions in the aftermath of the spill. There was an increase in mental-health, drug, alcohol, and domestic-violence service needs. The Kodiak Island Mental Health Center reported a 700-percent increase in crisis-intervention cases over the previous year (Kodiak Daily Mirror, 8-3-89:1). Counselors with the Kodiak Council on Alcoholism, Inc., saw many clients who were fearful and anxious about the nonexistent fishing season (Kodiak Council on Alcoholism 1989). The Kodiak Women's Resource and Crisis Center reported that many families were experiencing stress from the sudden change in income and lifestyle and from the disruption in seasonal activities. The Kodiak Police Department reported an increase in the number of domestic disturbance cases--from 150 by the end of July 1988 to 230 by the end of July 1989, with 141 of those 230 cases occurring after April 1, 1989 (Kodiak Daily Mirror, 8-3-89:16). There were six suicides of young men in Kodiak between ages 18 and 31 in April and May 1989. Although the media did not connect them directly to the oil spill, local officials admitted this was quite unusual.

People living in Kodiak's outlying and primarily Native villages were particularly hard hit by the oil spill, because they depend primarily on subsistence resources and commercial fishing for their livelihoods. The KANA Alcohol Outreach Program experienced a significant increase in requests for alcohol-prevention and -intervention services from all six villages after the oil spill. Several of those villages had made progress in dealing with alcoholism and experienced some setbacks after the oil spill (Kodiak Daily Mirror, 9-21-89:1). Local tribal governing bodies expressed concern about problems with youth due to the absence of parents who were working on the oil-spill cleanup and about increases in assaultive behavior related to intercommunity animosity between individuals who were working and others who were not working on cleanup activities (KANA Village Alcohol Outreach Program 1989).

The oil spill affected other aspects of people's personal behavior that were not documented in case-load statistics. For instance, individuals and families had difficulty planning for the future. Their perceptions of spill-related risks to their health and their livelihoods made decisions concerning whether to stay in the community or invest in homes, businesses, or property more difficult. Kodiak became, for many people, a less desirable place to live.

The emotional impact that the oil spill had on people was related to a number of factors. People felt uncertain about their economic future and about the long-term nature of the spill's impacts; fear and concern were high. Fishermen, in particular, feared losing their independence and becoming dependent; they generally preferred to work instead of drawing claims money. Kodiak residents also experienced feelings of

helplessness and futility as the magnitude of the spill became known and they realized that their own skills were of no use in controlling it. In the words of one fisherman, "We are a community used to dealing with the worst nature can throw at us. We perform the nation's most dangerous occupation in the world's worst weather. But we feel fearful and inadequate in the face of the advancing oil from the Exxon spill" (Kodiak Daily Mirror, 4-14-89:2).

Part of the emotional stress that people felt had to do with being confronted with environmental degradation and death. The Exxon Valdez oil spill had a tremendous impact on people who are used to living by the sea and who assign many intrinsic values to their environment. Interviewees often talked about experiencing the losses. People missed hearing the familiar sound of birds and seeing fish and sea mammals in the bay. They reported being shaken up after running across dead birds and animals. The weight of the death they were surrounded with was obvious. Many local residents, and the community as a whole, went through a grieving process that involved denial, anger, depression, and, finally, wanting to do something about the oil spill.

The oil spill evoked feelings of rage in some Kodiak residents. One interviewee said that Kodiak's environment was "like a beautiful painting that had been destroyed by black ink," and he likened his feelings to the outrage people express when a priceless work of art is destroyed (Endter 1989). During the 1989 annual Crab Festival, an estimated 1,200 to 1,500 people marched and staged a rally to protest Exxon's slow cleanup efforts. Many of the marchers wore black to symbolize their mourning and carried anti-Exxon placards. An effigy of the tanker Exxon Valdez was tarred and

feathered at the end of the march (Kodiak Daily Mirror, 5-30-89:4). Exxon closed its Kodiak command post for several days after one of its representatives received a threatening note (Kodiak Daily Mirror, 5-026-89:1). The anti-Exxon graffiti that appeared in numerous public places during the months after the spill was another indication of local anger.

Some residents expressed despair and fatigue as areas that had already been cleaned were hit again with "mousse" (emulsified oil) or had oil percolate up from below. "It's like taking ground again and again in a battle," remarked one resident (Kodiak Daily Mirror, 6-8-89:2). Others likened cleanup operations to a guerrilla war, where puffs of smoke come up and then disappear, only to reappear somewhere else. Indeed, the oil-spill headquarters operated like command posts. Said one National Park Service employee, "We keep hoping for some kind of closure, some sign that this is all the damage that we have and we can deal with it. But we can't. The oil disappears one day when the waves clean a beach only to wash up on another beach the next day" (Kodiak Daily Mirror, 6-23-89:4).

Another aspect of emotional stress had to do with the fact that Kodiak residents' experience with the oil spill violated community values. Residents of Kodiak, many of whom are small, independent fishermen and business people, place tremendous value on hard work and individualism. Fishermen believe that the way to work oneself up in the fishery is through hard work. The oil-spill-response efforts violated that value. People who had connections, or people who were not considered very employable within the

fishing industry, were the ones who often obtained spill-related work. After several fisheries were closed, idleness was a problem for many fishermen.

Inherent in the world view of fishermen is the belief that they have a certain amount of control over their own destiny and that fishermen all have a somewhat equal chance against the sea or nature. Government interference and foreign competition is often blamed for the existing inequalities. The Exxon Valdez oil spill resulted in fishermen experiencing a loss of control over their destiny. In general, the Kodiak communities wanted and fought for more local control over the decisions being made.

In mid-September, as Exxon was pulling out of Kodiak, the Kodiak Village Services Network sponsored a community mental health and social healing activity with the theme "Kodiak Renewal: Going Forward." The purpose of the community gathering was to provide information on how crises affect communities and to have people share their feelings and experiences in order to help residents recover from the emotional strains of dealing with the spill. The celebration followed "Black Friday," a day when people were "encouraged to wear black as a sign of mourning for the losses suffered from the oil spill" (Kodiak Daily Mirror, 9-14-89:4).

Stress in Dealing with Exxon: Exxon's handling of the oil-spill response itself caused significant impacts on Kodiak communities. Dealing with Exxon was a major source of emotional strain and stress.

Kodiak residents' initial frustration in dealing with Exxon stemmed from their perceptions that Exxon was responsible for the oil spill, did not have adequate cleanup technology or contingency plans in place, and was inexcusably slow in responding to the

spill and formulating a cleanup plan. As cleanup operations proceeded, Kodiak area residents criticized Exxon for slow payments, for not paying boats as agreed to under contract, for unkept promises to the villages, for lack of communication and information, and for frequent turnover of representatives in the area (Kodiak Daily Mirror, 5-10-89:8). People were particularly angry with what they believed was Exxon's mishandling of the cleanup; they were upset that as the oil on the beaches increased, Exxon's presence did not. They claimed that Exxon's original promises of cleaning up all of the oil and making everyone "whole" were not kept.

A second major problem in dealing with Exxon concerned the fairness and complications of the claims process. After the oil hit Kodiak, Exxon established a claims center in Kodiak City. In general, people were upset when Exxon representatives responded to their concerns with "file a claim," when what they really wanted was cleanup. Most community residents would have preferred to engage in their normal occupations. As some interviewees remarked, people did not like being on "the Exxon claims dole." Later, people felt that Exxon's claim that "we will make you whole" turned out to be "buzz words." The Kodiak Daily Mirror reported that one fisherman, who had spent a lifetime dealing with fish sharks, called them goldfish in comparison to Exxon (6-29-89:1; 3-23-90:10).

