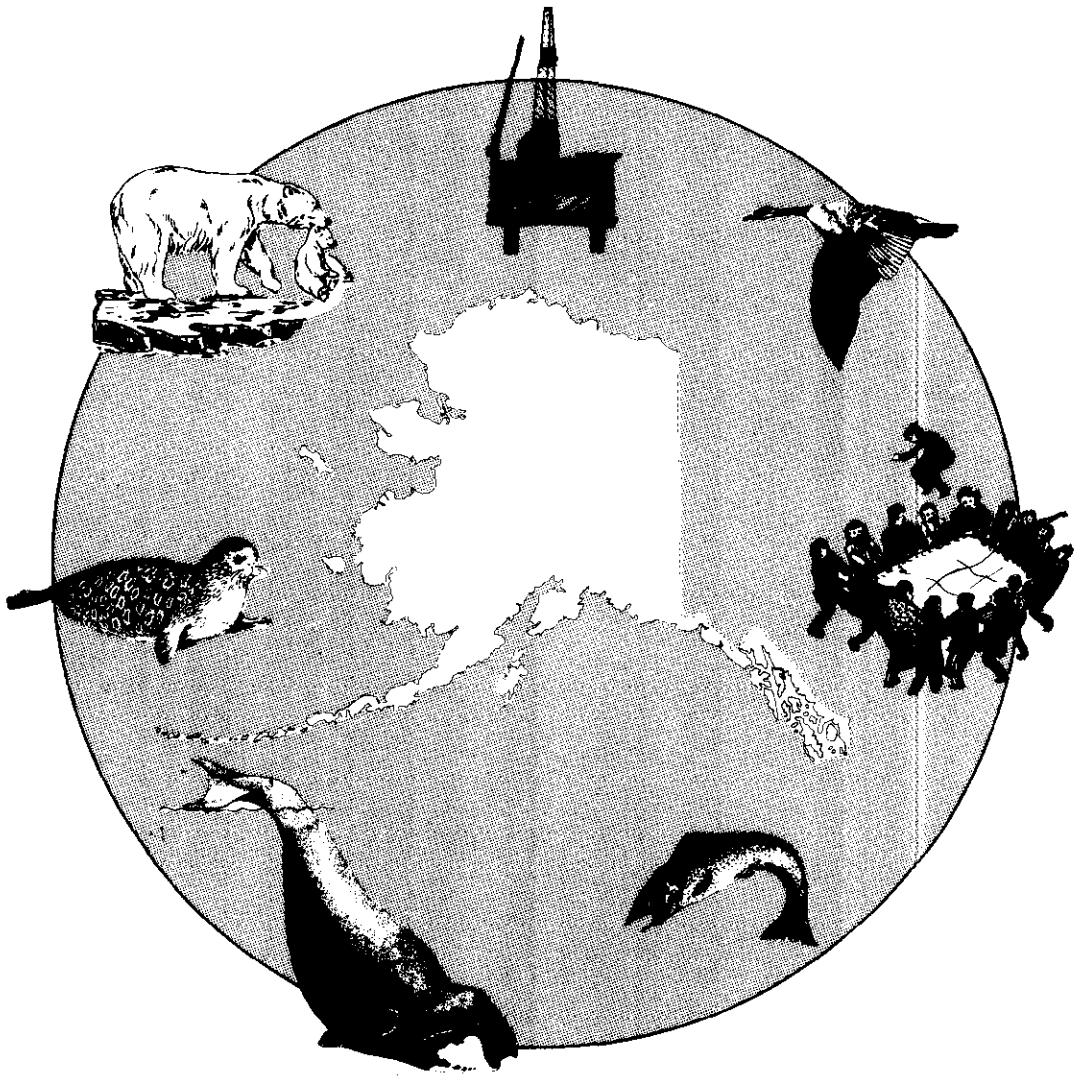
OCS Study
MMS 92-0052

Social Indicators Study of Alaskan Coastal Villages

IV. Postspill Key Informant Summaries

Schedule C Communities, Part 2:
(Kenai, Tyonek, Seldovia, Kodiak City, Karluk, Old Harbor, Chignik)



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Submitted to:

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Anchorage, Alaska

Human Relations Area Files

May 1993

Alaska OCS Environmental Studies Program

Social Indicators Study of Alaskan Coastal Villages
IV. Postspill Key Informant Summaries. Schedule C Communities, Part 2.

Human Relations Area Files
New Haven, Connecticut

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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 Claims 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
CIRCAC	Cook Inlet Regional Citizens Advisory Council
CIRT	Crisis Intervention Response Team
CMC	Coastal Management Corporation

Acronyms (continued)

CPI	Consumer Price Index
CRSA	Coastal Resource Service Area
CISPRI	Cook Inlet Spill Prevention and Response, Inc.
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
KNA	Kenai Native Association
KTC	Kodiak Tribal Council
KVSN	Kodiak Village Services Network
MMS	Minerals Management Service
MSRC	Marine Spill Response Corporation
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

Acronyms (continued)

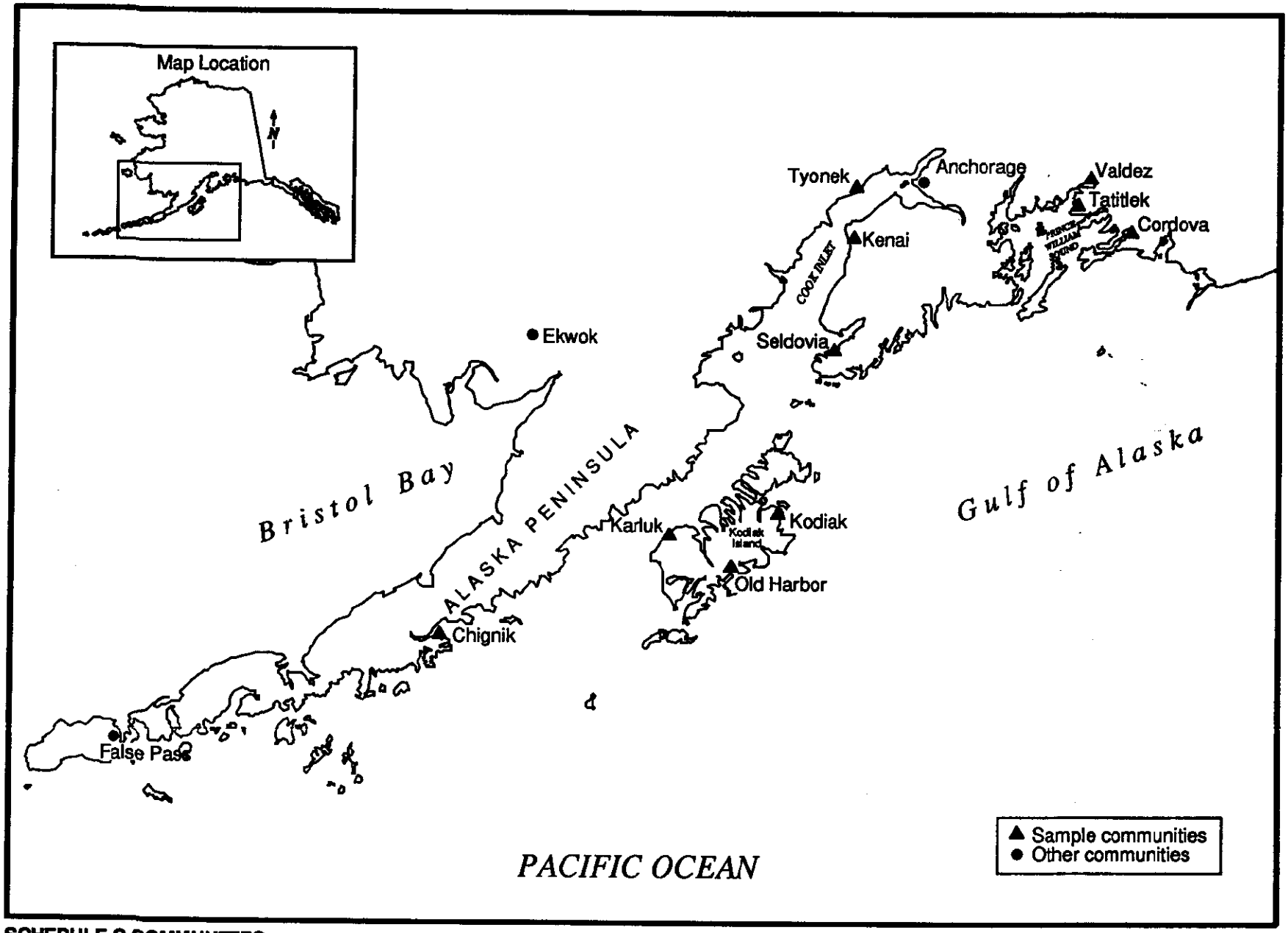
OED	Office of Economic Development (U.S.)
OEDP	Overall Economic Development Plan
OPA	Oil Pollution Act of 1990
P.L.	*Public Law*
PHS	Public Health Service
QI	Questionnaire Informant
REAA	Rural Education Attendance Area
RELI	Resident Employment and Living Improvements (program)
S.A.F.E.	Safe and Fear-Free 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 Yup'ik 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	Postmarriage 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	Postmarriage residence with or close to husband's kin.



Map 1

SCHEDULE C COMMUNITIES

Cook Inlet Communities

Cook Inlet Hub Community: Kenai

KENAI

Lynn A. Robbins, Ph.D.

KENAI

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KENAI

I. HISTORICAL CONTEXT

I.A. History

When Captain James Cook navigated his namesake inlet in 1778, the Dena'ina occupied the inlet and its major tributaries from Kachemak Bay to Tyonek near what is now Anchorage. There were at least 14 villages and 3,000 Dena'ina in the Cook Inlet area when the Europeans arrived. The Dena'ina have played a major role in the heritage and traditions of the Kenai Peninsula. At contact and for long thereafter the Dena'ina traced their descent through the female line, practiced polygamy (a man having more than one wife), and embraced animistic beliefs (spirits, good or malevolent, are inherent in all things). They had powerful shamans who communicated with the world of spirits and were greatly respected and occasionally feared because of their special powers. The Dena'ina hunted large land mammals and birds, fished for salmon and steelhead, and harvested plants. They saw themselves as partners with nature in their displays of respect for living and inanimate beings. The "potlatch," in which a noted person receives and redistributes goods as part of an annual ceremony, was a key element in the winter cycle of Dena'ina life. Feuding has been noted. Although most of the ancient Dena'ina traditions have disappeared or greatly changed, some practices and beliefs remain; and the Dena'ina, who make up about 3 percent of the population of Kenai, maintain important roles in resource management, politics, and civic activities.

Captain Cook made few contacts with the Dena'ina during his 1778 journey. In 1786 two British ships visited the Cook Inlet on a trading venture; the captains traded a few goods for some furs with the Dena'ina, and several other ships representing the English visited, each trading on a modest scale and each captain noting the high character and honesty of the Dena'ina.

Russians settled at Saint George, now known as Kasilof, in the Kenai area in 1786; in 1791 they established the tiny settlement of Saint Nicholas, where the city of Kenai is now located. In 1793 a Russian named Baronoff brought 30 criminals to teach the Dena'ina people agriculture. Hostilities between the Russians and the Dena'ina soon

broke out as Russian Orthodox priests attempted to suppress the Dena'ina practices of polygamy, shamanism, and animism. (One of the main historical attractions in Kenai is the Russian Orthodox Church of the Assumption built in 1895.) A smallpox epidemic struck the Dena'ina in 1838, causing many deaths and reducing morale. The indigenous Dena'ina culture began to decline markedly, unchecked by the transfer of the Territory of Alaska to the United States in 1867 (Osgood 1976:19).

The opening of the American era was marked by the establishment of 13 fur trading companies, the most successful of which were headquartered in Seattle and San Francisco. By 1883 the fur trade collapsed, but resource extraction was only beginning. In 1882 a salmon cannery was built at the mouth of the Kasilof River; and by 1929, 23 canneries operated in Cook Inlet. Several canneries--most of them on the Kenai River--remain today.

In 1991 Kenai was the largest city on the Kenai Peninsula, with a population of about 6,500 (16% of the estimated peninsula population of about 45,000). The city's economy is based on fossil fuel extraction (natural gas and oil in Cook Inlet); commercial fishing; Federal, State, and local government offices; retail and wholesale businesses; tourism (chiefly from the Anchorage metropolitan area); and an important level of the harvest of renewable subsistence resources for household use (game and fish).

Kenai has a major airport that serves the entire peninsula; many tourist attractions in its vicinity; and economically progressive city, borough, and Native institutions as well as effective voluntary commercial and service organizations (Alaska Department of Commerce and Economic Development 1988).

The city experienced its first energy boom in 1957, when oil and natural gas were discovered in the area in State lands and waters. These local resources resulted in construction of two oil refineries, a major chemical plant for production of liquefied natural gas for the City of Tokyo and some cities on the U.S. West Coast, a chemical plant for production of fertilizer for agricultural uses, and nine offshore oil and natural gas production platforms. In early 1990, the fossil fuel industries accounted for about

one-half of borough property taxes ($1.5 million), an estimated 550 direct jobs, and total annual revenues of $50 million (Little 1990). Kenai had an annual budget of $8 million (Fiscal Year 1990-1991) with a (surplus) fund balance of $8 million. Its population base in that budget year was 6,546. The city council and mayor were trying to keep the surplus at no less than $8 million. Kenai was in the top 10 percent among U.S. cities as measured by the percentage of money on hand in proportion to its budget (income). For this reason, the mil rate was comparatively low. The city is bonded to $7 million; but if it wished to do so, it could bond itself to $140 million. The city also received a relatively modest sum from the State budget because of its stable and healthy finances.

The city's airport land system had $26 million on hand--an important contribution to the city's fiscal position. There were about 120,000 emplanements--commercial and private--from and to Kenai in 1991. The City of Soldotna, located about 11 miles from Kenai and roughly the same size, considered having commercial flights--a point of earnest competition between the two cities.

In 1991 the Kenai Peninsula Borough population increased and there was pressure on the financial and capital resources of cities on the peninsula. Eighty percent of borough bonds were paid by the State of Alaska and 20 percent by the borough.

In 1991 the State reduced its borough funding level to 70 percent; and there was an expectation on the part of various officials that the new gubernatorial administration would reduce the State's contribution even further. This caused considerable alarm because of the rising need for more education monies. The borough's single school district was not doing well financially in 1991 because of State funding cuts and rising school enrollments.

I.B. Kenai Native Community

In the 1930s Kenai was still a small village. Two canneries supplied primarily by local set-net fishermen operated on the Kenai River. A few non-Native homesteaders raised livestock and vegetables, mainly for home consumption. A few small stores sold basic supplies and staples.

Kenai began to change fundamentally, demographically, economically, and socially with construction of the Wildwood Air Force Base during World War II and the highway to Anchorage. Homesteaders wanted better services, more stores, and roads. Construction at Wildwood brought wage income and more retail stores to the community. Homesteading did not develop beyond self-sustaining meager production, but it did provide land for the early residents. Many people abandoned their homesteads in the early period of homesteading because of isolation and hardships. The homesteading mystique has faded with time, but there are a few early residents who vividly recall their experiences; and they take a very special pride in having been among the first homesteaders. Many of the leading families in North Kenai, Kenai, and Soldotna are descendants of or are homesteaders. They are fond of the cooperation, generosity, and friendships they experienced; and although they appreciate those times, they would not want to return to them.

The population of Kenai remained stable in the 1930s and 1940s, although construction of a gravel airstrip during World War II began a period of increasing involvement with the outside world. In 1947, homesteading by non-Natives began in the Kenai River area when three townships in the Kenai National Moose Range were opened to entry as the result of intense demand for land after World War II.

A right-of-way for a new highway to connect the Kenai Peninsula with Anchorage was plotted parallel to an old wagon trail from Moose Pass on the Alaska Railroad to placer gold claims at Cooper's Landing. Veterans and some residents of Kenai claimed land in the Kalifonsky Beach, Soldotna, Kenai Spur, and Sterling areas. By 1949 the new road between Seward and Kenai was usable in good weather. The road provided access to homesteads in the Sterling and Soldotna areas, and by 1950 about 170 residents occupied isolated homesteads near Kenai. The Kenai population was then 320.