The claims paperwork alone presented problems. Claimants had to prove they had suffered a loss or damage, which usually involved providing records of previous involvement in the fisheries. People had to present their case to adjusters who lacked knowledge of the fishing industry. The partial release agreement form that the Exxon

claims office first used had wording in it such that individuals might unknowingly give up rights to future claims by signing it. Alaska Legal Services urged local residents to use a substitute "Acknowledgement of Receipt of Monies" form that did not admit liability or waiver of claims (Kodiak Daily Mirror, 4-24-89:1). A new claims form that was more acceptable to fishermen was later used by the Exxon office. The new form noted receipt of payment without having fishermen give up future claims and stated that the payment was considered a credit toward future claims (Kodiak Daily Mirror, 5-15-89:4).

The perceived arrogance with which Exxon management treated members of impacted communities was a third major aggravation. Local officials reported that Exxon dealt with people in Kodiak as if they knew nothing. This insulted Kodiak residents, who are generally well-educated and choose to live in Kodiak because they value the lifestyle. One public official commented that Exxon executives had the attitude that Alaskans were not knowledgeable and, consequently, they did not trust local information. For instance, Kodiak officials requested that Exxon use only double-engine helicopters to fly across Shelikof Strait. Local air charters use only double-engine planes to fly across that strait for safety reasons. Yet Exxon claimed that local people were just trying to increase Exxon's costs and that such precautions were unnecessary.

Public officials also reported that they tried to get Exxon to do certain things based on their knowledge of the area and the community. However, local recommendations and proposals were often rejected and decisions were made in Houston or Valdez. According to respondents, Exxon ended up making "stupid mistakes" and community residents had to sit and listen to Exxon's local representatives defend

those mistakes. When Exxon finally realized that their company's plans did not work, they went back to local officials to find out what was wrong. These local representatives felt like they were continually bailing Exxon out of errors that could have been avoided.

Kodiak public officials admitted that Exxon had a few good representatives who tried to understand the local situation and did their best to get things done for the community. Frustrations mounted when these Exxon representatives were rotated out of the area. Some Kodiak residents said they developed sympathy for these Exxon representatives after seeing that they were caught in a system over which they had little control. After dealing with Exxon for over 5 months, one Kodiak official commented about Exxon's huge and inflexible bureaucracy, "Decisions are made at the top; they do not even listen to their own people, and they do not let local representatives make independent decisions, always citing legal and policy reasons" (Endter 1989).

A fourth major stress in dealing with Exxon concerned the way in which oil-spill response became a media campaign. In the words of one Kodiak public official, "We wanted technical people and they [Exxon] sent us public relations people" (Endter 1989). Kodiak residents said they were upset with Exxon's attempts to minimize the extent of the impacts, deflect attention from the oil spill, and placate people with rhetoric. They resented Exxon's focus on the amount of money spent and on attempts to save otters, birds, and wildlife instead of on how much still needed to be done and on the impacts on communities. It was not that local residents felt wildlife did not deserve the attention that it got, but that people also deserved more attention. They did not believe there was enough attention to the impacts on areas outside Prince William Sound. Kodiak

residents were particularly upset when the oil spill started disappearing from national attention while they were still in the midst of battling it.

Dealing with Exxon and the oil spill wore people out. Kodiak residents desperately wanted life to get back to normal. Even though the cleanup was not complete in September, people were relieved when Exxon left. They were generally weary from dealing with Exxon and tired of Exxon's control over the situation and the purse strings. They were glad that Exxon was leaving because they perceived Exxon as being a divisive force, and they thought that Exxon's departure would give the community a chance to unite and would help eliminate some of the confusion and conflict.

In September 1989, Kodiak residents were in the process of summarizing their experiences so far with the oil spill. People acknowledged that Exxon took responsibility for the spill, made advance payments on claims to keep people going, and financed cleanup operations. Yet local people felt that they had to pressure Exxon and that its response was too little and too late. They resented that Exxon would not listen to local people; they thought that they could have saved Exxon time, money, and effort. Some Kodiak residents felt that local people could have done a more effective cleanup job with the nearly $2 billion that was spent. Local people--even some of those who profited from the cleanup--were upset at the waste and inefficiencies. People said that Exxon's story was that they had spent lots of money, picked up tons of debris, and done the job; and they wanted credit for that. People conceded that Exxon won the media battle. In

September 1989 the local perception was that no beach was clean, oil was still hitting Kodiak beaches, and Exxon had gone home.

VI.B. Results of the 1991 Research

In spring 1991, the Exxon Valdez oil spill in Prince William Sound and the cleanup efforts that took place in summer 1989 were still considered major disruptive events by Kodiak residents. However, by 1991, many residents saw the oil spill as a historical event rather than a continuing influence on the town's socioeconomic climate. When asked about the oil spill, people in Kodiak tended to refer mainly to their memory of the short-term effects of the spill; and some found it difficult to identify the long-term effects.

This report summarizes the views of KI's and institutional respondents interviewed in February and March 1991 about the effects of the Exxon Valdez oil spill on the Kodiak community. In keeping with the respondents' categorization of oil-spill impacts, the summary is divided into two sections--short-term effects and long-term effects. Each section includes discussion both of social and psychological effects and of the effect of oil-spill-related events on Kodiak institutions.

Short-Term Effects:

Social/Psychological Effects: Oil from the Exxon Valdez first reached Kodiak Island about a month after the March 26, 1989, oil spill. Before the oil reached Kodiak, the city's and borough's Emergency Services Team began to hold daily public meetings that included city and borough officials, State and Federal agency representatives, and Exxon representatives. The meetings were videotaped and played

back on the local television station, and the Kodiak Daily Mirror and two radio stations frequently covered cleanup progress. Kodiak's initial response to the oil spill thus took place in a very public forum. One institutional respondent, a social service provider, said that during summer 1989 everybody talked about nothing but the oil spill, but she never tired of talking about it.

In 1991, Kodiak residents remembered how angry and helpless they felt after the oil hit the shores of their island. Exxon was perceived as the enemy. Part of the problem was that Exxon representatives were seen not to care about the damages their company had caused to Kodiak shores and waters. Exxon seemed unresponsive to the opinions and feelings of community residents.

When asked whether they thought that Exxon provided trustworthy information to the public, Kodiak KI's usually interpreted the question in reference to Exxon communications during summer 1989, when most of the cleanup took place. Eleven KI's (34%) thought that Exxon gave trustworthy information, while 16 (50%) thought that the corporation did not. One KI said that Exxon gave information that company officials thought was correct at the moment, and another said that there just wasn't that much information available. One respondent said that media watchdogs prevented Exxon from hiding information.

Others were more critical of Exxon, saying that the company tried to give the impression that the damages were minimal and the cleanup was successful. A fisherman said that Exxon's communications were "written by PR people for consumption in the Lower 48," and another KI said that Exxon representatives provided only the information

they had to. One person said that it took too much time for Exxon's information to come out. Examples of "cover-ups" cited by KI's included the number of dead birds, the effects on sea life, and the proposed local burning of oily waste. A man said that he had been at the places Exxon was reporting about and had seen that what they said wasn't true.