In 1950 the Kenai area was about 50 percent Native, but since then non-Native migrants in search of employment in the oil and gas industries, commercial fishing, government, and business far outstripped the Dena'ina population. The Natives comprise only about 3 percent of Kenai's population.

The Kenaitze people, a branch of the Dena'ina, maintain a distinct cultural identity despite major economic, technical, political, and demographic changes in the Kenai area. Key places and institutions for the Kenaitze are the Russian Orthodox church in Kenai; Wildwood, a former World War II Air Force base acquired under the Alaska Native Claims Settlement Act (ANCSA); the Native Kenai Village corporation; the Kenaitze Tribal government; and the for-profit Kenai Native Association (KNA). These institutions and places, in conjunction with strong family ties, facilitate the maintenance of strong cultural roots and common identity. Kenaitze fishermen use set and drift nets for salmon fishing from the Kasilof area to the Kenai River. This occupation, which has long been important to the Kenaitze, also maintains social and tribal solidarity as many families and friends fish together.

The KNA was established to represent the 170 people who enrolled in the historic village of Kenai under the terms of ANCSA. This urban people was entitled to set up a 23,040-acre estate. When the U.S. Defense Department announced its intention to close Wildwood Air Force Base in Kenai, the KNA, through negotiations with the Federal Government, received title to the land and buildings in 1972. The KNA established its Wildwood Indian Action Program, under grants from the Bureau of Indian Affairs, to provide vocational training (mechanical, clerical, building maintenance) for Native students from villages throughout Alaska. The KNA also formed three oil service businesses--a roustabout service, a wireline company, and a Kenai-Anchorage Construction Company.

Salamatof is a historic Native village north of Kenai with over 150 enrollees. It was recognized as a Native village corporation under ANCSA and has 92,160 acres in the Kenai area. These lands, selected by the Salamatof Village Corporation Association for their commercial value, are leased as commercial and recreational lots. The Salamatof Village Corporation also selected lands overlying gas fields in the Kalifornsky area that may be leased or developed by Cook Inlet Region, Incorporated.

As the Kenai population continued to increase, so too did needs for basic services. In the late 1950s the residents of Kenai voted against city incorporation on two

occasions, but a third effort succeeded and in 1960 the town became a first-class city chartered under the State of Alaska. Land values and taxes increased to pay for city services.

The oil and gas boom began in the Kenai area in 1957 when oil was discovered on land in the Swanson River area northeast of Kenai. There was great anticipation of this strike and jubilation when it came through. The few who held mineral rights, homesteaders under whose property some oil deposits were found, were disallowed financial benefits because of laws affecting homesteaders and oil leasing.

The discovery of oil caused land values to rise rapidly as owners speculated on increases in population, further oil exploration, and greater demands for land in general. Kenai grew in population as it served with Soldotna as one of two supply and service centers for the oil wells and related developments several miles from the city. Oil workers took up residence in the two towns and in trailer courts and rental units scattered along the highway system. These workers were from the oil-producing states of Louisiana, Oklahoma, Texas, and California. These early oil field workers were usually unmarried and transient, and they rarely attached themselves to the communities in the area. Those who brought their families remained largely transients; their children attended local schools, but the parents rarely became involved in school or other social and civic affairs. These workers were rough-cut. According to Kenai residents, they drank hard and were often racially prejudiced. There was strain in Kenaitze/non-Native relations in the late 1950s and 1960s during the oil and gas boom when workers from Texas, Oklahoma, Louisiana, and California manifested prejudice toward Natives in schools, businesses, and other aspects of life in the city. Those prejudices are waning, although hard feelings over Kenaitze subsistence fishing are common between the Kenaitze and non-Natives. With a few notable exceptions, relations between the Kenaitze and the non-Natives of the Kenai area are generally cordial.

The amenities brought by the oil developments in turn brought desired and undesired changes to Kenai, and residents still debated about economic growth and infrastructure development (schools, roads, services, and entertainment). Growth and

development was eventually preferred over stagnation or a possible return to conditions prior to the opening of the oil fields.

Oil and gas development expanded with construction of a marine terminal in the late 1950s/early 1960s, the Standard Oil refinery at Nikiski in 1963, and discoveries of large offshore deposits of oil and gas in Cook Inlet between 1963 and 1965. New oil service industries were established in the Kenai and North Kenai areas. The North Road out of Kenai became the site of many prefabricated steel buildings. These were the preferred locations for these buildings and worker housing because of the ease of travel and because the maintenance of back roads would have been very expensive.

Between 1965 and 1968, 10 permanent offshore drilling platforms were placed in the State waters of Upper Cook Inlet, each with a crew of from 50 to 60 workers; construction of each offshore pipeline required from 100 to 200 workers. In 1968 and 1969, three petrochemical plants were built in the Nikiski area. These new energy facilities necessitated a large support network of roads, businesses, services, and homes in the North Kenai area.

Population and employment increased rapidly with the growth of the oil industry. The period of greatest increase occurred from 1965 to 1968 and, obversely, unemployment rates declined. Employment dropped by 1,300 jobs upon completion of the construction of wells, pipelines, and refineries; and unemployment rates went up. Around 1970 the industry went into its exploration and development phases in Upper Cook Inlet. Employment and unemployment stabilized at levels below their previous peaks in the late 1960s.

The population of the Kenai Peninsula increased from 6,000 in 1960 to more than 14,000 in 1970. Kenai's population quadrupled and Soldotna's tripled during this period. In 1970 about 50 percent of the Kenai Peninsula's population lived in the Kenai area. The many migrants to the area were newcomers to Alaska who did not have strong ties to the communities. The common social and economic problems created by rapid growth were a feeling of estrangement and decline in a sense of community neighborliness and a loss of privacy among the long-term residents--the Kenaitze and

others, increases in prices, traffic congestion and accidents, dust, noise, and shortages of housing, goods, and medical care (MSNW/HRPI, 1976). Long-term residents also were dissatisfied about employment opportunities because they were not able to gain highly paid jobs at the new oil and gas facilities. In addition, they found the architecture of trailer courts, prefab buildings, new businesses, and many new homes characterless and bland. In 1976, the average length of residence in the Kenai and Soldotna areas was 6 years. This average includes long-term Kenaitze residents and the early non-Native homesteaders.

Most residents had lived in the area less than 5 years. For comparison, the average duration of residence in Seward for 1976 was 14 years (Green et al. 1977). Many of the long-term residents benefited from the boom from better roads, more services and stores, higher wages, more business opportunities, and more diverse types of work.

Another building spurt occurred between 1975 and 1978, when a second petrochemical plant was built, creating hundreds of construction jobs and related economic enterprises and services.

In a 1976 survey (sample size unspecified), 50 percent of the respondents favored further development of oil and gas over other possibilities. The three most favored economic activities were petrochemical industry, fisheries, and tourism. Respondents believed that further development of these sectors of the economy would bring three desired results for residents of the area: more job opportunities, higher wages, and general economic improvement. Support for these courses of action was accompanied by several caveats about undesired rapid population growth, pollution, and damage to the beauty and natural resources of the area. Most of the respondents urged slow growth with high-paying jobs that would last 10 years or more (Green et al. 1977).

Rapid growth and a preponderance of newcomers in the Kenai and Soldotna areas from the late 1950s to the late 1970s created an open social structure in which newcomers are free to participate. Many social relations outside of immediate family members were loosely organized around common interests and friendships. Many voluntary associations and organizations were formed. These included, among others,

the Elks and American Legion, women's groups, and square dancing groups. Churches, schools, restaurants and bars, and sporting events become especially important.

Occupations provided the determinants of many social networks. Oil and gas workers, professionals, businessmen, construction workers, and commercial fishermen formed tightly organized subcultures or sodalities. Construction and oil workers formed one of the subcultures in the 1970s. This occupational culture has flourished in Kenai and Soldotna since the late 1950s and persists in the 1990s. Construction and oil workers comprised about 20 percent of the workforce in Kenai in 1976. Many of these workers took employment on the Alaska North Slope, to which they commuted on work schedules that allowed them reasonable periods of time with their families. Other workers continued to work in oil and gas extraction in Cook Inlet. Some worked in short-term construction, others in petroleum processing, and still others returned to the Lower 48 states after the major construction projects were completed. Many invested in homes and land in the Kenai and Soldotna areas.

The oil industry has been the principal multiplier of economic growth in Kenai, paving the way for professionals in business, services, and government (teachers, dentists, doctors, managers, planners, insurance agents, realtors, retailers, bankers, lawyers) who enjoy relatively high pay and the beauty and recreational opportunities provided by the area. Many professionals participate frequently in civic affairs and show a certain degree of sensitivity to the natural environment. This group has the greatest political influence of all occupational groups that lobby in Juneau, Anchorage, and Washington, D.C. Although commercial fishermen make up only about 5 percent of the work force, their political and economic leverage played important roles in fish and game management, political representation, and participation in community events.

I.C. Kenai Peninsula Borough and the City of Kenai

The Kenai Peninsula Borough was established to execute powers given to it by the *Alaska State Legislature. These powers are divided into two spheres--areawide and* nonareawide. The Legislature has areawide power over education, assessment, and collection of taxes for the borough and for the cities within the borough, planning and

zoning, solid waste disposal, senior citizen funding, 911-emergency communications, and general administrative services. Nonareawide powers, as directed by the voters in service areas, include hospital (2 service areas), fire protection, and emergency medical (6 service areas), recreation (1 service area), ports and harbors, and road maintenance and construction services (4 service areas).

The borough assembly has 16 members. The borough government received the Distinguished Budget Presentation Award from the Government Finance Officers Association of the United States and Canada for its Fiscal Year 1988 budget. The borough mayor and his staff were instrumental players in the establishment and operation of the Oiled Mayors Council, which coordinated efforts to assist in the cleanup of the Exxon Valdez oil spill, provided communications, worked toward settlements with the Exxon Corporation, and addressed other matters vital to mitigation.

Kenai was incorporated in 1960 and has a mayor and council system of government with a city manager. The population of the Kenai Peninsula Borough has increased about 4.5 percent during each of the decennial census periods since 1960: the population increased from 9,053 in 1960 to 40,802 in 1990.

The city is supplied with water from artesian sources. The average daily use was 1,500,000 gallons in 1989, and the water supply is chlorinated. Sewer and garbage services are provided for over 5,000 of the 6,300 (1990) residents. Electricity, natural gas, telephone facilities and services, fire-fighting and police services, and local radio and newspaper media are available. The city is 93 feet above sea level, and precipitation is about 20 inches per annum; in comparison with most of Alaska, the weather is mild with mean January temperatures at +12.7 °F, and +53.5 °F in July.

There were 779 students in the elementary grades, 210 in the junior high school grades, and 489 in the high school grades. For health care, there are several physicians in Kenai and a 46-bed hospital in Soldotna, 11 miles from Kenai. Kenai boasts numerous indoor and outdoor recreational facilities and opportunities, as well as historic sites. There also are several National and State parks on the Kenai Peninsula. There is a theater, museum, the Fort Kenai Historical Site, the Russian Orthodox Church

National Shrine, an 80-acre campground and park, skiing, fishing, skating, hiking, boating, snowmobiling, hunting, a hockey rink, drag strip, five baseball fields and a professional baseball team (the Peninsula Oilers), four softball fields, one football field, four tennis courts, and an 18-hole golf course. There is a recreation center with three racquetball courts, exercise room, saunas, and a gymnasium with a weight-lifting room.

Kenai has six air services at its regional airport. Water transport consists of barge service for ocean-going vessels. Six truck transport companies are represented in the city, as are two taxi-cab services and three car rental operations. Paved highways cross the peninsula, connecting communities to Anchorage and the Alaska Highway. In 1989 there were 500 acres for commercial siting within the city, including waterfront, heavy industrial, and airport and light industrial sites. Outside the city considerable acreage is available for commercial development.

With a population of 6,327 in 1990, Kenai was the seventh largest city in Alaska, composed of 5,604 whites, 535 Alaskan Natives, 176 Hispanics (predominantly Filipinos with Hispanic surnames), 96 Asians and Pacific Islanders, 55 of unknown ethnic or racial background, and 37 Blacks.

The cost of living was 13 percent above the national average in 1989. Average housing costs were as follows: two-bedroom apartments rented for $350/month, three-bedroom for $450/month, and two- and three-bedroom houses rented for $550 and $750/month, respectively. A one-to-two bedroom house sold for $67,560 and a house with three or more bedrooms sold for $75,935. Food costs ranged from $56.54/week for a household of two adults to $95.53 for a family with two elementary-school-age children.

Tables 1 and 2 compare the 1989 prices of 24 marketbasket items in Kenai with similar information recorded in 1991, and Tables 3 and 4 compare 1989 labor costs with 1991 information. Prices are slightly higher in 1991 than in 1989, reflecting inflation. There are no obvious inflationary consequences from the Exxon Valdez oil spill to marketbasket items in Kenai in 1989. If inflation had dramatically influenced prices in 1989, they would have been closer to the 1991 prices than they are.

Table 1

PRICES OF 24 MARKETBASKET AND OTHER CONSUMER ITEMS IN THREE STORES IN KENAI, AUGUST 1989

	Store 1	Store 2	Store 3
Food			
10 lb flour	$ 2.99	$2.69	$2.99
12 oz evap. milk	.59	.57	.73
1 lb onions (yellow)	.69	.33	.39
48 oz cooking oil	2.87	3.65	4.37
6-pack cola	2.99	2.99	2.05
10 lb sugar	4.49	4.39	4.69
18 oz corn flakes	2.25	2.15	2.39
24 oz bread	2.29	2.29	2.35
1 lb bacon	1.99	1.09	.99
3 lb coffee	9.69	10.56	9.33[a]
1 lb butter	1.97	1.79	2.03
12-qt powdered milk	4.89	5.39	5.49
22 oz punch	2.75	3.09	2.97
Other			
Pampers 12 pack	4.97	4.73	4.99
Coleman lantern	89.00	na[b]	na
2-D batteries	1.25	1.15	1.25
1 gal Blazo	4.89	4.89	4.99
1 gal gasoline	1.39	1.49	1.39
1 qt motor oil	1.49	na	na
35-hp outboard	2,471.00	na	na
16-ft skiff	1,995.00	na	na

Source: Robbins, 1989.

[a] Normed for per-unit prices to gain comparability.
[b] na = not applicable.

Table 2

PRICES OF 24 MARKETBASKET AND OTHER CONSUMER ITEMS IN THREE STORES IN KENAI, APRIL 1991

	Store 1	Store 2	Store 3
Food			
10 lb flour	$ 3.89	$ 3.21	$ 3.89
12 oz evap. milk	.63	55.79	
1 lb onions (yellow)	.79	.59	.59
48 oz cooking oil	2.87	3.31	3.75
6-pack cola	3.19	3.19	3.19
10 lb sugar	5.19	4.59	5.33
18 oz corn flakes	1.89	2.29	2.25
24 oz bread	2.29	2.29	2.29
1 lb bacon	2.89	2.89	2.89
2.7 lb coffee	8.69	8.89	8.69[a]
1 lb butter	2.89	1.69	2.25
12-qt powdered milk	7.29	7.75	7.29
22 oz punch	3.37	2.99	2.57
Other			
Pampers 32 pack	11.99	11.99	11.99[a]
(Pampers per unit =)			
Coleman lantern	49.95	na[c]	na
2-D batteries	1.27	1.25	1.27
1 gal Blazo	5.95	6.39	na
1 gal gasoline	1.40	1.36	na
1 qt motor oil	2.50	1.77	1.89
35-hp outboard	3,200.00	na	na
16-ft skiff	4,136.00[b]	na	na

Source: Robbins Field Survey, 1991.

[a] Normed for per-unit prices to gain comparability.
[b] No 16-foot skiffs were available.
[c] na = not applicable.

Table 3

A SAMPLE OF LABOR COSTS IN KENAI, AUGUST 1989

Labor Category	Wage
Net hanging	$25/hr
Rough carpentry	$10-25/hr
Electrical	$10-25/hr
Engine repair	$10-25/hr
Welding	$10-25/hr
Plumbing	$10-25/hr

Source: Laborers Union, Local No. 341, Kenai, Alaska, 1989.

Table 4

A SAMPLE OF LABOR COSTS IN KENAI, APRIL 1991

Labor Category	Wage
Net hanging	$25.00/hr
Rough carpentry	$10.66/hr--Nonunion $23.95/hr--Union, plus $5.95 benefits
Electrical repair	$11.00/hr--Nonunion
Engine repair	$7.00/hr
Welding	$16.71/hr
Plumbing	$15.57/hr

Source: Alaska State Employment Office, Kenai, Alaska, 1991.

I.D. Natural Resources

Game was plentiful in the Kenai area in 1991, although the peninsula had changed ecologically in recent decades. Before the turn of the century, caribou were common and moose were comparatively rare. Human-caused fires in the late 1800s and in 1947 converted caribou-lichen habitat into low-growing deciduous shrubs and other plants suitable for moose. This change was especially pronounced in the Homer area, where caribou were once numerous. According to most of the respondents, moose had recently come under threat by a myriad of human activities (housing, roads, road kills, noise, some indiscriminate shooting), mainly those that altered the animals' habitats. Caribou were re-introduced a few years ago in the Kenai area; and there was a small, stable herd in 1991.

A longtime resident of Kenai who was a hunter and a fisherman said that ducks, geese, and king salmon had declined significantly in numbers in the past 30 years. He also said, with some irony, that "There are many moose and they are all in the Kenai city limits." He said that there were residents who would "hunt out" all of the moose in the area if there were no game regulations, and there were those who would not care if the moose disappeared because these people considered the moose to be a dangerous nuisance. This person, whose knowledge of peninsula wildlife was extensive, expressed gratitude to the Alaska Department of Fish and Game (ADF&G) for having brought wolves back onto the peninsula and for having planted game fish for sport fishermen in Skilak Lake. A final comment from this person: Dall sheep were being harvested in their Cooper Landing habitat faster than they could replace their losses.

A majority of persons interviewed thought that moose, seagulls, ducks, geese, beaver, ptarmigan, owls, grouse, and brown and black bears were plentiful. About half regarded the number of caribou available as adequate.

When asked about Dall sheep, less than half of the respondents had an opinion. It is evident that a large proportion of the respondents gave no answer to many of the questions because they were ignorant about resource abundance.

When discussing resources, some persons said quite pointedly that seagulls were important in the local food chain because they do a lot of "cleaning up." And although more brown bears were harvested in the Kenai area, black bears were numerous--which pleased many respondents. Brown bears also were present in appreciable numbers, and none of the respondents believed this animal was threatened on the peninsula. A few caribou were harvested each year by ADF&G to keep the numbers in balance with the habitat on which the animals depended.

Attitudes about the relative abundance of salmon species underscored some of the conflicts and worries over these important resources. About as many respondents thought that king, red, and silver salmon were available in adequate quantities as thought the opposite. Below, we address conflicts over salmon by various user groups and about the anger expressed by many persons over foreign open-sea drift-net fishing boats unlawfully taking large numbers of salmon incident to their hauls of target species (squid, in particular).

Pink and chum salmon, neither of which was of central importance as commercial or game species in Cook Inlet were considered to be more than adequate in numbers. The inlet and its feeder streams were not prime habitat for these species. Halibut, pike, Dolly varden, char, smelt, cod, grayling, herring, clams, and berries were considered to be in adequate numbers biologically and for human uses by most persons who believed they knew enough to give informed opinions.

There was a clear recognition in the community that wild creatures were forced into smaller and smaller areas on the peninsula as the human population continued to rise, and that all species should have been managed with greater care than was present in 1991. As for management, three in four persons said that State or Federal agencies should continue managing wild species, although there should be local influence on that management. Only a little over half of my respondents actually thought local residents influenced ADF&G decisions.

Individuals without institutional restraints would, in the words of some respondents, "hunt out the moose" and needlessly exploit marine and freshwater fish resources as well,

according to the prevailing attitude about management of wild resources. Further, most of the persons interviewed had well-considered opinions on game management. Some persons stated that despite their knowledge, the Kenaitze did not, nor were they likely to, have the equipment and personnel to manage game. To explain this point further, one person said "[the Kenaitze] . . . have the right ideas [values] but they . . . do not have the authority or the means [equipment, trained personnel, funds] to manage game and fish in the region." This same person added that, in his opinion, the Kenaitze managed the biota completely and with care before other races came to the peninsula; they insured that resources were not abused, and even though the Native population was relatively small and there were opportunities to squander resources, the Natives restrained themselves from doing so. One man said, "in all of my nine years in Alaska, I have come to the conclusion that Native Americans should have more say in the management of biological resources." Another point about attitudes toward the Kenaitze potential for wise game management was that most people did not believe Natives under 50 years of age were more capable and knowledgeable than other ethnic groups.

The Salamatof Native Corporation planned to develop a tourist facility on its lands in the Elephant Lake area, where there were many wolves, bears, and moose. Several persons said that this plan demonstrated to them that Native American institutions were interest groups, a few among many that must be restrained and regulated by public agencies in their pursuit of self-interest and personal gain and pleasure.

As to who possessed the greatest amount of accurate records about the biological and physical environment, most of my informants replied that scientists do. Many persons commented on the word "Native," which I used frequently when posing protocol topics to them, such as "who do you think knows more about . . . ?" They asserted that anyone who knew local conditions and circumstances was in conduct a "Native," and many non-Native American persons knew the land, water, weather, and living resources as well or better than some of the Native Americans who lived on the peninsula. These were not bigoted statements; they were matter-of-fact observations about uses of terms. When interviewees were asked about local control and knowledge of local conditions,

they frequently lumped all persons together, Native Americans and otherwise, in their comments about local control over fish and game management.

Discussions of local control of fish and game were always qualified. Some persons believed that more local influence was called for on the condition that it be achieved with great care and considerable planning among local and State groups. The Alaska Fish and Game Board was praised by some persons for taking local suggestions seriously in fish and game management. Other persons felt the board too often favored sport hunters and fishermen from outside the peninsula. A commercial fisherman insisted that more fish hatcheries were needed to enhance stocks of king, sockeye, and silver salmon. He feared that these species would decline without such action. The sockeye remained numerous. The harvest of sockeye was once as low as 1.7 million in the 1970s, but the imposition of a 200-mile offshore national Exclusive Economic Zone (EEZ) in the 1970s temporarily restricted foreign fishermen from fishing within 200 miles of the U.S. shore and helped to raise the average annual catch in the 1980s to about 4 million fish. The same man also said that an industry might come along that would have to treat Kenai River water, which would be a round-about way of improving water quality for Kenai and Soldotna residents.

Most of my informants thought a person needed 6 or more years to get to know the local area well enough to harvest local resources well and in comparative safety. A third of the informants thought that a person never knows enough--there is always more to learn about pursuing game, fish, and plants, and otherwise getting around on land and water; a larger fraction thought 1 to 5 years were sufficient to gain the knowledge needed to move about safely and to competently harvest wild resources. Some respondents were particularly knowledgeable about fish and game; and their households harvested at least some animals, plants, and fish from all available harvestable species in the region. For example, one household reported harvesting moose; silver, king, and sockeye salmon; halibut; cod; crab; shrimp; scallops; clams; and several species of berries.

My informants who had resided in Kenai for 11 or more years, nearly two-thirds of my sample, possessed many important memories and stories about places on the peninsula that they enjoyed telling to family and friends.

A typical opinion about game management in Kenai was encapsulated by a woman's comment, " . . . any resource that is important to local special interests is subject to considerable local political pressure." This statement, and many comments in a similar vein, were directed primarily at the sport hunters, fishermen, guides, and outfitters, and their influence on the Alaska Fish and Game Board. Trophy-seeking fishermen and hunters were looked upon with contempt and anger by most of the respondents. They were often referred to as "screamers," meaning that they were the loudest squeaky wheel in the body politic. These expressions of displeasure also were voiced by commercial set-net fishermen who often saw themselves at odds with sport fishermen.

Although ADF&G was favored over other parties as the preferred manager of game and fish in Alaska, there were some misgivings about the agency. Some persons charged that ADF&G listened to sport hunting and fishing guides, and that it heeled to their lobbying over the wishes of local hunters and fishermen (commercial, sport, and subsistence). One person said, "Subsistence was favored by the State of Alaska, but now sport hunting and fishing are given emphasis and locals are subordinate to outsiders in ADF&G policies." A second person said, "Subsistence was favored by the State of Alaska, but now sport fishermen and hunters have the governor's ear." On the same subject, a third person said, "Most of the serious conflicts in Kenai are between Kenai River guides and everyone else."

To add to the grievances registered about sport fishermen and river guides, a person who lived near the Kenai River and who could see a considerable stretch of the river from his home said that he had counted as many as 100 boats across from his residence on the river during the king salmon season. He asserted that king salmon were not well counted to monitor reproduction, and that he rarely saw spawned-out kings in the river--in contrast to the 1970s, when it was common to see many kings that had

laid their eggs. He went on to say that about 10 to 15 percent of the kings that were hooked and released died soon after--an atrocious waste, in his view.

Despite some favorable attitudes about Federal management of fish and wildlife, many persons registered strong opposition. Their most frequent complaint was that Federal agencies did not know local people and local circumstances, and they favored interests outside of Alaska. It was common in Kenai for residents to believe that Federal agencies would impose undesired policies and regulations on local communities. Many persons who set up new residences in Kenai did so to escape the physical confinements, economic limitations, and otherwise distasteful environmental quality of their former communities. They also hoped to get away from further restrictions placed on their freedom by various public agencies. As one person said, "Alaska is distinct with its wilderness. What pertains to it does not pertain to the Lower 48."

Another source of controversy over fisheries was centered on the conduct of a few members of the Kenaitze Tribe who asserted what they believed to be the right of all Alaska residents to harvest wild foods whenever there was a need for them. The Tribal Chairwoman disapproved of this position on wildlife harvests. Most of the tribal members, along with most of the other residents of Kenai, realized that the human population was too large for a heavy reliance on local subsistence resources. Rules and regulations governing commercial, sport, and subsistence interests and clamming were clearly called for; and most persons, both tribal and nontribal, preferred that ADF&G manage resources. A small minority of my informants said that subsistence resources should be available to those in need, regardless of the season and game and fish regulations.

The Alaska Supreme Court granted the Kenaitze Tribe the right to conduct subsistence fishing on the Kenai River as a result of a case brought before the court by some members of the tribe. The right was granted with the stipulation that it must be connected with persistence of cultural traditions; thus, fishing must be undertaken to teach members of the tribe the importance of subsistence fishing in the Kenaitze culture, past and present: the term for this was "educational subsistence fishing." The court's

decision was a bright spot in the lives of many members of the tribe and a source of resentment among many non-Native Americans in Kenai. Despite this resentment, however, the tribe sponsored Indian dances in the Kenai High School that were attended by hundreds of peninsula residents. The dances fostered trust and goodwill between Native Americans and other people on the peninsula, according to several informants.

Several informants commented about the management of salmon, observing that wild fish stocks and their harvest were in jeopardy because of the global tendency toward hatchery production. They stated that the fisheries of the future seemed to be heading in this direction, just as certain wild animals, birds, and plants were ultimately domesticated and managed by humans. They said that State agencies did not want to acknowledge this fact, repeatedly applying the term "aquaculture" only to hatchery salmon. The officials continued to promote fisheries dependent on wild stocks in sport and commercial enterprises. The agencies excluded other products, such as shellfish and kelp, from endorsement and development of aquaculture projects. It was important for State residents to recognize that Federal recreation taxes brought in significant sums of money and that hatcheries played an important role in this.

The Cook Inlet Aquaculture Association (CIAA) on the peninsula was supported by a 2-percent commercial fish tax on drift-net fishermen and by State funds. In 1991, the director of the peninsula's aquaculture association insisted that the State could have greatly expanded its aquaculture products in variety and volume to compete with Japan, Norway, and other nations that were taking larger shares of the marine products market. Such action would have increased State tax revenues from sport fishing, a substantial source of income for the State. Marketing salmon also could have been more stable and could have competed with producers in other states and countries.

There was a $3 million fish ladder on the Paint River near Homer, Alaska, for which all contracts and permits had been obtained by the CIAA, the organization undertaking the project. In compensating fishermen for their losses caused by the 1989 Exxon Valdez oil spill, Exxon included this fee in its settlement with commercial fishermen; but it did not convey the funds directly to CIAA, an action that disappointed

CIAA officials. Exxon representatives said that giving the monies directly to fishermen was justified in that these expenses were a normal part of the cost of running a drift-net operation.

A local group of citizens challenged the Paint River fish ladder project on the grounds that fish stocks for the project would be taken from the Katmai and McNeil Rivers. The project required compliance with the National Environmental Policy Act (NEPA) of 1970, which the project managers indeed took into account; but they did not believe that the project threatened riverine stocks.

Threats to the king salmon were exacerbated by the presence of as many as 600 drift-net fishermen using drift nets up to 1.5 miles long. Despite these pressures on king salmon, a majority of persons believed those fish to be well managed. (The king salmon has a 4-5 year cycle from the time it is hatched in freshwater, migrates to the ocean, and returns to spawn.) Silver salmon, according to an experienced river fishermen, were harvested with greater intensity on the Kenai River because guides fished for this species over the 2-month silver salmon season.

Many persons said that local residents were less and less able to afford hunting for moose and Dall sheep because of ADF&G's regulations on where game could be harvested. They had to travel farther to hunt these animals than in the recent past, to areas where hunting was permitted. Overnight stays and special equipment were required, both of which incurred considerable expense. Thus, some kinds of hunting were less accessible to local persons. Fishing on the Kenai River also had been more restrictive for local persons because of the large number of guides (more than 300 in summer 1990). The ADF&G attempted to impose a limit on the number of guides on the Kenai River to about 200, but this was stalled by legal appeals in 1991.

One of the most important aspects of the tourism industry was king salmon sport fishing. Fishermen usually were allowed to keep their catch; but because of diminishing stocks, ADF&G permitted only catch-and-release during the 1990 run. The adverse effect was that motel reservations were canceled, and there was a noticeable decline in business throughout Kenai. The ADF&G policy caused considerable consternation in

the city; for many parties, its consequences were as adverse as the Exxon Valdez oil spill was to drift-net fishermen. For example, two professional sports teams, the Kansas City Royals and the Los Angeles Lakers, canceled reservations at one motel during the 1990 fishing season, a blow to the motel owner and staff. In 1991, the catch-and-release policy was again imposed until after the king run in 1991.

One commercial fisherman said that fishing boats should have been taxed by the State to achieve some equity in resource use. He also said that all management decisions should have been based on biological processes, rather than on political considerations, so that resource stocks would be adequately protected.

One of the few specific subjects on fish and game management was about beavers, which had set up a colony near the Kalifonsky Beach Road across the Kenai River from the City of Kenai. A large beaver pond formed by the colony had undermined the road, prompting ADF&G to move the animals elsewhere. There were people who deeply resented this action, while others believed it was warranted. Beavers were not as numerous as they once were, and some Kenai residents took pride in both seeing and protecting them. There also were instances of domestic rabbits that had escaped from their pens and survived in the wild. Another local resident commented: "Gulls love development."

II. IMPACTS OF THE EXXON VALDEZ OIL SPILL

This section examines some of the social and economic consequences of the Exxon Valdez oil spill on Kenai residents. Here I draw from persons in the key-informant sample, but also from more than 35 officials in various capacities, local press releases, and various documents.

The words of one respondent sum up many persons' attitudes on the Exxon Valdez oil spill: "I sit here by myself and fume and turn red. I am thoroughly disgusted. Reaction to the spill was dilatory and the cleanup inadequate. Exxon has done responsible things, but they made money on increased prices [for some of their products] and tax deductions. There was terrible destruction. The captain was at fault and so was Exxon."

Another person moved from one of the Lower 48 states to Valdez in 1989 to get a job during the height of the social, ecological, and economic effects of the Exxon Valdez oil spill. She said, "I had trouble getting a place to stay and the place was so ugly and filthy, I moved to Kenai because I was told there was work there, and [because] I like small towns. I got a job in Kenai and I do not regret my decision to come here."