Institutional informants also pointed to Exxon's manipulation. A social services director said that Exxon did an excellent job of implementing standard social-psychological strategies: "They let people vent their anger while they maintained total control." Confrontation with the huge Exxon corporation, or working for it on the cleanup, was difficult for Kodiak fishermen whose occupational self-image was one of freedom from bureaucratic controls. According to a local businessman, "Fishermen found out how little control they had over their own lives. They weren't as independent as they thought they were."

Some institutional respondents commented favorably on the benefits of the Kodiak Emergency Services Team's efforts to include the community in public meetings with Exxon and government agencies. They praised Kodiak local government officials' advocacy for the community, e.g., the mayors' negotiations with Exxon to get claims for cannery workers. A Native corporation manager said, "[The city mayor] did an excellent job of responding to the community's desires. . .. Solve problems first and worry about finger-pointing later." However, in retrospect, a member of the Emergency Services Team said, "I was disappointed in the way some people acted. Some were able to channel their emotions [and others weren't]. They had no control over Federal, Exxon,

or State officials, so they lashed out at city officials. . .. There were a lot of meetings to go through, tying up both the mayors." This public official thought the events of the summer were beneficial to relationships between local government and the USCG, while there was some "fallout" with the State Department of Environmental Conservation: "They were asked to do a job they had no expertise in."

Many people in Kodiak noticed that there had been unfortunate splits between fishermen as a result of the spill, especially between those who worked for Exxon and those who did not. Again, in response to questions about disputes in Kodiak that were caused by the oil spill, KI's referred mainly to disputes that occurred during summer 1989. Most 1991 KI's (75%) thought the oil spill had caused many disputes between fishermen. Only one person (3%) thought the spill caused no disputes, and 19 percent thought the spill caused very few disputes between fishermen. Many examples of disputes given by respondents were variants of "Who gets the money?" For fishermen, this meant jealousy of those who got charters and bad feelings between the haves and the have-nots. One KI said, "A very few made a lot of money, and the rest went hungry." Another said that Exxon and VECO didn't hire the people who really needed the work.

A bank officer said that the greatest financial benefit of the oil spill went to fishing vessel owners, especially those who received an extra income from Exxon employment. This resulted in the purchase of bigger boats, more gear, "all types of gyrations in that area." He said that there were people who could buy homes free and clear with their spill-generated income. On the other hand, he added, some fishermen

conscientiously did not enter into the competition for spill employment at all: "They sacrificed themselves income-wise."

Despite many references both to the large influx of Exxon money in Kodiak and to the economic losses incurred by the spill, most 1991 KI's (56%) did not report any change in their income as a result of the oil spill. Twenty-five percent reported a decrease, while 13 percent reported an increase. Those whose households included salmon fishermen said their incomes had dropped. One person pointed out that her teenage son, who usually fishes, couldn't work for VECO because he wasn't yet 18. Two men who worked in canneries in 1989 said they experienced a decrease in income. One of them said he should have put in a claim, but he had not.

Several KI's commented that prices in Kodiak went up as a result of the spill. They mentioned increases in the price of groceries, gas, and supplies. One KI, however, denied that there had been any change in prices in Kodiak. A comparison of average food prices in 1989, 1990, and 1991 shows that prices rose 6.4 percent between March 1989 and February 1990; and although food prices dropped slightly by March 1991, they were still 6.0 percent higher than pre-spill prices in Kodiak (see Sec. III.B. above).

Some KI's said that there were disputes about the amount of damage caused by the spill. A Native KI said that the older, established fishermen had had disastrous years before and were more philosophical about the oil spill: "The Johnny-come-latelies were the first ones in there to get their claims. They were screaming about the environment and all." The KI's reported that some fishermen got more upset than others about the

damages to the future fishing resources and about the time taken to accomplish the cleanup.

Respondents thought pre-existing conflicts between seiners and setnetters, or between salmon fishermen and trawlers or longliners, were exacerbated by the oil spill. Some disputes between those who couldn't fish and those who could were reported. It was thought to have been hard on the seiners, whose fishing was closed for the summer, while trawlers, longliners, and some salmon setnet fishermen were able to fish. One KI said, "[Some] people went to their fish sites and collected from Exxon. Others fished and had to work harder for it instead of sitting waiting for checks from Exxon."

Some KI's mentioned moral compromise as the cause of disputes. These respondents expressed disappointment in the amount of greed shown by Kodiak fishermen. A grocery store employee said she was disgusted by the luxurious quality of the groceries some fishermen bought when Exxon was paying the bills. She added, "A lot of it went to stock households." Another KI commented that the fishermen didn't want to work, they just wanted to collect big checks. Echoing a sentiment also expressed by several others, one person said that Exxon wasted money hiring boats to sit and do nothing.

Public officials, service providers, and businessmen mentioned family disruptions and divorces after the 1989 oil spill that wouldn't have occurred otherwise. One KI respondent blamed her divorce on the spill, saying that because her husband did not go salmon fishing, she had to sell their home and go on welfare. A minister said he did a lot of counseling after the oil spill because marriages were fragmented and people felt

helpless and hopeless. There also was concern about the residual effects of the oil spill on children.

Remembering the end of the summer cleanup efforts in 1989, some respondents thought Kodiak residents did well to get away from dealing with the oil spill. The director of mental health said, "After the cleanup crews left, people left town if they could, or forgot about it--that was healthy. There was some anxiety last spring before people knew how the herring and salmon were going to be." She had noticed that as soon as Kodiak people saw that fishing in 1990 was going to be normal, they were more relaxed. For her, this was an indicator of the characteristic resilience of the Kodiak community.

Effects on Institutions: Financial institutions were impacted by the oil spill largely because of the influx of cash in Kodiak. The same bank officer quoted above said that, in 1989, the volume of lending was over and above that for 1990. There were new loans for larger vessels. He pointed to a number of new warehouses in Kodiak that didn't exist before the spill; these were postspill investments with excess funds. In addition, "Some of my customers paid off their debts, which impacted my loan portfolio." The bank did not alter its lending structures at the time. However, because some Kodiak fishermen and some other businesses experienced a loss of revenue, "We were lax if we didn't get payments." The bank officer said, "The 1989 year weighs heavily in loans. But we throw that year away. We're not going to count it. In mid-1990 we got back to where we were pre-oil spill. We've only had one boat foreclosure in 5 years. We didn't foreclose on any because of the spill." The KI respondents commented that

people in Kodiak enjoyed the money generated by the oil spill. One pointed out that while a lot of people got new boats, now they had to make payments on them. There was pressure to generate money from the new investments.

During the oil-spill cleanup, businesses had a problem finding and keeping employees because VECO paid much higher wages to cleanup workers than the norm for labor in Kodiak. A State Job Service representative said, "Employers called with their openings and couldn't get anybody. They had to raise their wages from 5 or 6 bucks an hour to $8 an hour." A school district official said that the problem of employing custodians and aides in schools in Kodiak villages continued into the fall. This was especially true in Karluk and Akhiok. He felt that the impact of oil-spill money was particularly high in villages where there is low participation in commercial fishing.

There were several miscellaneous comments about the short-term impacts of the spill on institutions:

- The school district rented the use of its auditorium for oil-spill meetings and VECO employee meetings. While the use of the facilities generated revenue, some graffiti damage appeared in the area. A school district official thought it might have been done by disgruntled would-be VECO workers.