These and other comments tell some of the story of the effects of the oil spill on people's lives. Many people said emphatically that the oil spilled by the Exxon Valdez should have been burned shortly after the spill occurred and that the Alaska DEC and the USCG were reluctant to approve of burning the spilled oil because they feared adverse public reaction.

One drift-net fisherman was so determined to receive compensation from Exxon that he claimed he dragged his drift nets up and down Cook Inlet to oil them so he could qualify for compensation. He reported that he encountered no oil, going on to say the closure of drift-net and some set-net fishing in the inlet was the result of "media hype."

Another drift-net fisherman was upset with the compensation he received from Exxon. He said Exxon compensated fishermen at a price of $1.60 to $1.70 per pound for sockeye when they should have been paid $2.50 per pound. He seemed to be in the minority on this point--most fishermen interviewed for this study were satisfied with their monetary compensation. Their suffering came in the uncertainties that they, their families, and crews experienced. Boat captains insisted that captains and crew file separate claims so that crew members would be treated fairly and so that captains could not shortchange their crews. Both parties received full compensation.

One of the long-term consequences of the Exxon Valdez oil spill was evident in the information media of the State of Alaska. The VECO Corporation, which directed most of the cleanup efforts and earned substantial profits in doing so, purchased The Anchorage Times--a newspaper known for its conservative, pro-business posture--to counter the more liberal Anchorage Daily News. Many peninsula residents referred to The Anchorage Times as "The VECO Times." VECO's spill-cleanup windfall meant

ownership and partial control of one of two major newspapers in Alaska (VECO sold The Anchorage Times to the Anchorage Daily News in 1992).

Other unexpected impacts involved workers on offshore oil platforms in Cook Inlet who earned more in 1989 than usual. Shortly after the spill, platform workers put in more time at their jobs because the Environmental Protection Agency (EPA) and Alaska Department of Environmental Conservation (DEC) imposed new regulations on rig operators and more frequent monitoring at the platforms, and there was an increased emphasis on worker safety, all of which required more working hours.

In the regulatory realm, DEC continued its close watch on water quality and other potential environmental impacts of energy industries in Cook Inlet during the 1990 summer season--another beneficial side-effect of the oil spill. Many more site visits were made than before 1989. These DEC actions included added precautions in environmental protection, such as moving underground fuel tanks farther from onshore zones of potential water contamination. These measures did not impose a heavy cost on fish processors, although energy industries did pay more for environmental safeguards.

One person summed up a majority opinion about Federal, State, and Exxon Corporation responses to the Exxon Valdez oil spill as a quagmire of institutional procrastination, confusion, timidity, and buck-passing by saying that these institutions should have complied with the following dictum: "Lead, follow, or get the hell out of the way." This person also said, in reference to the consortium of oil companies in Prince William Sound and the companies offshore--the companies with the spill-response plan: "If you let a two-year-old do what he wants to do, he will mess up." The Federal-State spill-response plan was vitiated and ignored.

According to one person, the Exxon Valdez oil spill occurred, in part, because spill prevention and response were in the hands of the oil industry. He stated that "You shouldn't let them have that much responsibility." This man said that Exxon, not the captain of the ship, was at fault. He believed that the State of Alaska ". . . was lulled into complacency, and big money glossed over the problems."

I asked my informants whether they thought that Exxon and the State and Federal Governments were truthful with the public about the spill. Most did not believe that any of the institutions were truthful; a few persons pointed out that some hedging of the truth by all three was understandable and excusable to avoid misunderstandings. A little subterfuge was permissible, in their opinion.

Some respondents said that Federal agencies seemed to have been interested mainly in visual impacts from spills rather than scrutinizing the effects of the spills. This may have been so because the Federal Government was not as affected by the spill as local residents were. These comments also asserted that the State of Alaska's hands were tied in its attempts to respond to the spill because it was constrained to act in concert with Federal agencies.

A majority of the respondents believed that there will be more spills in Alaska and elsewhere in the world. (The several major oil spills that had occurred since 1989 were cited by many persons.) Almost all of my informants cited specific examples of improvements in the safety measures instituted since 1989 in Prince William Sound and Cook Inlet. Because of these measures, most of the respondents felt reassured by government and industry that there would be less likelihood of a spill in Prince William Sound of a magnitude and duration similar to the Exxon Valdez spill. However, most persons believed that large spills were inevitable, somewhere in the world, Alaska being no exception, and that some spills were unavoidable or were likely simply because of human error that one must more or less expect. The majority of respondents believed that a large spill in Cook Inlet could not possibly be cleaned up because the tides were swift and strong and winds were frequent. Most of the respondents also believed that further oil and gas exploration in Cook Inlet would have an adverse reaction on the waters and land. About 60 percent of the respondents were satisfied with the condition of the land and waters; 40 percent were not.

Oil Pollution Act of 1990

One of the most important changes in the lives of peninsula residents was implementation of the 1990 Oil Pollution Act (OPA). The OPA was passed to remedy

the problems and oversights that contributed decisively to the Exxon Valdez oil spill. The OPA calls for outfall testing, prevention measures, safe operation of tankers, biological baseline studies, atmospheric-information collection, and testing to determine if standards are met. There will be 4-year contract agreements to conduct these tests and studies, and the General Accounting Office will conduct audits of the activities each year. Prince William Sound residents were the main source of pressure on Congress to establish OPA. Since then, Alyeska had spent over $50 million to comply with OPA's provisions as applied to Prince William Sound. The OPA also established the Cook Inlet Regional Citizens Advisory Council (CIRCAC), which was in charge of monitoring companies' performances in the extraction and transport of crude oil, natural gas, and other fossil fuels and their derived products. The CIRCAC worked closely with the Cook Inlet Spill Prevention and Response, Inc. (CISPRI), an organization funded--by Federal mandate--by Cook Inlet fossil-fuel production and processing companies whose purpose was to improve spill-prevention and response measures. The CISPRI also provided monies for CIRCAC. In 1991, the two organizations were working together under a 1-year agreement; CISPRI provided $600,000 for each of the first 2 years of CIRCAC's operations. The members of CIRCAC apparently were sensitive to the financial burdens imposed on industries and mindful of this in establishing the first 1-year agreement and subsequent renewal for a second year.

The nation has been watching Prince William Sound and Cook Inlet to see how OPA will be implemented. According to the Acting Director of CIRCAC, citizen input results in the best kind of industry oversight and results in the best industrial performance in environmental protection. The Bush Administration pledged support of OPA. Some industry employees had observed that water quality monitoring in the deeper parts of the inlet channel across from Nikiski might be warranted, because there was a possibility that some industry-deposited wastewaters might cause some adverse environmental effects. As of December 1991, the DEC had not insisted on monitoring this part of the inlet.

In the 1980s, it was "sexy," according to one interviewee, to "knock the DEC." While most State agencies received budget increases, DEC held about even in appropriations, partly because many legislators were indifferent or hostile to the agency. During this same decade, there was a persistent erosion of support for the spill-prevention-and-response system established by Alyeska, the U.S. Coast Guard (USCG), and DEC in the 1970s (Davidson 1990; Keeble 1991). The Exxon Valdez oil spill and Federal passage and implementation of OPA changed these circumstances.

Public and Congressional outrage over revelations about oil transport safety and control of pollution from vessels and onshore facilities was further heightened when operations in Prince William Sound were compared with those at the Scottish port of Sullom Voe in the Shetland Islands under jurisdiction of the local county government. The port at Sullom Voe handled 6 million barrels of North Sea crude oil each day, and the majority owner was British Petroleum--the majority owner of Alyeska Pipeline Service Company. Some Alaskans invited representatives from Sullom Voe to visit Prince William Sound and share information about port operations. The contrasts between operating practices in Prince William Sound and Sullom Voe were startling. Comparisons of these two management systems were presented to Congressional committees, and OPA was fashioned on a model of environmental protection taken largely from Sullom Voe. In Out of the Channel: The Exxon Valdez Oil Spill in Prince William Sound (1991:156), John Keeble states::

> Unlike the Alyeska terminal, Sullom Voe had reels of boom permanently deployed at sensitive areas, random helicopter surveillance of tanker traffic, full radar coverage, a permanent on-site pollution response team, regular drills, pilots who rode tankers to the open seas, regular inspections of tankers, more tugs used for berthing and backup assistance for major spills available within 24 hours. Sullom Voe has not had another major spill since institution of its plan.

Sullom Voe had a serious oil spill in the 1970s. The county government requested broad enforcement powers from the Scottish Parliament to establish the plan briefly described above. Just as the county received the powers it requested, a vocal and

indignant segment of the residents of Prince William Sound and Cook Inlet sought and received legislative support from Congress in a process reminiscent of the Sullom Voe experience.

The OPA brought many beneficial changes in Cook Inlet. The Exxon Valdez oil spill was followed by 20 major effects studies and 40 new Federal regulations. More than 20 crucial tasks were spelled out by legislators and witnesses before Congressional committees. However, there had been little progress on the tasks and the legislation as of 1991. For example, two tasks central to legislation were rules requiring identification of who pays for cleanup and how much cleanup equipment the industries must place in different ports in the country. As a penalty for not obeying such rules violators would be prohibited from transporting oil in U.S. waters. (Some companies, such as those affiliated with Dutch Royal Shell, threatened a boycott of the rule because, they claimed, the liability standards were too expensive for them.)

Not only did OPA require double hulls on ships by the year 2010--one of the regulations for which the Act has become famous, it also called for tug escorts, tighter standards for pilot qualifications, dollar values on oiled wildlife, limits on the number of shift workhours on tankers, and new standards for ship licensing. The OPA also had more stringent rules on tanker-safety systems, the number of officers on the bridge of a tanker entering a port, studies on cleanup technologies, deepwater ports, tanker personnel, vessel-traffic services, ship construction, navigation rules, foreign-tanker standards, inspections, and crew training.

The 182-page OPA made tanker owners very nervous. Studies revealed that more than 15 percent of the oil released in a spill was rarely recovered, and it was not clear if the new Federal regulations would require a rate of recovery larger than this. It was possible, according to prevailing speculation, that Federal rules might demand that a certain proportion of spilled oil be recovered each day following a spill. These rules could ignore weather conditions that have much to do with opportunities for recovery. It also was not clear which techniques would be mandated: biodegradable chemicals, skimmers, burning the oil, or a combination of these.

Another provision of OPA calls for creation of the Marine Spill Response Corporation (MSRC), a nonprofit organization established by 22 major U.S. oil transporters and producers. The MSRC must purchase sixteen 210-foot spill-response ships that shall be equipped and online by February 18, 1993. This is the Congressionally mandated date when major oil companies must be prepared to respond to the worst-case spill. Each spill-response ship is expected to cost about $185 million and serve five regional centers--near Seattle, Washington, in Puget Sound; Port Hueneme, near Santa Barbara, California; Lake Charles, Louisiana; Miami, Florida; and New York City Harbor. There will be 22 depositories of spill-response equipment throughout the U.S. at a cost of an estimated $400 million. The annual MSRC budget is expected to be about $100 million, with approximately 400 full-time employees.

In September 1991, Alaska DEC officials requested that MSRC establish a regional *center in Alaska. The MSRC had two objections to the request: (1) State spill liabilities* were stiffer than Federal; and (2) Prince William Sound and Cook Inlet industries and communities had taken special actions to prevent and clean spills in the past so could be expected to be prepared for the future. No action on the request had been taken as of September 1991. The Alaska State Legislature in its 1991 session requested the Citizens Oversight Council on Oil and Other Hazardous Substances to examine statutes on immunity and make recommendations on changes that might be needed. In the meantime, draft regulations were prepared to establish and implement the State of Alaska's 1990 spill-contingency legislation--a law separate from immunity statutes (Enders 1991).

On August 15, 1991, the oil industry, the Alaska DEC and Division of Emergency Services, the Kenai Peninsula Borough, the USCG and CISPRI participated in a simulated 45,000-barrel spill of North Slope crude oil for the Tesoro Alaska Petroleum Corporation. On August 17, 1991, a second drill was conducted for the Unocal facility at Nikiski. The simulated spill occurred 1.5 miles from the Kenai Pipeline dock in Nikiski. The fictional tanker Kamishak Bay struck "an unidentified submerged object" at 6:10 a.m. Three of the 18 holding tanks in the hypothetical, 300,000-barrel, double-hulled vessel

were punctured. The CISPRI conducted the cleanup using contracted equipment and personnel.

A representative from the Alyeska Pipeline Service Company was present to learn from the simulated spill and responses to it. By 9:00 a.m. the spill had formed a 4-square-mile slick 2 miles east of Nikiski. The CISPRI crews used controlled burning, chemical dispersants, skimmers, and booms to contain the crude oil. Other crews placed booms across the mouth of the Kenai River and on the west side of the inlet to protect beaches. By 2:00 p.m. Tesoro employees estimated that 4,000 barrels had been dispersed or burned. Apparently no oil-spill-response exercises had been conducted in Prince William sound before the Exxon Valdez oil spill. These important exercises in Cook Inlet taught those involved many important lessons about communications and coordination. The participants said that one missing aspect of an actual spill was the presence of media representatives in large numbers with many questions to ask and the need to respond to public reactions. These two additional factors might have slowed progress or altered decisions. Frank Mullen, the then-Acting Director of CIRCAC responded by saying, "It's hard to be critical of a drill . . .. You've got to make sure they [spills] don't happen in the first place" (Brown 1991f).

The two oil-spill drills were considered to be successful, according to observers. However, flaws were noted by Townsend Environmental of Otis, Oregon, a consulting firm that prepared an evaluation for CIRCAC. The DEC received the most criticism: the agency was ". . . plagued by a lack of planning and inexperienced and untrained personnel." The oil industry was praised for its performance in the simulated spills and responses. Two companies, Tesoro and Unocal, participated in the drills. The CIRCAC received similar praise. The report said about these parties, "Training for spill response obviously has been very good . . ." and "In fact, the training was so thorough that we did not see a single instance of anyone referring to the contingency plans or technical manuals" (Brown 1991f). The drills were staged for 12-hour responses and were, in this respect, limited. There were several other specific oversights and errors in the spill-response drill noted in the report:

- Problems with the communications network.
- CIRCAC and the borough were not notified of the spill drills.
- Dispersants and burning were applied too soon.
- The companies were not prepared to accommodate the number of volunteers.
- Tesoro's recovery and rehabilitation of wildlife were delayed.
- The unified-command-plan approach was difficult for Tesoro, and there was no communications component for the contingency plan.
- Efforts to place booms across the Kenai River failed, and the boom for burning was deployed improperly.
- There were difficulties for Unocal in its administrative efforts.
- There needed to be a better description of CIRCAC's role in spill response.
- The USCG's role was difficult to evaluate because it did little in the drills.

Industry officials did not take exception to this evaluation. CISPRI director, Bill Stilling, said that the report was a fair account of the limitations of the performance of various organizations in the drills. He believed that improvements in the shortcomings noted in the report would be made in forthcoming drills.

Coincidentally, there was a spill of 4,300 gallons of diesel fuel from a dock at Nikiski on August 13, 1991. Less than 44 gallons of the spilled fuel were collected according to DEC officials. This rate of recovery was very disappointing to DEC. Weather conditions and the very thin, filmy consistency of the fuel hampered cleanup efforts. Spills of petroleum products violate Federal and State laws, and the owner of the vessel can be fined. No attempts to impose a fine by Federal or State agencies had been announced by mid-September 1991, although the State's attorney general was reviewing the case and the USCG also was conducting an investigation. Response to the spill was prompt. The ARCO Corporation rapidly sent a vessel with a boom to the spill, and CISPRI also promptly deployed equipment. Although diesel fuel is less toxic to marine organisms than crude oil and gasoline, the spill could have added to the cumulative effects of previous fuel and fuel-stock spills in the inlet, according to one DEC official (Brown 1991d,e).

A frozen pipeline ruptured at the Kenai Pipe Line Company at Nikiski on January 4, 1992 (Brown 1992), releasing about 171 barrels of oil into Cook Inlet (the oil formed a 1,006-barrel mixture with water). The spill was initially reported to have been 17,000 gallons, which would have made it one of the largest in Alaska's history. The Kenai Pipe Line Company claimed that only 171 barrels (about 7,200 gallons) were released. According to DEC, skimmers retrieved only 16 barrels or about 9 percent of the spilled oil, while company representatives said that about 70 barrels (40%) were cleaned up.

Meanwhile, CIRCAC approved a 1991-92 budget of more than $1.6 million in mid-September 1991 (Brown 1991c). The money, if available, would come from CISPRI, the spill-response organization made up of oil industries working in Cook Inlet. An additional $200,000 over the $1,459,000 requested from CISPRI was to be sought from other sources. The CISPRI board objected to paying more than the $1 million annual sum required of CISPRI under the Federal law that set up the two organizations. The CIRCAC received $600,000 for its 1990-91 budget, and its officials believed that the balance ($400,000) should be applied to the 1991-92 budget. The chairperson of CIRCAC's Environmental Monitoring Committee said that the watchdog group would ask for as much as possible and see what happens.

The proposed budget called for $777,000 for Environmental Monitoring Committee projects; $490,798 for administrative costs; $293,000 for Prevention, Response, Operations, and Safety Committee projects; and $86,200 for meetings and council members' expenses. The largest sum for projects, $500,000 would be spent for ongoing monitoring research to assess environmental effects on Cook Inlet. This includes a sediment and water program at discharge points at industry facilities, determination of toxicity levels for shellfish and anadromous fish, and calculation of releases of contaminants into the inlet. The monitoring work and administrative costs were expensive and, according to council members, comparatively large sums were needed to fulfill the mandates of OPA. In all, CIRCAC proposed 15 projects. Among these were:

- $100,000 for measurement and assessment of environmental effects of bioremediation, mechanical cleanup, burning, and dispersants.

- $50,000 to study the effects of fog, ice, winds, waves, and extreme temperatures on vessels.
- $50,000 to gather information for managing spills on such subjects as biologically sensitive areas.
- $50,000 to find out about the structural features and resilience of Cook Inlet oil facilities.
- $30,000 to make recommendations to Federal and State agencies on changes made in navigation and piloting standards.

CIRCAC members were studying alternatives to this plan if full funding was not available.

In a later development in late fall 1991, the CIRCAC budget was held to about $600,000 by the CISPRI board--to the objection of CIRCAC. It seemed that the Federal Department of Transportation would have to intervene through court injunction to restore monies to CIRCAC to bring the budget to the mandated $1 million.

Cook Inlet oil and gas development will continue to be a source of prospective economic activity as reserves of oil on the North Slope diminish. ARCO made a strike in Cook Inlet north of Nikiski in summer 1991. The yield was about 1,100 barrels per day with prospects for increased output. This strike was greeted with enthusiasm throughout the peninsula. There also were more efforts to lease acreage near Kachemak Bay, near Homer. The State planned to sell leases in Sale 74 on September 24, 1991, for gas and oil exploration on 606,000 acres in and near Cook Inlet.

The former manager of the Chevron plant at Nikiski said that spill-prevention and cleanup expenses should be borne by the public and under public control. He went on to say that companies were over-regulated and that regulations were based on too many hastily and ill-conceived perceptions and generalizations. He also asserted that there were too many reporting requirements. He averred that Cook Inlet could be a more suitable site for new refineries than large urban centers in California because fewer people would be exposed to the pollution generated; air and water pollution regulations could continue to be as rigorous in Cook Inlet as in southern California and the San

Francisco Bay area. He also stated emphatically that Cook Inlet energy industries contributed an important measure of Alaska's self-sufficiency. He said that if there were no oil shortages on the West Coast, the Alaska market would be ignored. Apparently the West Coast ran out of jet fuel during the Gulf War and purchasers bought fuels from the Chevron Refinery in Cook Inlet to make up some of the shortfall.

The former plant manager said that everything in the industry had been made into a poisonous snake, so to speak. He preferred that scientific investigations and generalizations become the basis for laws and regulations, and that universities could play an important role in this process. He also believed that media coverage lacked balance and that there should have been less emphasis on disaster and more on well-considered evidence.

Some respondents stated that the Exxon Valdez oil spill was not as ecologically harmful as many persons had expected. According to one of these persons, nature can handle single, large episodes of pollution. To support this assertion, he stated that pink salmon fingerlings survived the spill and returned in record numbers. He spoke with some misgivings and some irony in saying that "all the fever" over the spill had since become law. He also said that the Chevron plant, before its June 1991 closure, was expected to pay $400,000 per year on spill-prevention measures and that had the plant remained opened, it would have had to pay as much as $1.5 million per year for this purpose in forthcoming years. The former plant manager regarded this cost as prohibitive, since the plant showed a consistent, modest annual net profit of $4 to $6 million for its various products. He said that the Nikiski energy facilities owned by several multinational corporations and the Alaska-based Tesoro Alaska Petroleum Corporation were expected to pay up to $10 million annually into the OPA co-op to fund spill prevention and cleanup equipment and to train personnel. The co-op was vulnerable to possible collapse if just one of its members withdrew. (Tesoro probably did not have a net wealth of more than $500 million, a small sum compared with the large multinationals. Yet it was expected to pay 43% of CISPRI's operating costs.)

Furthermore, Tesoro and other Cook Inlet fossil fuel industries that transport and *receive North Slope crude oil from Alyeska's pipeline terminal in Valdez were expected* by Alyeska to carry up to $1 billion in liability insurance, a burden Tesoro officials believed well beyond their company's reach. This requirement was announced by Alyeska when Tesoro was planning to upgrade its Nikiski plant. By June 1991, however, Alyeska revised its plan on liabilities; it now allows companies to operate in Cook Inlet and Prince William Sound without having to pay large insurance premiums.

A misgiving about the spill and OPA registered by one person was that it had given industry a quasi-governmental role: OPA could be interpreted to involve more corporate interference and decision-making powers in local governance. Large corporations involved in resource extraction and processing have played major roles in government since the arrival of large salmon canneries in Cook Inlet in the late 1800s. Despite the possible expansion of corporate powers, OPA had brought benefits to local voluntary groups. Citizens' groups help to scrutinize corporate conduct and the actions of the USCG, according to several respondents. As a counter to this assertion, one person said that the citizens' groups had become organs of special interests; for this reason, he was very suspicious of them. He expanded his cautionary comment by adding that special interests of any kind work against the general welfare and that checks on them should be insured. Scientific knowledge of high validity and integrity was the least partial instrument of decision-making.

The Exxon Valdez oil spill caused plans for exploration activities in the Alaska National Wildlife Refuge (ANWR) to come to a halt, and it contributed in fall 1991 to Congressional rejection of oil exploration there. According to one person, the Prince William Sound oil spill and cessation of corporate oil and Federal plans to drill in ANWR resulted in more fossil fuel exploration in Cook Inlet than at any other time in the past 8 to 10 years. The stepped-up activity had caused a small economic boom in the Nikiski-Kenai-Soldotna area, attracting many persons from the recession-ridden Lower 48 states.

The June 1991 closure of the Chevron facility at Nikiski probably was not, according to several persons, the result of the Alyeska-imposed liability or the provisions of OPA, requiring expenditures for CISPRI and CIRCAC. Rather, the plant shutdown was a decision made by Chevron officials in California who regarded the facility as outmoded, in need of considerable renovation, and insufficiently profitable in the overall accounting of corporate performance; and rebuilding, which was certainly needed for the 40-year-old plant, would have been an unsound financial move. On the other hand, the former plant manager believed that costs incurred by OPA played an important role in the corporate decision to stop production of oil product at the plant.

Several persons in the fossil fuel industries asserted that the Federal Government and the DEC had hurried too fast to impose new regulations on oil companies. The pace of enforcement should have been slowed, they said. And another person speculated that the oil facilities in the inlet were aging--all but one of the 15 platforms were at least 15 years old; and the safety requirements under OPA, and lessons that might be learned from the Kuwait oil-pollution disasters of the Persian Gulf War, would result in improvements in oil-spill prevention and cleanup.

II.A. Impacts on the City of Kenai

To place some of the other economic effects of the spill on Kenai in an intelligible perspective, a brief recent history of some economic trends in the city is helpful here. Kenai, like many towns in Alaska, grew rapidly in the 1970s and 1980s when oil revenues from North Slope developments created prosperity, services, and facilities on an unprecedented scale. From 1986 until 1988, however, Kenai experienced a decline in economic activity, so much so that the city lost some of its population to outmigration as oil prices on international energy markets dropped from $34 in 1986 to $10 in 1987. Business- and residential-occupancy rates fell 10 percent in about a year's time. Overall, the 1989 business year in Kenai was not comparably a bad one; it actually showed an increase over 1987 and 1988, which were years of recession following the slump in oil prices.

Kenai has experienced several business cycles during its recent history, and long-term residents have adjusted to these ups and downs. One person noted that a general consequence of each boom-bust cycle was that "newcomers did not dare ride out the downturn, unlike long-term residents." In 1975, for example, the economy declined in productivity and employment after the North Slope oil boom and completion of construction of the Trans-Alaska Pipeline. The next recession occurred in the mid 1980s with the plunge in oil prices. The Exxon Valdez oil spill was the harbinger of an increase in economic activity, even as the rest of the nation was deeply mired in a protracted recession.

Incidents of crimes in Kenai declined in summer 1989, in part because many recidivists went to work on the cleanup, according to one law enforcement official. Furthermore, some former and potential offenders (those well-known to the local police) went to work in the canneries. Their jobs were arduous and the hours long, so much so that, in the words of the law enforcement officer, "They were too tired to commit crimes during the summer," or "to steal their way out of town." Local residents who left to work on the cleanup returned to Kenai. From 1988 to 1989 incidents of assaults decreased from 167 to 159, burglary from 70 to 67, larceny from 286 to 253, vandalism from 183 to 165, possession of drugs from 49 to 44, and DWI's from 120 to 98. The total number of criminal offenses recorded by the Kenai City Police Department in 1988 was 2,091; in 1989 the figure was 1,882, a 10-percent decrease. Arrests declined from 977 in 1988 to 682 in 1989. The 1990 figures showed a substantial (23%) increase in criminal offenses from 1,882 in 1989 to 2,307 in 1990. Arrests rose from 1,682 in 1989 to 1,953 in 1990 (Kenai City 1991). The law enforcement official stated that an increase in transient men and women in search of jobs in 1990 accounted for increases in law enforcement cases.

During the summer, outsiders looking for work set up their tents near the mouth of the Kenai River. Kenai residents routinely expect these make-shift communities to *form--the migrants take any jobs they can. However, in summer 1989 tent-dwellers in* pursuit of work did not appear. Most likely they worked on the spill cleanup or on renovation of the Unocal natural gas liquefaction plant at Nikiski, in the less skilled part

of the project, to bring it up to date on environmental compliance. Plant renovation was itself a result of the Exxon Valdez oil spill. The EPA and DEC hastened their timetables for compliance and made more frequent inspections of fossil fuel facilities.

In addition to the effects on employment observed by Kenai residents, there were other effects that might have been less obvious but that were of considerable consequence to some persons. These persons believed that the Exxon Valdez oil spill hurt the peninsula's image. The former image, and a reasonably accurate one according to some persons, was of a clean, abundant, scenically grand environment. The oil spill, at least temporarily, resulted in a much-tarnished image.

Community leaders were asked about local community control and decision-making influence in the operations of oil-related activities in the Kenai area. Responses varied greatly, as one would expect. The then-new editor of the Peninsula Clarion said, "The more local involvement, the more local independence. Industries' problems are locals' problems. Is there ever enough control?"

A second community leader said that increased local control over oil-related developments might involve little more than adding needlessly cumbersome and numerous local regulations to existing State and Federal regulations. He added that the various advisory councils formed to oversee Cook Inlet fossil fuel industries ". . . wasted action; the bigger the committees, the less the positive action." And yet this respondent was quick to recognize that creation of a council was necessary because the public was greatly aroused over the spill.

A third person commented that the oil spill and its aftermath did not change fossil-fuel-consumption habits in Alaska or the other 49 states, nor had the U.S. Government changed its energy policy. She said that people were much more inclined to blame industry for problems associated with the use of fossil fuels than to work on amending national energy policy.

Moreover, the Exxon Valdez oil spill had not daunted the Kenai Chamber of Commerce from endorsing oil exploration in ANWR. Some persons who supported ANWR development noted with self-humor and irony that endorsing ANWR exploration

brought no direct liabilities to peninsula residents and that the NIMBY (Not-in-my-backyard) phenomenon was alive and well in Kenai. In March 1991, the Kenai Chamber of Commerce launched a grassroots campaign by sending 6,000 letters to Chambers of Commerce throughout the U.S. urging support for opening ANWR (Peninsula Clarion, March 16, 1991). Furthermore, Governor Hickel said that he had wanted to spend State monies to campaign nationwide for ANWR development.

The City of Kenai did not experience a decline in sales tax revenues in 1989 compared with 1988. Indeed, there was a small increase in 1989 over 1988 (Impact Assessment 1990:B-11).

One Kenai City councilperson said that the City received $300,000 on a total of $2.5 million in sales taxed by the city as a result of spending by cleanup workers. In addition to this income, the city received compensation for the loss of about $45,000 in dock fees when the drift-net fishermen were not allowed to fish in Cook Inlet during summer 1989. Another unexpected benefit was that public awareness of the dangers of oil transport greatly increased, and the oil industries received considerable related publicity that scrutinized all aspects of their operations.

There were many institutional conflicts in the aftermath of the spill, but ultimately institutional relations improved among governments on the peninsula compared with conditions prior to the spill. In the first few months after the spill, many institutions were not certain of their jurisdictional, legal, and regulatory boundaries. There was a great deal of confusion and several turf battles among towns, the borough, the State of Alaska, and Federal agencies. All of these matters needed clarification, and many officials made corrections and settled problems as they decided who was responsible for what. Most of these problems were solved. One person noted that one of the unpredictable and beneficial effects of the spill was that governments achieved a better understanding of their respective roles and authorities.

The city was experiencing a small economic boom in spring 1991, created by public sector spending by the city government--a boom likely to continue for at least a year or two. Several projects accounted for this increase in economic activity. A new visitors'

center costing about $1.6 million would be constructed in summer 1991; there would be a $1 million overhaul of the city sewer system to comply with EPA regulations on clean water. The airport would receive a $1 million expansion, an action that would require an environmental impact statement--which would require further expenditure of city funds. With a combination of State and municipal monies, the city would build a $7 million senior center. Several businesses would expand in consonance with these projects: an existing restaurant would expand, a new restaurant would be constructed, and a large motel once closed due to a recession would be reopened.

Commuting by air to Anchorage was relatively inexpensive. One could travel for as little as $80 round-trip, which for some persons who needed to make a few trips to Anchorage each month was much faster and safer than the 3.5-hour drive. Cheap fares offered by commuter airlines stimulated Kenai's economy and prompted the mayor to refer to Kenai as a "bedroom community of Anchorage." In 1990, 85,000 persons went through the Kenai airport. Kenai was served by United Parcel Service, DHL Worldwide Express, and Federal Express--all of the major rapid-service carriers--and by all of the national car rental companies.

In April 1991 the City of Kenai employed 84 persons--about the same number as in 1989--whose salaries ranged from about $20,000 to about $50,000 per annum. According to the mayor of Kenai, none of the employees left her or his job to work on the Exxon Valdez oil-spill cleanup.

The Kenai Women's Resource and Crisis Center was the only service facility to report a loss of staff or an increase in demand for services. Two of the 17 staff members and most of the 35 volunteers quit their jobs to work on the spill cleanup. Some of the volunteers returned after their work in Prince William Sound was finished; one of the permanent staff did not return. Occupancy at the shelter increased 30 to 40 percent during the summer and fall of 1989, much of which, according to staff members, seemed to have been the result of stress caused by husbands not being allowed to drift-net fish.

The Cook Inlet Council on Drug and Alcohol Abuse (CICDA) provides services for Soldotna, Kenai, and outlying communities and has a branch in Homer. The CICDA facility in Kenai provides an education series for abusive individuals, a drinking and driving seminar, a treatment and outpatient program, and an Alcohol Safety Action Program. The staff at the Kenai facility reported no noticeable impacts from the oil spill (Impact Assessment 1990). Moreover, the Central Peninsula Hospital, which had run a chemical dependency program since 1986, was also unaffected by the spill, according to staff members.