- Two managers of Native corporations contracting with timber companies working on Afognak reported that their organizations had assisted in the oil-spill-response effort by supplying log booms to protect key commercial or subsistence fishing areas. They were later reimbursed by Exxon. Neither of these respondents thought that

the oil spill or oil cleanup had significantly hindered the normal operations of the timber companies.

■ A KANA representative had concern about damage to archaeological sites in the Kodiak Island area that occurred because of cleanup activity: "The word is out to pot hunters." However, another KANA employee said that, in 1989, Exxon-sponsored archaeological reconnaissance work had helped to identify sites that would not otherwise have been found.

When KI's were asked whether Native institutions were useful in assisting community members, KANA was the institution that usually came to mind. Koniag, Inc., the regional for-profit Native corporation, has its main office in Anchorage and does not maintain an important presence in Kodiak. A Koniag officer contacted in Anchorage said that the corporation was not damaged in any way by events related to the oil spill, nor did Koniag experience any unusual pressures from shareholders, Exxon, or government agencies because of the spill.

Forty-four percent of KI's said that Native institutions had been helpful, while 31 percent thought that they were not helpful. Eight respondents (25%), all non-Native, said that they didn't know enough about Native institutions to give an opinion. The main way in which KI's thought Native institutions provided assistance to Natives in the oil spill was as advocates or spokesmen for Native people. Many KI's assumed that the help offered by KANA was primarily to Natives living in Kodiak area villages. The KI's commented: "They raised enough hell, complained enough to get some action for the villages." "They made sure their areas were skiffed and boomed." "KANA pretty much

got all their guys to work." "KANA helped villages deal with Exxon, got the money and canned fish, helped them deal with stress." Ironically, although two KI's mentioned the formal distribution of subsistence salmon as one of KANA's helpful activities, the project was actually coordinated by the borough and the Alaska Department of Community and Regional Affairs; KANA had declined a role in distributing the fish. One person said that Native institutions had helped to create a new awareness of the need for subsistence foods.

Some KI's thought that Native institutions had tried to help but were ineffective. There were complaints (from non-Natives) about Native spokespersons who claimed to represent the whole Native community but did not. According to one, "There were wild stories about inequalities, the whole lifestyle changing. It was something new to complain about." A Native woman said, "The Native institutions caused more problems--[they] tried to get more money, taking advantage of the situation. Some of the things KANA was getting money for were ridiculous. . .. [They had] good intentions but they didn't end up helping anybody." A non-Native man said he didn't think that KANA had been helpful, ". . . but I think they do damn little anyway."

What Native institutions should have done, according to one KI, was help Native people to realize more positive awareness and actions. A Native woman thought KANA could have offered more guidance to village providers, such as Community Health Aides and Village Public Safety Officers. Another KI said that Native institutions should have

provided cultural awareness. A non-Native man married to a Native suggested, "The best thing they could do would be an education about concern for the environment. That starts with school kids. It would have more credibility coming from KANA, from an elder program or something."

When asked about assistance to the Kodiak community from social agencies other than Native institutions, many KI's responded that they had heard that counseling, from the mental health clinic or the KCA, was available after the oil spill to help people with stresses caused by the oil spill. The Key Informants' comments indicated that they recognized a need for such counseling. A minister who did pastoral counseling said, "Some people were depressed and suicidal. Even nonfishermen felt somebody had broken in and entered their house. [There was a] terrible feeling of rape, violation." Only one person volunteered that she had received counseling for oil-spill-related problems. She thought it should have been free, but she had to pay for it. One man thought that support groups (or self-help groups) were more helpful than agencies because they were "outside of the purview of bureaucracy." One KI said, "KCA put an ad in the paper for counseling. I don't think anybody responded." However, other KI's thought that the mental health clinic and KCA must have been very busy dealing with oil-spill problems.

As was true of Native institutions, some KI's said that they didn't know anything about the services provided by other social agencies. One said, "None of them are useful, period. Not in the oil spill, either." Neither of the two Filipino KI's thought that

social services or Native institutions had been of assistance to the community after the oil spill. One of them said, "Nobody I know received any assistance."

Institutional informants at KANA, like the KI's, saw KANA's role during the aftermath of the oil spill as one of advocacy for Native people against Exxon. For KANA, the results of working in an adversarial position to Exxon were not all negative. A respondent at KANA reported: "There was some camaraderie and strengthening of KANA. It strengthened tribal governments in a common effort. [KANA was needed to] get resources to help them." However, he said, the oil-spill summer "killed off grant opportunities" for KANA and village governments, because of the all-encompassing necessity of dealing with the oil spill. KANA's former oil-spill coordinator commented that among the short-term pressures on employees of that institution, there was stress and burnout. KANA received extra funding from Exxon for work generated by the oil spill, but there was no mutual support among program managers, who all had to compete and lobby for oil-spill money within KANA. Long-time employees were upset at the people who had been hired with Exxon money.

Social service agencies, unlike KANA, were not called on to serve as spokesmen or advocates for the community. They did prepare for and, in most cases, experienced an increase in requests for services. The mental health clinic, KCA, and the Kodiak Women's Resource and Crisis Center received State funding, later reimbursed by Exxon, to cover extra work as a result of the spill.

In regard to the mental health clinic's activities in the months following the oil spill in Kodiak, a mental health professional said, "All we did was emergency. Ongoing

treatment got put on a burner. We've never been able to catch up with that. The big increase in case load hasn't slacked off." She said that among the mental health staff, there was a high level of real stress. During the oil spill, the clinic started having staff meetings twice a week. According to the director, the partial funding mental health received to deal with extra work in the aftermath of the oil spill came far too late to be used most effectively.

The director of KCA said, "The oil spill didn't create drinking problems. Initially, yes. Once the work got started, no. Then immediately following the cleanup, yes. Everybody partied for a while." Because of the late receipt of funds to deal with extra work generated by the oil spill, the new person hired by KCA contracted with an outside group to do community team-building. The session went well, the KCA director said, but the group didn't continue to meet after the initial encounter.

The Women's Resource Center did not have its anticipated rise in requests for services until January or February 1990. However, other social service agencies experienced an increase in case load during summer 1989. Generally, there was little to support Key Informants' ideas that counseling "about the oil spill" was available to directly help people with problems related to the spill. However, social service providers were able to identify a general increase in community disruptions occurring after the Exxon Valdez accident, and it was to these problems that they had been called upon to respond after the spill. Social service providers thought that assistance had been provided to the community, but that it was less direct than was suggested by Key Informants' perceptions.

Long-Term Effects:

Social/Psychological Effects: In spring 1991, institutional respondents were more likely than KI's to see continuing social and psychological effects of the oil spill in Kodiak. A KANA official said that following the first disruption of community life because of the inconsiderate way the cleanup was managed, there remained an inordinate amount of mental health problems, family disorders, and other social disruption in the Kodiak area. A city official said that while conflicts had receded among fishermen, he personally had felt stress and strain in the past year, including continued time away from his family. He said that enemies formed because of the oil spill had lasted long after the initial impact. A social-service-agency director commented, "Some people will be living off the oil-spill income for the next 10 years. They did real well. The most prominent people in the community made out real good."