II.B. Impacts on Businesses and Households

Many businesses were adversely affected, including remodeling and construction firms that already were doing poorly in 1989 because of a downturn in the economy that began in 1986. There was a loss of work that normally would have come from drift-net fishermen who remodeled and rebuilt their homes with proceeds from a good fishing season. The fishermen were forced to cancel or delay projects. Heavy machinery was difficult to rent or hire because most of the larger construction companies were hired by Exxon and VECO. River guides were forced to halt services on the Kenai River; when ADF&G closed the Kenai, one person said "The smaller the community, the more effective the response to the spill" and thus the more widespread the economic downturn.

Suppliers of fishing equipment and fishing-gear repairs lost a great deal of business from the drift-net fishermen as of August 1989. One person observed that the fisheries and related businesses lost an entire cycle of purchase and repair business from drift-net fishermen. In 1989, fishermen planned to repair or replace boats, engines, and other equipment in anticipation of a more normal fishing year. These fishermen did not fish and very few rented their vessels for cleanup work; thus, one entire cycle of replacement and repairs was missing. Exxon-compensation income obviated any need for fishermen to make routine annual expenditures. They did not require loans, fishing permits, repairs, new equipment, or crew members. Indeed, at one point some of the fishermen put pressure on the Kenai Peninsula Borough to ensure some fairness or equal

distribution of boat hires by VECO. According to one person, few, if any, Kenai boat owners were hired.

Field researchers received very few comments about the purchases made by set-net fishermen from oil-spill-cleanup earnings. The few comments made were largely speculative. There was little information collected about the difference between local and absentee fishermen and their relative effects on the local economy.

In August 1989, the information available about the spending patterns of cleanup crews was anecdotal. It was known that the unemployment rate in Kenai had dropped precipitously, from about 10 percent to 3 percent. From this figure many persons concluded that workers hired at VECO's Anchorage office were erstwhile unemployed persons. Although VECO did not hire on the peninsula, applicants went to Anchorage to seek placement on the cleanup. These workers, so some further speculation went, were paying overdue bills; and some with surplus cash intended to buy land and houses.

The reduction in unemployment adversely affected many businesses because some skilled persons (welders, mechanics, and others) left their regular jobs for higher paying cleanup work. One obvious result was that businesses and households suffered from a shortage of handymen. Wages at fish plants rose from about $6.00 to $8.00 per hour and persons looking for work in Kenai expected salaries starting at about $10.00 per hour--a *sum considerably above the customary average.*

The loss of personnel at the Kenai McDonald's restaurant was a major example of stress and financial loss from the direct and indirect effects of the spill on a community that lost--rather than gained--population and workers. The franchise holder and manager of the restaurant (and a second one in Soldotna, 11 miles from Kenai) was unable to hire a full staff because recent high school graduates and others had taken work on the cleanup. She often worked from 6 a.m. to 8 p.m., taking only 3 days off in several weeks' time. Her business was shorthanded, but because she did not want the quality of her service to decline, she worked longer hours. Regardless, the restaurant's business fell off by 10 to 15 percent because there were fewer fish processing workers. The processors who normally placed 20 or more large orders of $450 or more each day,

placed only three such orders in August 1989. She made large, personnel-wage-labor subsidies to her business by putting in many hours and she also had difficulty finding assistant managers because of competing cleanup wages. She also paid higher-than-normal wages at the restaurant.

By mid-July, the owner of the McDonald's franchise was able to convince some school teachers, who would not otherwise have taken a summer job, to work for her. The business survived, but the franchisee said that she did not believe she could endure a similar ordeal. She remarked, with some irony, that the news media placed far too much emphasis on wildlife losses from the spill and much too little on the people who suffered mental and physical stress.

The borough mayor and his staff mobilized their resources, working many extra hours and making a trip to Washington, D.C., to seek assistance, according to a respondent who was a borough assemblyperson. During this time, the borough routinely publicized reports on effects of the spill and actions taken to reduce the worst effects. As the McDonald's owner said, *"The Mayor damned near killed himself from work."* About the spill she said that "I do not want an outside force to determine my future." She further commented that economic cycles in Alaska were less and less predictable. In the past 5 years, Kenai has experienced (1) a drop in oil prices, (2) a brief, mild recovery, and (3) the oil spill. Each cycle created its special anxieties.

The real estate market was hurt by the spill, according to available anecdotal evidence. Some insurance agents who normally sold commercial real estate to drift-net fishermen had to shift to home insurance sales because of a decline in the usual purchase patterns. This change in business emphasis was difficult for some agents.

More jobs were lost (450) than gained (400) because of the spill. These figures are evidence of considerable economic effects of the spill on Kenai's work force and businesses; as many as 22 percent of the jobs were affected by the spill--10 favorably and 12 unfavorably. Furthermore, only 7 percent of our key informants said that they gained income because of the spill, while 12 percent said they lost money. One in 10 persons in the 1991 sample of key households gained employment as a result of the Exxon Valdez

oil spill. About half of these jobs were in the oil-spill cleanup. Other jobs taken were in businesses in Kenai and other communities whose work opportunities increased after the spill--motel, airport, car-rental service, and oil workers were hired to replace persons called away to the spill. Interpolating from our sample, it is likely that 100 persons left the City of Kenai to work on the spill, and about 300 persons acquired jobs in sectors of the Kenai economy affected by the spill.[1]

A negative consequence of the spill was that just over 12 percent of the persons interviewed reported that they, or one or more persons in their households, lost their jobs. One person was forced to relocate because she lost her job as a result of the spill.

Five percent of the key informants in 1991 lost some property to the effects of the spill; we do not know how many gained property because we did not ask about property gains. We know that new jobs created by the oil spill allowed a few persons to purchase land, housing, and other properties. We have no systematic data on property acquisition for the entire sample.

Five persons who said they experienced financial losses as a consequence of the spill believed that they were not adequately compensated, and one person said that compensation was adequate. Most of these respondents were drift-net fishermen. Those fishermen who were dissatisfied said that Exxon made determinations of compensation without consultations with individual fishermen and that psychological miseries, some of which were considerable, were not part of the settlements.

The spill also caused reduced environmental monitoring in Cook Inlet. The EPA, DEC, USCG, and ADF&G employees were kept busy in Prince William Sound preparing a cleanup and monitoring program during the first few months following the spill. However, by summer 1989, EPA, DEC, and USCG were making frequent, surprise visits to Cook Inlet oil and gas industrial facilities and vessels to monitor environmental performance.

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[1] These estimates are based on the assumptions that the Kenai labor force had about 4,800 persons on average from 1989 to 1991, that unemployment was about 10 percent, and that about 10 percent of the jobs were dependent in one way or another on the many effects of the oil spill.

Fish processors found the plentiful supply of labor in 1990 in great contrast to the 1989 season, when erstwhile cannery workers either did not go to Alaska--thinking the spill had badly harmed all Alaskan fisheries--or went to Anchorage or Prince William Sound to hire on with the VECO cleanup. Obtaining an adequate labor supply was difficult for processors that depended on local labor, in contrast to processors in the Seattle area that had a reasonably steady labor supply among whom they advertised each spring.

The labor market in Kenai was uneven for employers in 1990. The McDonald's restaurant, which was short of workers in summer 1989, continued to experience difficulties in recruiting a sufficient number of employees well into 1990. The labor supply improved in late 1990 and continued to improve into early spring 1991. The franchisee raised wages $.45 above the State's minimum to $4.75 per hour during the oil-spil-cleanup period. In order to attract qualified persons, she raised wages again to $5.75 in June 1990. Prices at the restaurant also were raised--without customer complaints. During summer 1990, the restaurant enjoyed its largest sales volume in its 6 years of operation. The franchise holder attributed her success to excellent weather despite a poor commercial fishing season.

From November 1990 to February 1991, an increase in gasoline prices from $1.39 to $1.80 per gallon and unusually bad weather combined to reduce traffic to Kenai. It is also possible that anxieties over the Persian Gulf war caused a decline in the traffic to Kenai. The consequence was a downturn at McDonald's restaurant from November 1990 to February 1991, at which time the Kenai manager-owner reduced wages to $5.25 per hour.[2] The restaurant had 47 employees; some worked as little as 8 hours (1 day) each week, while the majority put in between 30 and 40 hours each week. Job applications increased during this period and on through the spring despite the reduced wage rate because there were many newly arrived, unemployed job seekers from the

[2] The downturn in business is not speculative, but the cause may be because McDonald's franchises throughout Alaska experienced a downturn during the winter of 1990.

Lower 48 states. Peninsula schools gained 500 in enrollments, requiring 25 more teachers to alleviate the burden on the teaching staff. The McDonald's franchisee said that her Soldotna restaurant was one of the most successful in the corporate region (including Oregon, Idaho, Montana, Washington, and Alaska). She also said that business slumps hit Kenai before Soldotna because Soldotna had a larger proportion of professionals and was less prone to economic swings, especially those dependent on the oil industry.

One reason for the slow recovery in the labor supply after the Exxon Valdez oil spill was that some of the oil-spill-cleanup workers qualified for and used their unemployment privileges, and there were some former cleanup workers who left Kenai. In both instances erstwhile workers were removed from the local labor supply. In mid-March 1991 there were only 47 jobs, all nonprofessional, posted in the State Employment Office in Kenai.

The spill year, 1989, saw serious labor shortages for lower-paying wage work; 1990 was, ultimately, the opposite of this. Businesses contacted for interviews reported about-average numbers of applicants in March and April 1991. Two circumstances created this condition: there was little oil-spill cleanup and the peninsula was the destination of many persons from the Lower 48 states who were looking for work--many of whom had heard from kinspersons, friends, acquaintances, and strangers of an increase in jobs in Cook Inlet energy industries. Some of these job seekers were out-of-work loggers from the Pacific Northwest; many persons had heard that Governor Hickel favored construction of a natural gas pipeline from the North Slope to Valdez, and this had prompted some persons in the Lower 48 to move to the peninsula.

Many seasonal workers and some of the oil-spill workers returned to their hometowns in the Lower 48 states, where they extolled the beauty and majesty of the Kenai Peninsula. This word-of-mouth means of conveying to others the grandeur of Alaska attracted many newcomers. Many of these job seekers were stranded in Kenai and Soldotna without work, and a record high number of persons in both communities used local food banks. Furthermore, there were about 1,000 HUD homes for sale in

Alaska in 1989; and because of the economic slump at that time, HUD reduced the sales prices. Some of these houses could be purchased for as little as a $100 down payment. In late 1990 housing prices fell in the Anchorage area and on the peninsula. This also might have been another incentive for people from the Lower 48 to migrate to Alaska.

Unions played a central role in oil pipeline work and State politics during construction of the Trans-Alaska Pipeline, and apparently they experienced a temporary surge in membership during the spill cleanup. A union official said that the Exxon Valdez oil-spill cleanup brought many new members into Laborers Local No. 41 in Kenai and into locals in other parts of Alaska. They worked for VECO, and the unions set the wage scale at from $10.00 to 18.00 per hour with overtime, per diem, and fringe benefits. Some of the new union members returned from the cleanup to take jobs in VECO operations other than the cleanup. The nonunion-wage scale was $16.69 per hour with overtime and per diem but no fringe benefits. The unorganized workers would have received union fringe benefits had they requested them because Exxon was willing to pay for them.

During the second year of the cleanup, the Laborers' Local did not place members on the job. Cleanup wages were $12.00 per hour, and VECO hired only about 200 workers. Exxon had a reputation for not yielding to unions, according to one union official. This circumstance was, in the union official's words, "One of those things. This all points out how powerful oil companies are." The union official also said that Exxon could have paid higher wages in summer 1990 without financial hardship. Unionized cleanup workers spent their income on home improvements, new housing, vacations, and sundry other expenditures.

One respondent estimated that income from the oil-spill cleanup was spent within 12 months of the cleanup period. Many Kenai residents believed that there would be a second lengthy cleanup period in 1990, but this did not happen and unemployment benefits received by cleanup workers who had not taken new employment had expired by spring 1991. Furthermore, some of the cleanup workers who had moved to Kenai from other parts of Alaska (many of whom had joined the Laborers Local) stayed on in Kenai

in hopes of obtaining employment in the forthcoming city and private-business-construction projects. These projects had not started as of spring 1991, and several were not scheduled to begin for a year or longer.

Several Kenai organizations had the specific goals of economic planning and promoting economic growth. Those contacted in August 1989 were the Kenai Chamber of Commerce, Kenai Peninsula Borough Economic Development District, Kenai Native Village Corporation, Salamatof Native Corporation, and Kenai Bicentennial Convention Bureau. These organizations promoted tourism, real estate, and mineral development and were competent and determined to rejuvenate and expand the peninsula's economy. Their representatives placed considerable emphasis on development, although they expressed regrets about the oil spill and believed that it was the result of negligence on the part of all parties concerned. One of these persons said, "Captain Hazelwood poured the gasoline, someone else lit the match." Representatives of organizations supporting further economic development stated that spills in general were inevitable, but they also believed that more energy development was desirable for Cook Inlet. Fifty-five percent of our key informants believed that Exxon and the Federal and State Governments were to blame for the Exxon Valdez oil spill. Twenty percent believed that Captain Hazelwood alone was at fault.

Tourism overall had shown a steady increase on the peninsula, although the pattern of spending and visits had changed. The Kenai Chamber of Commerce visitor registration book had about 16,000 signatures by August 25, 1991--down 1,000 from 1990, the record year. On August 28, 1991, the Kenai Chamber of Commerce had recorded 5,584 visitors, compared with 6,927 by the same date in 1990. This decline was expected by chamber officials due to the imposition of ADF&G's catch-and-release recreational fishing policy on the Kenai River; the start of Operation Desert Storm, which occurred when many Lower 48 families were planning their vacations; and the subsequent increase in gasoline prices. The Kenai Chamber of Commerce conducted a huge effort to promote tourism during the 1991 bicentennial year of Russian settlement on the

peninsula by mailing 38,000 pieces of tourism information, and chamber officials believed the tourist year would have been worse without this effort.

In September 1991, the Kenai Peninsula Economic Development District released a report prepared under contract to Fox Practical Marketing and Management, a private research corporation, on tourism on the Kenai Peninsula. The report was revealing and important to peninsula residents. Fox estimated that 250,000 visitors annually spent about $96 million on the peninsula, supporting about 2,000 peninsula jobs. Roughly 180,000 of the 250,000 visitors were from points in Alaska, the majority from Anchorage (Lewis 1991c). Tourists from out of State spent about $20 million and State residents $76 million. In-State visitors made an average of 4.3 trips to the peninsula during the year (in this case 1990-1991, July to July). From 1985 to 1989, there was a steady increase in non-Alaska tourists: 5 percent in the Kenai-Soldotna area, 6.8 percent in Homer, and 9.3 percent in Seward. These visitors spent an average of 17 nights on the peninsula (1991), compared with 3 nights in 1987. They spent $8.7 million in the Kenai-Soldotna area (more than any other area on the peninsula).

II.C. Impacts on Commercial Fishermen and Fish Processors

The United Cook Inlet Driftnet Association (UCIDA) is one of the major resource institutions in Cook Inlet. Two of its officers were interviewed in April 1991. The UCIDA had between 350 and 450 of the 585 drift-net fishermen in Central Cook Inlet. The UCIDA officials said that drift-net permits sold for about $180,000 in 1991. Commercial fishing with drift nets required about 3 years to learn and several additional years to earn a steady profit. Set-net permits were valued at $70,000 to $80,000 in the same year. This method of commercial fishing also required several years to learn and to earn a reasonable profit. Drift-net fishermen experienced some of the most serious adverse effects from the oil spill. These fishermen, in contrast to most of the set-net fishermen who work the shoreline and riverline, were closed out of fishing during 1989 by ADF&G. The actions by ADF&G were taken only after extensive consultations with fishermen when oil was discovered in the central channel of the inlet. Set-net fishermen were not allowed to fish in Cook Inlet from Anchor Point on the south to as far north as

Kasilof. There are about 700 commercial set-net fishermen in Upper Cook Inlet. Nonetheless, the set-net fishermen caught about 5 million salmon, chiefly the commercially valuable sockeye in one of the richest harvests on record. The harvest was fortuitous in that it had nothing to do with the spill. Had drift-net fishermen been allowed to fish they too would have enjoyed the record year. The scattered oily remnants from the original pool of oil had not harmed adult sockeyes so far as anyone was able to determine.