One KI said that working with people and getting to know them was a positive effect of the spill. A social service provider said that the enhanced sense of community in Kodiak, one of the benefits of the oil spill, had faded. However, she said, "People who weren't well-known in the community had their strengths emerge." She pointed out as a positive sign that Mike Milligan, who had been an outspoken advocate for the community in public oil-spill meetings, was elected to the borough assembly in fall 1990.

Several institutional respondents mentioned that the oil spill made people less reticent to be vocal, since they now saw a new possibility of influencing public policies. One example was a controversy in February 1991 over the city council's choice of a new city manager. When the top candidate was discovered to have spent time in jail last

summer for his participation in marijuana sales, a Kodiak radio station held a call-in so the public could voice its criticism. The mayor found this an inappropriate use of the media as a public forum for local government decision-making.

The oil spill was thought to have accelerated environmental thinking in Kodiak, and to have brought on more environmental scrutiny in Alaska and elsewhere in the U.S. One KI said, "Maybe now people will put their foot down on offshore drilling."

Kodiak people mentioned that now the schools are incorporating environmental issues in the curriculum. A school district official said that even before the oil spill, the schools had been doing a lot with the environment, e.g., employing an annual Sea Week curriculum. Now, he said, several teachers are doing things with recycling.

The Kodiak Borough now had a recycling program and had hired a borough environmental engineer. Since the Exxon Valdez oil spill, the borough has dealt with two small oil spills in Kodiak--one in the boat harbor, attributed to a leaking tank from a nearby store, and one in Potato Patch lake, caused by the hospital. Some KI's and institutional interviewees hoped that fishermen had changed their habits and become more environmentally responsible. A KI noticed that there were more ads warning against throwing plastics in the ocean. A school district official, a former fisherman, was skeptical about fishermen's changed behavior, wondering whether fishermen continued to disregard the consequences of putting bilge oil or detergent ("Do you realize how much Joy is sold in Kodiak?") into the water.

Some Kodiak residents thought that by spring 1991, the new environmental awareness had subsided along with people's initial indignation and self-righteousness

about the oil spill. A social service provider said, "There's an absence of followup from the environmental groups that protested so loudly. Who's boycotting Exxon now? Environmental concern is less when they wave $1,000 bills in front of your face." A city official said, "It's hard now to find people to devote the time. People want somebody else to get out there doing it."

Possibly, some residents thought, Kodiak would now be better prepared for another disaster. "We would respond faster," said a Native corporation manager. A KI respondent said that with the "potential lesson to be learned" there are now better regulations and enhanced awareness of hazards.

In summer 1989, people in Kodiak recalled, there were more transient people in town than usual. Some thought that not all the new people left Kodiak after the cleanup. A school district official noted that Kodiak City had been growing and the villages losing population even before the oil spill. However, he said, the spill caused a loss of enrollment in village schools when some residents of those communities left in the fall for Anchorage or Kodiak. Also, during the year after the oil spill, he said, there were some school-age youngsters living in substandard conditions in the city-run campground at Gibson Cove.

According to a mental health provider, in February 1991 there were no continuing direct effects of the spill in Kodiak. "There's so much else going on in the fishing industry that it's hard to attribute to the oil spill. The past salmon year was not impacted by oil. People here are so busy getting on with things. The spill is 2 years ago. If it's not something you can do something about, they get on with other things." She

said that the frustrations felt right after the spill had turned to positive energy after the cleanup crews left.

Effects on Institutions: At the beginning of 1991, the Kodiak City and Borough governments still were involved in the oil spill in several ways. According to the city mayor, Exxon still hadn't paid $200,000 in raw fish tax it owed to the city. Impact Assessment, Inc., a consulting firm commissioned by the Oiled Mayors Task Force to study local effects of the spill, was subpoenaed to give up its data and the names of informants to Exxon's attorneys; the mayors opposed this action. Litigation against Exxon by commercial fishermen and Native groups was still pending.

There were continuing impacts on Native institutions. The former KANA oil-spill coordinator said that people in Kodiak villages were still highly concerned about contamination of subsistence resources: "They're eating the foods but wondering about mutations in the next generation of fish. They want to see maps of where the contamination is." The former coordinator agreed with another KANA official that people were still worried about carcinogens in the shellfish and finfish. At a recent teleconference with the State On-Scene Oil-Spill Coordinator, the former coordinator reported that four out of six village mayors participated and expressed concern about contamination of resources. This KANA employee was a member of the Oil Spill Health Task Force, which was now meeting less frequently than previously. She said people are tired of dealing with Exxon and with the spill in general: "Nothing was ever established as far as a contingency plan for the villages."

Other institutional respondents were more skeptical about fears of damage to the resources. A mental health provider said she didn't hear a lot of concern about contamination, or about something amiss in the environment, in the course of her work; but she said that she probably wasn't a good person to ask. A Native corporation land manager said, "The biological and economic effects are tremendously exaggerated at this stage." He said that he was not an admirer of village leaders (one in particular) who concentrated on how best to extract profit from the oil spill.

During the oil spill, KANA had difficulties in supervising village employees and working as an advocate for villagers. KANA-supervised persons who were village service providers (VPSO's, Community Health Aides, Community Health Representatives) quit their jobs to work on the spill or were unable to devote attention to their usual jobs because of new spill-cleanup responsibilities. Tribal councils and city government also were affected by members' spill employment. In spring 1991, a KANA employee said that there is still disruption in Native governments: "Tribes are dysfunctional a lot, but the oil spill contributed more problems." Since the oil spill, there has been a turnover of all the VPSO's except one. She said that the villages are still thinking in terms of Exxon wages. "Now they call KANA looking for money, even though the budget's a little tighter now and KANA can't send people to extra. . .training."

Exxon had a plan to help rebuild tribal governments. KANA requested money from Exxon for this purpose, but Exxon worked on it as well. A person at KANA said, "Basically they're buying off the villages. There were clauses on the forms that prevented it from happening." The same respondent at KANA felt that Exxon was very self-serving

and deliberately tried to make for disunity and discord. Exxon wanted to pit KANA against the villages. "They're highly talented, they have the resources of an entire European country. People were disappointed in KANA. We got money from Exxon, but we were guaranteed that it made us look like jerks." Another Kodiak social service provider shared this view of Exxon: "Exxon had been prepared for this kind of disaster for a long time. [Their philosophy was,] if you've got an enemy, put him on your payroll."

In March 1991, there were continuing pressures on the former KANA oil-spill coordinator. She is not now paid to deal with the oil spill, and she doesn't have time for it. Her regular duties are to oversee the VPSO's and work on tribal operations. Still, other agencies continue to call her about oil-spill issues instead of dealing directly with the villages.

A respondent at the Women's Resource Center said that the Kodiak Village Services Network (KVSN)--village-based teams of service providers including Community Health Aides, Community Health Representatives, and Village Public Safety Officers who work together to respond to emergencies--crystalized during the oil spill. This year, Larsen Bay did not request KANA's services; this provider saw this as a positive sign that the spill encouraged village self-determination.

At the Women's Resource Center, requests for services increased in January and February 1990. By spring 1991, they had slowed down. According to an employee of the center, half the crisis calls have been from men, starting with the oil spill. While female callers typically say, "I don't want to put up with this anymore," male callers were more

likely to say things like, "I'm the skipper. I'm responsible for these people." During the spill, the crisis line also would get calls from people who were depressed about the environmental damage.