Drift-net fishermen met repeatedly with ADF&G representatives before and during the fishing season, hoping that an opening would be announced; but none came. The ADF&G followed a zero-tolerance policy to ensure a clean harvest and preserve the favorable reputation of Alaska commercial and recreational salmon. The fishermen largely followed this policy without serious protest, but they suffered emotionally and financially. Some boat owners were saved from financial ruin because there was a spill and they were compensated by the Exxon Corporation for the fish they could not catch. And some cleanup workers earned enough money to purchase businesses in Kenai. Cannery workers who lost time also were compensated (from $200 to $1,000 per worker). For the most part, fishermen in our sample and others with whom we spoke seem to have been satisfied with the Exxon payments made to them in the summer and fall of 1989.

People who went into commercial fishing hoped to achieve some measure of independence. In the words of one person, the Glacier Bay and Exxon Valdez oil spills ". . . saddled them with all that crazy work." Some fishermen signed releases after the Glacier Bay spill simply ". . . to get away from the problem." There had been divorces that were in part the result of the Glacier Bay and Exxon Valdez spills, and some fishermen resumed drinking and smoking because of the pressures on them in summer 1989.

One person said that the 1989 summer commercial fishing season was crucial to him and his children. The man said he couldn't wait to fish with his son and daughter, who were then 12 and 14, respectively. The three were expected to fish that year, and

the man said "My kids will never be that age again; and although this might seem like a small thing, but fishing together that year would have been very important to us." He said it was ". . . hard to quantify, but it is the biggest loss to me" [of all the adversities caused by the Exxon Valdez oil spill]. He added that fishing provided individual meaning to many fishermen. He had seen tough, rough-cut, individualistic men "come down" as a result of the Exxon Valdez oil spill. According to this respondent, between 30 and 40 percent of the fishermen were professionals in occupations other than fishing; another 30 to 40 percent had skills they routinely put to use outside of fishing; and 10 to 50 percent had no other occupation other than fishing, and they spent their time repairing and maintaining their equipment and were fully immersed in their craft. Most fishermen had close kin, usually their immediate families, as their fishing crews.

Oil spills had shaped much of UCIDA's recent financing and activities. The UCIDA was established in the late 1970s. Its purpose was to help members with marketing their salmon harvests--the major function of the organization in 1991. Other goals emerged in time. One of them was to lobby as one of 23 member organizations with the United Fishermen's Association (UFA) in the Alaska State Legislature to preserve natural salmon stocks. Salmon hatcheries were seen as a threat to UFA. Equally important were threats from oil spills--there were three in Cook Inlet during the 1980s. The first was an accident in 1987 that caused the 774-foot tanker Glacier Bay to spill between 33,000 and 202,000 gallons of North Slope crude oil about 2 miles from the mouth of the Kenai River in the central Cook Inlet fishing district during the largest return of Sockeye in early July. This was the largest oil spill in Alaska's water up to that time. Some fishermen were stopped from fishing while the oil dissipated. This event placed new burdens on UCIDA and created new roles for it. Before the Glacier Bay spill, annual dues were $100; but the spill imposed new legal demands on the UCIDA and the members voted to raise annual dues to $200--the sum members paid as of spring 1991.

The Glacier Bay oil spill permanently changed the lives of some of the drift-net fishermen who did not resolve their spill litigation until 1991. Exxon was much more

responsible and prompt in compensating the parties harmed by the Exxon Valdez oil spill than was the Trinidad Shipping Company, which owned the Glacier Bay and had since filed for Chapter 11 bankruptcy. Several owners of the oil carried by the Glacier Bay also were involved in litigation. The economic, social, and legal impacts of the Glacier Bay spill were enormously complex, time-consuming, and confusing. Fishermen had to file extremely detailed claims, among other frustrating and painful actions such as long, anxious waits for resolution of compensation. These events exemplified the difficulties experienced by everyone affected by a spill involving a relatively small and obscure company tangled in multiple ownership. Furthermore, the Glacier Bay spill might have contributed to a drop from $1.60 to $1.40 in the per-pound price of salmon sold by fishermen, whereas the Exxon Valdez oil spill did not influence prices one way or the other.

Litigation over the Glacier Bay oil spill continued into 1991. In September 1991, a Federal District Court jury in Anchorage ruled in favor of Tim Keener and 15 other Cook Inlet commercial fishermen (set gillnetters) in the amount of $2.55 million--after more than 4 years of effort to receive compensation for lost fishing time and fish. Keener operated a fishing site near the mouth of the Kenai River. The plaintiffs charged that processing plants dropped their per-pound price for sockeye salmon, the major Cook Inlet commercial species, from $1.70 before the spill to $1.40 after the spill (Huber 1991c). The plaintiffs also claimed that they were prevented from harvesting about 3 million sockeye salmon valued at roughly $12.00 each. Keener said, "Finally, the sun has come out."

Compensation to Cook Inlet fishermen was expected to reach $15 million and was to be distributed among 109 other fishermen who had earlier refused payment of about one-third the sum of the court judgment offered by Trinidad Shipping. This settlement was expected to financially compensate the fishermen in the months after a very poor summer 1991 fishing season (the worst compared to the previous decade). However, an appeal of the Federal District Court's decision could delay payment.

In summer 1991 commercial fishermen harvested 7 million salmon on their way to the mouth of the Kenai River. About 80 percent of the 700 compensatory-damage claims filed against Trinidad in 1987 were settled. The next court case related to the Glacier Bay spill sought punitive damages involving Trinidad and 29 other defendants--including Tesoro Alaska--that owned the oil. Punitive damages are generally larger than compensatory damages. The Glacier Bay settlement could have a substantial influence on the punitive-damage cases carried by lawyers for 800 drift-net fishermen in the forthcoming claims against Exxon (Huber 1991c).

In 1988 another spill--of unknown origin--occurred in Cook Inlet. Considerably smaller in magnitude than the Glacier Bay and Exxon Valdez spills, it nonetheless caused additional worries among fishermen and further misgivings about the oil-transport industry. Some UCIDA members work in the oil and natural gas industries in the inlet, and they wanted to help guarantee compatible uses of fossil fuels and fish. The UCIDA officially supported ANWR oil exploration and has tried to work with Kenai Peninsula sport fishermen.

Oil from the March 24, 1989, Exxon Valdez oil spill reached Cook Inlet within weeks of the accident. By that time the peninsula communities of Homer, Seldovia, and others had been affected by the oil. Within the first few days after the spill occurred, the Kenai Peninsula Borough took quick and firm action to contain the oil and alert communities of its inevitable arrival.

The closure of drift-net fishing caused the organization and allocation of the fishing sector of the economy to be greatly affected, with some set-net fishermen receiving unexpectedly large incomes while drift netters were left idle, or left to work for set netters or wait for Exxon to compensate them justly for their losses. In most years, drift *netters accounted for 50 to 85 percent of total commercial fish hauls.*

Upper Cook Inlet had about 750 set-net fishermen and 600 drift-net fishermen in 1990. The drift-net gillnet fishermen in the Upper Cook Inlet were to receive compensation for a harvest level of 5.9 million sockeye salmon (Peninsula Clarion, March 8, 1989) at $1.70 per pound. Fishermen were to be compensated based on their

average catch for 1986 and 1988. UCIDA, representing most of the drift-net fishermen, asked compensation for an additional 200,000 fish, claiming that this figure was closer to what the fishermen would have harvested had the closure not occurred. This amounted to 6.1 million fish for 1989, a figure UCIDA arrived at by adding the 4.9 million sockeye caught by set-net fishermen and a 1.2-million Kenai-River overescapement. The ADF&G had predicted a harvest of about 2.5 million fish; but the run was much larger than this, and the set-net fishermen hauled in 4.9 million fish--testimony to the ability of set-net fishermen to harvest large catches (Peninsula Clarion, October 9, 1989).

The record-high sockeye run in the Kenai River and its tributaries occurred because the central portion of the Cook Inlet channel was closed to commercial fishing and the sockeyes were at the high-run part of their cycle. The record run of about 6.1 million sockeyes was about double the usual number. Dip-net fishing for local household consumption also was permitted on an unprecedented scale. Tourism increased throughout 1988 once travelers learned that Cook Inlet streams had not been contaminated by the oil spill.

The UCIDA members emphasized that human beings had been fishing in Cook Inlet for about 10,000 years; and they wanted to ensure that one of the oldest human enterprises continued. One of their worries was that industries extracting nonrenewable resources treated Alaska as a frontier, a place where industries could do as they pleased without regulatory interference or a larger responsibility to society and nature.

Employment at fish processing plants was adversely affected by the Exxon Valdez oil spill. Canneries had difficulty getting enough employees in summer 1989, several months after the spill, because many of the people who usually worked for them had been scared off by graphic media reports on the adverse environmental effects of the oil spill. These erstwhile workers believed that Cook Inlet fisheries had been ruined for the season. They either stayed out of Alaska, or they went to Prince William Sound to work on the cleanup for wages far surpassing those they would have earned by processing fish. This absence of the customary pool of cannery workers left processors short-handed, and

plant managers were forced to take unorthodox and occasionally drastic measures to get through the season.

The manager of Kenai's Salamatof fish processing plant, who had been in commercial fishing since 1949, said his company and the drift-net fishermen his company worked with were treated efficiently and effectively by Exxon after the Exxon Valdez oil spill. Compared with the problems the fishermen and his company had over the Glacier Bay spill, working with Exxon presented no serious problems. The plant's employees who lost work time also were well compensated. The plant manager, who was satisfied with Exxon's compensation, said that settling with Exxon was very simple. Exxon made one visit to the plant and agreed to a settlement once the Exxon lawyers realized that Salamatof was serious about pursuing compensation. The plant manager added that a spill involving another company would have been a disaster for those who eventually were compensated by Exxon; restitution would have been much more difficult, if not impossible.

The manager went on to say that oil spills were inevitable, but that they should be avoided as much as financially feasible. Fishermen always faced uncertainties and risks--oil pollution among them. He also commented that fish processors did not communicate with each other and that each made settlement with Exxon on its own.

One observer said that fishermen who worked on the spill cleanup came from *several locations--Cook Inlet, other parts of Alaska, and the Lower 48 states. Those who* earned the greatest sums (for boat rentals and other cleanup work) were buying new equipment for their fishing operations in the inlet (as of spring 1991). Very few of the fishermen, according to this and other sources, were entirely dependent on commercial fishing for their income; many of them were property owners and professionals of one kind or another, and few of them were in arrears on permit payments.

Some processors had to ship fish at great cost to plants in Kodiak because they lacked employees to keep up with the numbers of fish brought in by set-net fishermen. One plant manager said that processors did not turn away the set-netters because they

needed them as steady suppliers from year to year. These observations followed on the heels of the worst effects from the spill.

The 1990 commercial fishing season in Cook Inlet was poor. For comparison, one fish processor who had been in the inlet many years processed only 800,000 pounds of sockeye salmon in 1990 compared with the spill year (1989), when 2.45 million pounds were processed. The poor year might have been related to the Exxon Valdez oil spill, but it also could have been a low year in the cycle of sockeye arrivals in the inlet; and perhaps effects could be attributed to other causes yet to be determined. This company needed to process about 1.5 million pounds in a season to break even: 1990 was a year of loss, and apparently all species of salmon were low in numbers in 1990 with the price of sockeye at about $1.55 per pound. One fish processor said there were so few fish to process that "We got to know them by their names." Sockeye runs are low every 4 to 6 years.

In 1990, the ADF&G allowed an escapement of 400,000 sockeye before opening the commercial season; and that number had not been reached as of late July, the period of highest sockeye counts on the Kenai River. Only about 240,000 fish had been counted with sonar devices at the mouth of the river. Subsistence fishing also had been stopped. Fish processors had no more than a few days of full shifts for workers; and the cannery workers, cannery managers, and commercial fishermen were greatly distressed over the situation (Huber 1991a).

Processors did not depend solely on sockeye. The processing season begins in the inlet with herring, followed by black cod, halibut, salmon, and, in October, shortly before the yearly shutdown, halibut again. Workers who stay throughout the season earn a bonus; and students, the bulk of the workforce during summer months, earn about $4,500 for a full season at a wage of about $6.00-6.50 per hour. Some processors supply housing and dining facilities for seasonal workers.

Data on the Upper Cook Inlet 1991 fishing season showed for the second year in a row that fishermen, especially those in commercial sales, had a distressing year. Only 2.8 million salmon were harvested in 1991. The catch was 2 million less than 1989 and 1

million less than 1990. From an expected 1991 harvest of about 3.8 million, exactly 2.2 million sockeye--the prime commercial species in the inlet--were harvested by set-netters (39% of the total) and drift-netters (61%). Other species and quantities harvested were 16,200 pink, 8,500 chum, 368,000 coho, and 13,900 chinook--all less than forecasted. Several conditions contributed to the dismal 1991 fishing season--a small return of salmon to spawn, low prices, a strike by the fishermen against low prices, dismay and confusion over subsistence-fishing regulations, continuing strife between commercial and sport fishermen, and a controversy between an ADF&G fish biologist and Alaska's Governor Hickel.

Commercial per-pound prices were about 60 percent below 1990 prices (between $1.00 and $1.20). Many fishermen did not earn enough money to pay their seasonal fishing expenses. The economic and social consequences were expected to be dire for the peninsula economy into 1992. The Kenai Peninsula Fishermen's Association expected to seek new markets for Cook Inlet salmon during the off-season, to include aquaculture as well as wild stocks of fish. (The 1992 king salmon sport season was successful and the sockeye commercial harvest was large.)

Sport fishermen harvested about 18 percent of the 1991 king salmon escapement (7,000 of 34,300). Set-netters took about 13 percent. An estimated 87 percent of the total king salmon run reached the Kenai River for escapement (reproduction upstream) and for subsistence- and sport-fishermen harvest. Set-netters released most of the kings they caught, and many of them donated money from their king harvest to the Kenai River King Salmon Fund set up in 1991. The king salmon subsistence harvest was stopped by the State of Alaska when commercial harvest of the species was closed due to lack of escapement. This source of controversy was to be resolved in court.

II.D. Impacts on Community Relations

There were some hard feelings among some local persons between those who did and those who did not work on the spill cleanup. These parties exchanged harsh words on certain occasions and some family relationships and friendships were under enormous stress. Some people who had not worked on the spill viewed some of the local cleanup

workers as opportunistic, self-serving, and slightly cynical--willing to trade on the misfortunes of others. Those most harmed financially were the drift-net fishermen; those who gained most financially were the set-net fishermen and persons who worked on the spill cleanup.

If there was a critical point at which a person left his/her job for work on the oil-spill cleanup, it eluded my investigation. It was evident that jobs paying under $10.00 per hour were vacated. Jobs that provided full-time employment, benefits, and good pay were not absented. One person who quit a job and went to Prince William Sound for employment with VECO worked for an annual wage of $24,000. This person left to work on the spill with little interest in or expectation of being allowed to return to his original position. The cleanup job lasted from May 1991 to September 1991. Upon his return to Kenai he had no luck in getting a new job. But this hardy, independent person was not worried about getting work. He commented that the cleanup was not particularly helpful in achieving its publicly stated goal, but Exxon's effort ". . . quieted many people and got rid of oil on top of rocks."

Another respondent affected by the oil spill said that she was teaching college courses in Cordova when the spill occurred. Within a few weeks, she lost 85 percent of her students. She claimed that the students left because their parents earned enough money on the cleanup to purchase homes outside of Cordova and move away permanently. The woman moved with her husband and children to Kenai, where the family purchased a house they could afford (in contrast to the Cordova housing opportunities at the time). Her husband taught in Cordova and traveled to his Kenai home as often as possible while the woman watched over the house and children.