In spring 1991, the mental health center continued to have a heavier case load than before the spill. The director thought it could be that during the spill people made more use of the center. It is also possible, she said, that the community is generally faster-paced and that this is reflected in an increased demand for mental health services. However, mental health case-load figures showed that there was a marked increase in use of services after the oil spill (see Sec. III.C, Health).

The director of KCA said, "We have more DWI [driving while intoxicated] clients now, but I don't know if it's because of increased enforcement or increased drinking. When people don't have money they go to the bars and we see them more." The KCA administered oil-spill-impact surveys to incoming clients between December 1989 and November 1990. Of 102 outpatient clients, the director estimated, 60 percent said they were directly impacted by the oil spill, 15 percent said they had experienced an indirect impact, and 5 percent said they were not impacted at all. These figures do not reflect whether outpatient clients had ever sought help from KCA prior to the oil spill. "It's hard to know how valid it is. Yes, the individual didn't work. He may not have gotten a job anyway. Definitely there's an increase in court-referred clients. It's gone from 60 [%] to 70 [%]. There are more villagers in." This institutional respondent thought the oil spill wiped out an established system of sobriety in Akhiok and that village response teams fell apart after the spill.

When asked about assistance provided by Native institutions to deal with the effects of the oil spill, KI respondents thought in terms of short-term assistance rather than assistance with the continuing effects of the oil spill. They seemed to think that there would not at present be anything more that Native institutions or other social agencies could do for the community. Institutional respondents were better able to identify continuing impacts of the oil spill, but they also pointed to more general socioeconomic changes in the community that might have caused changes in pressure on local agencies.

Filipinos in Kodiak have an organization dedicated to working in their interest. The Filipino American Association was started in 1983 but has existed under different names since 1972. The purpose of this group is to give assistance to its members and organize social activities for the Filipino community. The organization became politically active after the Exxon Valdez oil spill, representing the interests of the many Filipinos that work for the processors. The head of that organization was elected to the Kodiak City Council in October 1989.

References Cited

Afonsky, Bishop Gregory
1977 A History of the Orthodox Church in Alaska (1794-1917). Kodiak, AK: Saint Herman's Theological Seminary.

Alaska Business Monthly
1989 ANWR: Prince William Oil Spill Inflames the Debate. 5(8):18-28.

1990 Consequential Kodiak. 6(3):56-63.

Alaska Commercial Fisherman
1991 NMFS Pulls Another Salmon Sting. 3(10):16.

Alaska Consultants
1979 Northern and Western Gulf of Alaska, Local Socio-economic Baseline. Technical Report No. 12. USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

Alaska Department of Community and Regional Affairs
1988a Regional Government Study. January 1988.

1988b Impacts of Declining Revenues on Alaska's Smaller Communities. March 1988.

1988c Regional Government in Alaska. August 1988.

1989 An Update. Impacts of Declining Revenues on Alaska's Smaller Communities. March 1989.

Alaska Department of Fish and Game
1990 Alaska Supreme Court Says Subsistence Law Violates Constitution. Public communication bulletin, January 19, 1990.

Alaska Department of Labor
1989 Employment, Unemployment, Wage and Population Statistics: Kodiak. Pamphlet.

Barsch, R.L.
1985 Karluk River Study. Commissioned by the Kodiak Area Native Association.

Befu, H.
1970 An Ethnographic Sketch of Old Harbor, Kodiak: An Eskimo Village. Arctic Anthropology 6(2):29-42.

Black, L.
1977 The Konyag (The Inhabitants of the Island of Kodiak) by Ioasaf [Bolotov] (1794-1799) and by Gideon (1804-1807). Arctic Anthropology 14(2):79-108.

Chance, N.A.
1984 Alaska Eskimo Modernization. In Handbook of North American Indians, Vol. 5. D. Damas, ed. Washington, D.C.: Smithsonian Institution Press, pp. 646-661.

Clark, D.
1966 Perspectives in the Prehistory of Kodiak Island, Alaska. American Antiquity 33(1):358-371.

1984a Prehistory of the Pacific Eskimo Region. In Handbook of North American Indians, Vol. 5. D. Damas, ed. Washington, D.C.: Smithsonian Institution Press, pp. 136-148.

1984b Pacific Eskimo: Historical Ethnography. In Handbook of North American Indians, Vol. 5. D. Damas, ed. Washington, D.C.: Smithsonian Institution Press, pp. 185-197.

Craig, P.
1988 Memorandum from the Alaska Department of Fish and Game re: Groundfish Industry in Alaska.

Cultural Dynamics, Ltd.
1986 A Description of the Social and Economic Systems of the Kodiak/Shumagin Region. Technical Report No. 122. USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

Davis, N.Y.
1970 The Role of the Russian Orthodox Church in Five Pacific Eskimo Villages as Revealed by the Earthquake. In The Great Alaska Earthquake, Human Ecology Volume. Washington, D.C.: National Research Council, pp. 125-145.

1979 Kodiak Native Sociocultural Impacts. Western Gulf of Alaska Petroleum Development Scenarios. Technical Report No. 41. Prepared for USDOI, BLM, Alaska OCS Office.

Davis, N.Y. (continued)
1986 A Sociocultural Description of Small Communities in the Kodiak-Shumagin Region. Technical Report No. 121. USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

Davydov, G.I.
1977 Two Voyages to Russian America, 1802-1807. Richard A. Pierce, ed.; Colin Bearne, trans. Materials for the Study of Alaska History, No. 10. Kingston, Ontario: The Limestone Press.

Dixon, M., W. Myers, P. Book, and P. Nice
1983 The Changing Alaskan Experience: Health Care Services and Cultural Identity. Western Journal of Medicine 139(6):917-922.

Endter, J.
1989 Unpublished field notes, AOSIS research.

Fienup-Riordan, A.
1983 The Nelson Island Eskimo. Anchorage: Alaska Pacific University Press.

Fortuine, R.
1975 Health Care and the Alaska Native: Some Historical Perspectives. Polar Notes. Occasional Publication of the Stefansson Collection. Dartmouth College Library, Hanover, New Hampshire, pp. 1-42.

Griffin, J.F.
1989a Fathoming the Bottomfish Bonanza. Alaska Business Monthly. 5(3):26-35.

1989b On Guard. Alaska Business Monthly. 5(8):37-45.

Hill, P.J.
1986 Infrastructure Investment in the Kodiak City Area. In Cultural Dynamics, Ltd. A Description of the Social and Economic Systems of the Kodiak/Shumagin Region. Technical Report No. 122. USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program, pp. 353-395.

Holmberg, H.J.
1985 Holmberg's Ethnographic Sketches. Marvin W. Falk (ed.); Frita Jaensch, trans. The Rasmuson Library Historical Translation Series, Vol. I. Fairbanks: University of Alaska Press.

Hofmeister, J.
1990 Unpublished field notes, AOSIS research.

Hrdlicka, A.
1944 The Anthropology of Kodiak Island. Philadelphia: Wistar Institute of Anatomy and Biology.

Huggins, E.
1981 Kodiak and Afognak Life, 1868-1870. Kingston, Ontario: The Limestone Press.

Jordan, R.
1984 Archaeology at Karluk, Kodiak Island, Alaska. Research application to the National Endowment for the Humanities.

Kodiak Area Native Association (KANA)
1985 Overall Economic Development Planning Report.

1986 KANA 1986 Annual Report and 1987 Directory of Services.

1987a KANA Cultural Center and Museum. KANA Kasitaq: Newsletter of the Kodiak Area Native Association. April 1987.

1987b KANA Directory of Services and 1987 Annual Report.

1988 KANA Directory of Services and 1988 Annual Report.

Kodiak Area Native Association and the Alaska Department of Fish and Game, Subsistence Division
1983 Kodiak Island Area Local Fish and Game Resource Guide. Kodiak Chamber of Commerce. December 1983.

1989 City of Kodiak and Kodiak Island Borough Community Profile. Prepared for the Southwest Alaska Municipal Conference by the Kodiak Chamber of Commerce with assistance from the Kodiak Island Borough and the City of Kodiak, January 1989.

Kodiak Chamber of Commerce
1989 Annual Report, 1988-1989.

1989 City of Kodiak and Kodiak Island Borough Community Profile. Prepared for the Southwest Alaska Municipal Conference by the Kodiak Chamber of Commerce with assistance from the Kodiak Island Borough and the City of Kodiak, January 1989.

Kodiak Consolidation Committee
1989 Consolidation Report. With Assistance from the Kodiak Island Borough Clerk's Office and the Alaska Department of Community and Regional Affairs. May 15, 1989.

Kodiak Daily Mirror
1989 Leave Something for the Alaska Family Operations. March 7, p. 3.

1989 Exxon Offers Kodiak No Assistance for Now. April 5, p. 1.

1989 Fishermen Organizing to Help Protect Critical Areas. April 6, p. 1.

1989 Scientists Survey Beaches. April 7, p. 1.

1989 Oil Retreating; Fishermen Switching to the Offense. April 11, p. 1.

1989 Editorial. April 14, p. 2.

1989 Slick Threatens $3.2 Million Herring Fishery. April 17, p. 3.

1989 Villagers Want Independent Analysis. April 17, p. 1.

1989 Exxon Ready to Start Writing Checks. April 18, p. 1.

1989 Old Harbor Tribal Council President Advises Exxon to Include Six Villages. April 20, p. 3.

1989 Canneries Short Help. April 20, p. 12.

1989 Don't Sign Exxon Partial Release Form. April 24, p. 1.

1989 Chignik Frantic as Oil Gets Closer. May 1, p. 1.

1989 More Bird Deaths, 7 Vessels Look for Sea Otters. May 1, p. 2.

1989 Exxon Plan May Not Support Help for "Lightly Oiled" Places Like Chignik. May 21, p. 1.

1989 "Oiled" Mayors Meet with the Vice President. May 5, p. 1.

1989 12 Chignik Boats Sign with VECO. May 5, p. 4.

1989 Anything But Normal Salmon Fishery in PWS. May 8, p. 4.

Kodiak Daily Mirror (continued)
1989 "We Don't Believe Words Anymore..." Village Rep Blasts Exxon, VECO. May 10, p. 8.

1989 Mousse Spatters Nyak Bay Beaches. May 11, p. 1.

1989 IRS Advice on Boats Used for Oil. May 11, p. 4.

1989 At Karluk: That's Our Biggest Fear - If We Lose This Fish. May 12, p. 1.

1989 Fishermen Are Mad Exxon Waited Until the Oil Hit. May 12, p. 7.

1989 New Claims Form More Acceptable to Fishermen. May 15, p. 4.

1989 Closed Session to Consider Co-op Fishery. May 23, p. 1.

1989 Setnetters Plead to Do Inshore Cleanup: "We Have the Skiffs, Engines, Radios, Cabins and Experience." May 24, p. 1.

1989 Business Briefs. May 24, p. 6.

1989 Letter to the Editor. May 25, p. 2.

1989 Dead Bird Count Now 8,465. May 25, p. 7.

1989 Workers Badmouth Exxon as They Clean Up the Beach. May 25, p. 8.

1989 Kodiak in a Double Bind. May 25, p. 6.

1989 After Threat, Exxon Clears Out. May 26, p. 1.

1989 Oiled Mayors Ask for Formal Plan of Reimbursement. May 26, p. 1.

1989 Now We Learn Oil Spill Jargon. May 26, p. 12.

1989 Hundreds Protest Slow Cleanup Here. May 30, p. 4.

1989 Will There Be Enough Tenders for Oiled Fish? May 30, p. 7.

1989 Cleanup Shoddy. June 5, p. 2.

1989 Salmon Postponed to June 16: F&G Concurs with Group. June 5, p. 1.

1989 Exxon Declines Mayors' Request. June 6, p. 2.

Kodiak Daily Mirror (continued)

1989 Villagers Angry Over Short Pay from Veco. June 8, p. 1.

1989 Island in the Line of Fire; on Shuyak the Enemy Keeps Coming. June 8, p. 2.

1989 C.G. and Governor Endorse Plan for Exxon to Buy Back Oily Debris. June 8, p. 4.

1989 Oil Impacts Old Harbor. June 8, p. 5.

1989 Oil May Sink or Return Like a Yo-Yo. June 12, p. 1.

1989 F and G, Fishermen at Odds. June 12, p. 1.

1989 McAlpine Recommends Salmon Shut Down; Fishermen, Processors Support No Opening. June 14, p. 3.

1989 Oiled Mayors Meeting with Exxon Fails Again. June 14, p. 4.

1989 Salmon: Off Again. June 15, p. 1

1989 Oiled Mayors To Maintain Resolve. June 19, p. 3.

1989 Exxon Says No to Bounty Bags. June 20, p. 1.

1989 Filipino-Americans Meet Thursday. June 21, p. 1.

1989 VECO Has Spent $3 M Here in Two Months But Slow Payment Has Hurt Some Vendors. June 22, p. 2.

1989 It's 3 Months and the Spill Gets Bigger Daily. June 23, p. 4.

1989 Effects on Bears Are Being Studied. June 23, p. 5.

1989 Exxon to Change Vessel Contracts. June 27, p. 1.

1989 Ouzinkie Villagers Report Headaches from Oil Spill. June 27, p. 4.

1989 Exxon on Contracts: "Take It or Leave It." June 29, p. 1

1989 Crews Organize for Claims. July 17, p. 1.

1989 Processors Want Face-to-Face Talk. July 26, p. 1.

Kodiak Daily Mirror (continued)
1989 Letters to the Editor. July 27, p. 2.

1989 Claims Meeting Saturday. July 28, p. 1.

1989 Checks for Eagle, Second Payment of $2,000 for Others. July 31, p. 1.

1989 Situation Is Insult to Fishermen. August 2, p. 3.

1989 The Spill's Hidden Cost: 700% Increase in Cases at Mental Health. August 3, p. 1.

1989 More Stress, More Calls for Police Assistance. August 3, p. 16.

1989 Something is Missing: The Joy of Catching, Smoking Fish. August 4, p. 1.

1989 Letters to the Editor by Forrest Gould, "Some Gaps in the Claims Process." August 8, p. 2.

1989 Karluk Lodge: Spared by Oil But Hampered by Aftermath. August 11, p. 1.

1989 Port Lions Fired Up Over Incinerator. August 15, p. 1.

1989 Test Burn at Viekoda Today; ADEC Tries to Find Alternative Site. August 18, p. 1.

1989 Exxon Announces Winter Cleanup Program; Commissioner Kelso Calls it a "Blizzard of Numbers". August 21, p. 8.

1989 DEC Calls for Oil Cleanup to Continue throughout Winter. August 25, p. 8.

1989 Villagers Don't Buy It; Move the Incinerator Away from the People. August 29, p. 1.

1989 49,000 Reds and Silvers Will Go for Subsistence Use. September 1, p. 1.

1989 Villages Hedge over Exxon's Winter Plan. September 5, p. 1.

1989 For All Practical Purposes, Exxon Has Demobilized. September 7, p. 1.

1989 Borough Says Viekoda Site Not Consistent. September 8, p. 1.

1989 Unused Incinerator to Leave Kodiak. September 11, p. 1.

Kodiak Daily Mirror (continued)

1989 KANA Says No to Fish Distribution Program. September 12, p. 1.

1989 Community Healing Celebration at Ram Site Saturday. September 14, p. 4.

1989 Exxon Insists Shores Stable as They End Summer Cleanup. September 15, p. 7.

1989 Public Invited to Wings Open House. September 19, p. 10.

1989 Akhiok Still Strong on Resolve. September 21, p. 1.

1989 Letter to Editor: Wants to Give Credit for Cleanup. September 29, p. 17.

1989 Navy Memories Influence Voters. October 2, p. 1.

1989 Thoughts on Home Port Vote. October 2, p. 2.

1989 Native Center Will Tap the Skills of the Past. October 4, p. 3.

1989 Mental Illness Alliance Growing. October 4, p. 6.

1989 City Orders Campground Closed for Four Months. November 10, p. 1.

1989 Limited Entry Still Opposed. November 24, p. 1

1989 A Night on the Town: The Police Point of View. November 29, p. 1

1989 Borough Contracts Study of King Crab Habitat. November 29, p. 9

1989 High Price for Taking Care of Street Drunks. December 1, p. 1

1989 Life Can be a Dizzy Blur: The Men on the Street. December 6, p. 1.

1989 Many View Detox Center as a First Step in the Right Direction. December 8, p. 1.

1989 Assemblymen Call for Vote on Consolidation. December 13, p. 1.

1989 Mayors Propose Ways to Help Pay for Detox Center. December 27, p. 1

1990 Davidson Receives Borough Wish List. January 3, pp. 3, 11.

1990 Conventions Bring in Dollars. January 5, p. 5.

Kodiak Daily Mirror (continued)
1990 Many Lessons Learned from Spill. March 23, p. 10.

1991 150,000 Acres for Sale on Afognak Have Forester, Conservationists Working Together to Find Funding. May 31, p. 1.

1991 Is Logging Hurting Hatchery Streams? June 4, p. 1.

1991 Near Island Projects on Track. June 4, p. 1.

1991 KCA Waiting for Zoning Approval Before Opening New Detox Center. June 4, p. 3.

Kodiak Island Borough
1988a Kodiak Island Borough Annual Report. April 8, 1988.

1988b Kodiak Island Borough Coastal Management Program. Concept Approved Draft Reprint; revised incorporating Addendum No. 1. Community Development Department.

1989 City of Old Harbor: Comprehensive Plan and Capital Improvements Program. First Draft. Community Development Department.

1990a Kodiak Island Borough, 1989 Comprehensive Annual Financial Report, February 1990.

1990b Kodiak Island Borough Annual Report. April 13, 1990.

1991 Kodiak Island Borough Annual Report. January 11, 1991.

Kodiak Island Borough School District
1989 Kodiak Island Borough School District, Revenue Report, February 1989.

1990 Kodiak Island Borough School District, Fact Sheet, January 15, 1990.

Langdon, S.J.
1986 Commercial Fishing. In Cultural Dynamics, Ltd. A Description of the Social and Economic Systems of the Kodiak/Shumagin Region. Technical Report No. 122. USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program, pp. 5-149.

Langdon, S.J. and M.L. Miller.
1983 Social and Cultural Characteristics of the North Pacific Halibut Fishery. Draft report submitted to the North Pacific Fishery Management Council.

Lisianski, U.
1814 A Voyage Round the World, 1803-1806. London: John Booth and Longman.

Mason, R.
1988 Russian Orthodox Church Readers in Kodiak Area Villages. Paper presented at the 1988 Kodiak Cultural Heritage Conference.

1991 Unpublished field notes, AOSIS research.

McGinley, B.A.
1989 Joint Ventures in Fisheries. Pacific Fishing. 10(2):34-40.

McNabb, S.
1987 The NANA Region. Alaska OCS Social Indicators System: Secondary Data and Key Informant Summary for Schedule A Communities. Submitted to USDOI, MMS, Alaska OCS Region.

Merck, C.H.
1980 Siberia and Northwestern America 1788-1792. The Journal of Carl Heinrich Merck. Richard A. Pierce, ed. Fritz Jaensch, trans. Kingston, Ontario: The Limestone Press.

Mulcahy, J.
1988a Knowing Women: Narratives of Healing and Traditional Life from Kodiak Island, Alaska. Ph.D. Dissertation. Department of Folklore and Folklife, University of Pennsylvania.

1988b Unpublished field notes, AOSIS research.

Near Island Task Force
1987 Near Island Comprehensive Development Plan.

Oleksa, M.
1982 Three Saints Bay and the Evolution of the Aleut Identity. Anchorage: Alaska Pacific University HCRS Village Histories Project.

1987 Alaskan Missionary Spirituality. New York: Paulist Press.

Oswalt, W.H.
1967 The Alaskan Eskimos. New York: Chandler.

Payne, J.
1980 Kodiak Non-Native Sociocultural Impact Study. Technical Report No. 39. Prepared for USDOI, Bureau of Land Management, Alaska OCS Office, Anchorage.

1986 Sociocultural Systems of Kodiak City. In Cultural Dynamics, Ltd. A Description of the Social and Economic Systems of the Kodiak/Shumagin Region. Technical Report No. 122. USDOI, MMS, Alaska OCS Region, Social and Economic Studies Program.

Pleschner, D.B.
1989 Kodiak Flatfish: Evolution of a Fishery. Pacific Fishing. 10(2):40-45.

Roppel, P.
1986 Salmon from Kodiak: A History of the Salmon Fishery of Kodiak, Alaska. Alaska Historical Commission Studies in History No. 216.

Smith, B.
1980 Orthodoxy and Native Americans: The Alaska Mission. Syosset, NY: Orthodox Church in America, Department of History and Archives, Historical Society Occasional Paper No. 1.

Southwest Alaska Municipal Conference
1989 Developing Southwest Alaska's Fisheries Economy: A Guide to Community and Regional Growth. Report prepared by Graystar Pacific Seafood, Ltd., and Coopers and Lybrand.

State of Alaska
n.d. Old Harbor Airport Environmental Assessment. Department of Transportation and Public Facilities. Draft copy.

Taylor, K.I.
1966 A Demographic Study of Karluk, Kodiak Island, Alaska, 1962-1964. Arctic Anthropology 3(2):211-240.

U.S. Census
1990 Census of Population and Housing, Alaska. Preliminary report. U.S. Department of Commerce. Washington, D.C.: Government Printing Office.

1980 Census of Population and Housing, Alaska. U.S. Department of Commerce. Washington, D.C.: Government Printing Office.

U.S. Fish and Wildlife Service
1987 Kodiak National Wildlife Refuge Comprehensive Conservation Plan, Environmental Impact Statement, and Wilderness Review. Final Report.

n.d. Alaska Wildlife Refuge Exchanges: The Native Perspective. Brochure.

Will, A.
1981 A History of the City of Kodiak. Submitted to the Alaska Historical Commission.