There was some animosity toward oil workers when the energy industry was young on the peninsula; but as one person pointed out, "The industries brought produce and fresh fruit to Kenai." In addition to the benefits already cited, the industry brought other benefits--albeit unintended ones--to the natural environment. The roads and other facilities constructed by companies increased public access to wild areas for a cross-

section of interest groups that led, on occasion, to more interest and involvement in resource management.

Furthermore, some persons lauded the energy industries for restoring some of the lands they cleared. Groundwater and some surface waters, however, were often regarded as damaged beyond remedy. There were frequent complaints about new DEC appointees who seemed to know very little about environmental processes and measurement of the degree of harm that certain substances cause.

There were conflicts between oil companies and environmentalists over toxic wastes. For example, the Greenpeace flagship Rainbow Warrior docked at the Drift River oil terminal on the western shore of Cook Inlet on Tuesday, July 23, 1991. While taking sediment samples there, the crew raised a flag with the words "Valdez. Perth. Your Coast Next. Clean Energy Now," which referred to a July 21 6-million-gallon oil spill that occurred off the coast of Australia. The Greenpeace crew wanted to get a message to local people about threats from fossil fuel industries. The Greenpeace Northwest Office media coordinator said, "We're planning a nonviolent protest. The oil industries are blatantly involved in dumping heavy metals and all kinds of pollutants into the inlet, and they've got to be held responsible for cleaning up."

On the following day, one crew member hung a banner from the Unocal dock in Nikiski that read, "Break the toxic cycle. Don't spOIL Alaska," and "Industry regulates itself and no one knows what's going into the water. We feel there's a chronic toxic release problem [in Cook Inlet]. We call it the 30-year spill." In support of Greenpeace, a drift-net fisherman said that he did not know much about Greenpeace, and he had not protested against the conduct of oil companies; but on July 24, he said "I've lived here my whole life. I've never, never clashed with the oil industry . . . but they've pushed me to the limits of my emotional balance. I'm not an anti-oil kind of guy. I'm anti-irresponsibility" (Lewis 1991a). One person on the beach near the Unocal dock shouted obscenities at the demonstrators.

The chairperson of the peninsula-based Public Awareness Committee for the Environment (PACE), headquartered in Kenai, was quoted in the Peninsula Clarion as

saying, "We hope to keep [Cook Inlet] from becoming another Chesapeake Bay, Saint Lawrence River, Great Lakes, or Columbia River" (Lewis 1991b).

PACE had become an important force on the peninsula: in 1991 it had 75 members and the number was steadily increasing. The organization had five major purposes:

- Educate the local community on environmental subjects;
- Advocate proper and viable uses of Alaska's natural resources;
- Provide information and support to victims of pollution;
- Provide information and support to other environmental organizations; and
- Help in restoring the environment of the Kenai Peninsula and the entire State (PACE 1991).

II.E. Summary and Conclusions

The Exxon Valdez oil spill, and subsequent efforts by the Exxon and VECO corporations to remove oil, drew an estimated 300 persons from Kenai to Prince William Sound. Some of these migrants vacated lower-paying jobs in Kenai, those which paid *about $5.00 to $7.00 per hour; for this reason many small businesses were left short-*handed. Independent repairpersons, mechanics, equipment operators, fish processors, and others quit their Kenai employment to search for the high-paying spill-cleanup work that paid well over $1,500 per week. Others who sought work were unemployed persons who would not have otherwise gained employment during the summer period. Some business owners and managers had to work extra hours to fill in for employees who left the community. Fish-processing plants also were shorthanded, either because their customary workers stayed away from Cook Inlet--thinking it was seriously contaminated with oil--or to work on the spill cleanup. Processors, not wanting to lose steady suppliers, purchased the fish brought to them; but because some of them were short of laborers, a certain quantity of fish could not be processed. Crimes declined in frequency in 1989 because many habitual troublemakers also pursued jobs on the cleanup.

The 1989 sockeye run was huge, with about 5 million fish harvested under ADF&G management. The drift-net commercial fishing season was closed by ADF&G because

oily remnants of the spill were found in the central channel of Lower Cook Inlet, the section of the inlet where drift-net fishermen harvest fish. Although Exxon eventually compensated these fishermen for their losses, and although most of the 600 or more fishermen were pleased with the sums they received, there was a period of great anxiety and uncertainty during which the fishermen did not know if the season would be opened and whether they would receive settlement from Exxon.

On the one hand, UCIDA expressed pleasure, for the most part, with Exxon's timing and levels of compensation: fish processors acknowledged prompt and just compensation soon after meetings between the processors' attorneys and Exxon representatives. On the other hand, the set-net fishermen who work the shores of the inlet were allowed to harvest salmon in 1989: they brought in record hauls and record incomes. This anomalous circumstance created some bitterness and controversy between drift-net and set-net fishermen, some of whom were in the same family and the same friendship networks. Moreover, there were some hard feelings between drift-net fishermen and their friends and families, and persons who worked on the spill cleanup. The fishermen believed that their misfortune was callously used to others' advantage. Anger also was expressed against fossil-fuel-industry employees and their families, the impression being that these persons were part of a monolithic entrepreneurial presence that had no feelings for people and nature. Businesses that ordinarily supply the drift-net fishermen with equipment and loans and sell properties to them suffered from lack of business. In all, there was a feeling of despair and futility among many drift-net fishermen. A sense of the inevitability of oil contamination of Cook Inlet was in wide evidence throughout Kenai. This attitude stemmed, in part, from experience. For example, in 1987 the vessel Glacier Bay spilled between 33,000 and over 100,000 gallons of oil at the mouth of the Kenai River during the drift-net commercial fishing season; and many fishermen were still processing claims from that accident. (In December 1991, applicants received compensation from the companies involved in that spill.)

The City of Kenai filed for and received compensation for loss of about $45,000 at its loading dock, where some business had been lost during the closure of drift-net

fishing. Kenai city officials estimated that the city's economy received an infusion of about $2.5 million from monies spent by cleanup workers who returned to the community. This increased consumer spending earned the city about $300,000 in taxes. Furthermore, unlike many small businesses, the city and other private and public institutions whose employees earned well and received generous fringe benefits did not lose employees to cleanup work.

The 1989 tourist season was very busy as many sightseers, having seen television ads jointly paid for by the State of Alaska and Exxon explaining that most of the State was untouched by the spill, came to enjoy the Kenai Peninsula and to sport fish for the sockeye that were in abundance. Some sportfishing guides rushed information to their steady customers informing them that the spill had not harmed the inlet fisheries. After an initial scare, these businesses thrived in 1989. They did not do as well during the 1990 and 1991 king and sockeye salmon seasons. The 1992 season, however, was productive for sport and commercial fishermen. There was an abiding fear over the destruction of spawning sites (redds) caused by an abundance of spawning salmon during the 1989 salmon run. The results of this destruction will not be known until the mid-1990s.

The Laborers Union local office placed members at cleanup jobs, but activity was relatively slow because hiring was done in Anchorage. The union local in Kenai gained a few new members as a result of employment at the spill. In the 1990 cleanup season only about 100 persons from Kenai were employed, and this number did not affect union membership in a substantial way.

Kenai, its sister-city Soldotna 11 miles away, and Nikiski have many families that are dependent on oil and gas extraction and processing in the Cook Inlet energy industry. These sources of employment pay considerable wages and taxes (the Kenai Peninsula Borough received about 25% of its income from the energy industry in the inlet). The 13 offshore drilling platforms, many of which predate major national environmental laws, are a permanent part of peninsula life and are pointed to with considerable pride by many residents. Kenai Peninsula College, located between Kenai and Soldotna, features

an academic program in oil and gas extraction and processing. For this reason, many North Slope employees have permanent homes in Kenai. As one might expect, many of the leaders in Kenai promote further oil and gas exploration.

The Kenai Chamber of Commerce sent letters to chambers throughout the United States urging them to put pressure on Congress to approve industry plans to drill for oil in sections of ANWR. Oil from Valdez also is transported to the inlet for processing; this is a source of concern about environmental protection for many persons, including some of the oil and gas employees, many of whom are also commercial fishermen. Thus the community is a blend of (among other economic activities) fossil fuel extraction and processing and fish harvesting and processing. This mix fosters, in general, tolerance and accommodation between these two essential economic activities. This attitude is reflected in the official stand made by UCIDA in its endorsement of oil exploration in ANWR.

On the Federal level, the oil spill resulted in passage of the Federal OPA of 1990. The OPA profoundly altered institutions on the Kenai Peninsula that play a role in environmental quality, and it created wholly new organizations. CIRCAC was established under OPA to work with and be funded by the industry group, CISPRI. Disputes over funding levels have caused some serious deadlocks between industry and CIRCAC.

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Cook Inlet Periphery, Native Communities: Tyonek and Seldovia

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Tyonek and Seldovia

Steven McNabb

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TYOKEK AND SELDOVIA

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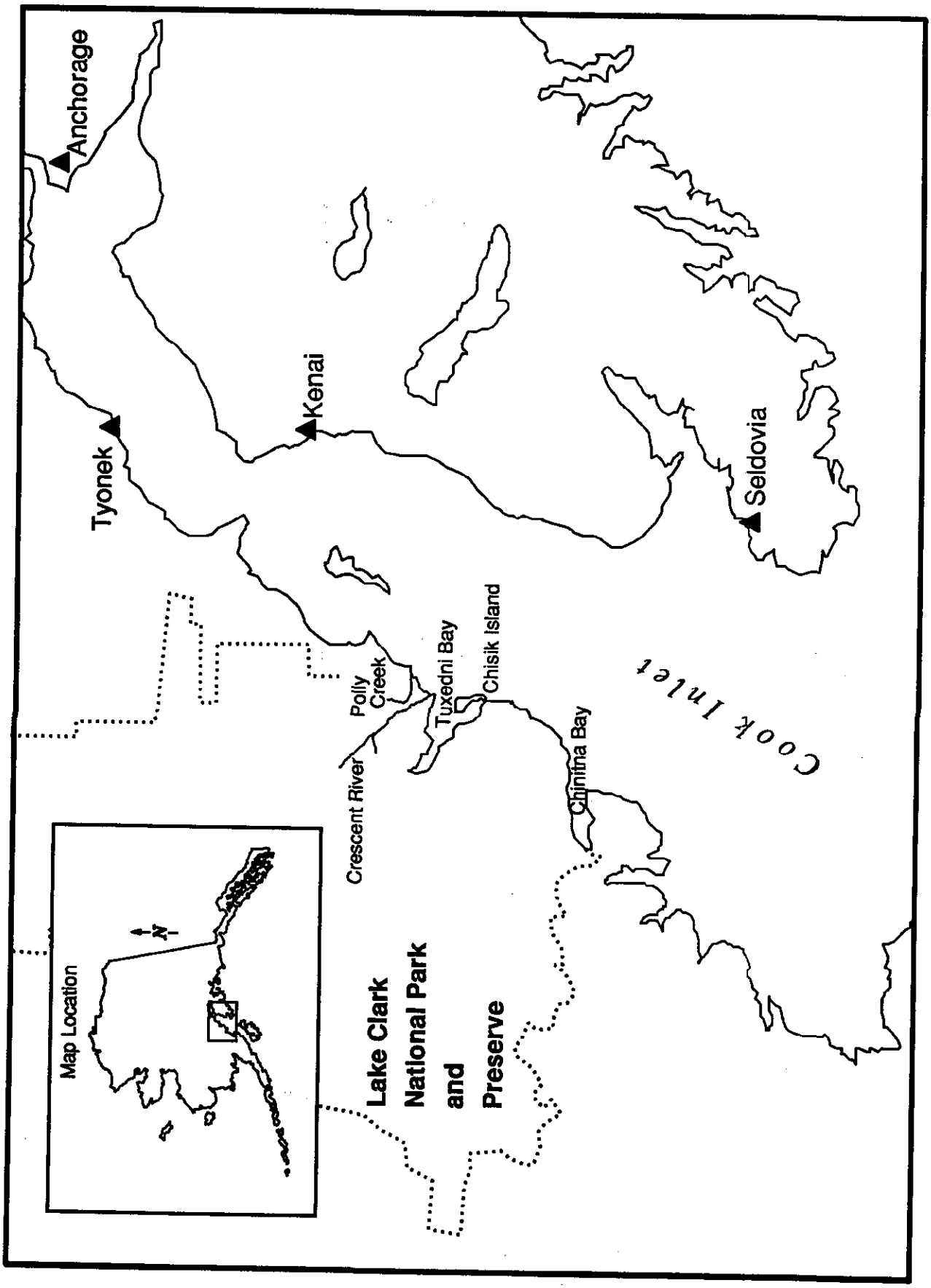
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COOK INLET PERIPHERY, NATIVE COMMUNITIES: TYONEK AND SELDOVIA

I. BACKGROUND AND HISTORICAL CONTEXT

I.A. The Natural Setting

The Cook Inlet area, which contains three Schedule C study sites (Kenai, Tyonek, and Seldovia), is classified as a Pacific coastal and rain forest geographic region (Racine and Young 1978:1). The area is a transition zone between the Pacific Northwest rain forests and the shrubland and tundra of the Alaska Peninsula. Pacific coastal forests of Sitka spruce occur here near their northwestern limit in North America. Spruce forests are sparse and interrupted by extensive areas of alder shrubland, and alder thickets cover most of the uplands. The deep bays and arms in the area (Tuxedni, Kamishak, Kachemak, and Chinitna Bays and Turnagain Arm) have large tidal fluctuations and glacial outwash that tend to form estuarine saltmarshes, with adjacent coastal beach vegetation and intertidal communities (Racine and Young 1978:1, 28). Map 1 depicts the general study area.

The climate of the Cook Inlet area at lower elevations is maritime subarctic. Summer temperatures are moderately warm, averaging above 50 °F for one or more months of the year. Winters are moderately severe, but permafrost is rare. Along the Cook Inlet coast, January mean minimum temperatures are about 10 °F. Common precipitation along the Cook Inlet coast is 60 to 80 inches, and snow accumulations may reach 10 feet or more. High precipitation often is accompanied by strong winds, low clouds, and fog (Racine and Young 1978:8-9).

Resource harvest and use patterns are poorly understood in Cook Inlet, due largely to the fact that the metropolitan areas that dominate Cook Inlet (such as Anchorage and Kenai) are complex and contain a dizzying range of special-interest and sport, recreational, commercial, and subsistence users. Because the road system that connects most Cook Inlet communities permits great mobility and access throughout the area, use patterns and zones of customary activity are poorly associated with specific communities. For example, the author's current and as yet unpublished analysis of

resource uses on the western coast of Cook Inlet shows that no significant differences are detectable based on residence. Existing documents do, however, describe the key species that generally are harvested by residents of Cook Inlet/Kenai Peninsula communities; these are listed in Table 1.

Table 1

RESOURCES HARVESTED IN THE COOK INLET/KENAI PENINSULA AREA

Fish	Mammals	Birds	Shellfish	Other
Halibut	Moose	Waterfowl	Clams	Firewood
Salmon	Caribou	Ptarmigan	Crabs	Coal
Trout	Elk	Grouse	Shrimp	Mushrooms
Herring	Beaver		Mussels	Seaweed
Eulachon	Hare			Greens
Cod	Black bear			Berries
	Mtn goat			
	Porcupine			

Source: Schroeder, Andersen, Bosworth, Morris, and Wright (1987:571).

I.B. Historical Context and Dena'ina Ethnohistory[1]

The first systematic archaeology in the Cook Inlet area began in the early 1930's with Frederica de Laguna's efforts to determine the regional prehistoric chronologies of Eskimo culture and Dena'ina Athabascans (or Tanaina, following now obsolete spelling conventions). The Pacific Eskimo culture that may underlie some Dena'ina sites is associated with the "Kachemak Tradition," dated in Cook Inlet from around 1,000 B.C. to 500 A.D. The origins and directions of influence of archaeological traditions that converge here from the south and west, and possibly from the Norton Eskimo culture to the northwest, are unclear and subject to some debate. Further details concerning the Kachemak and related traditions in the general area are found in Clark (1966, 1970,

[1] This section is based loosely on McNabb and Petrivelli (n.d.).

1981, 1984), de Laguna (1934), Dixon (1980), Reger (1977), Workman, Lobdell, and Workman (1980), and Workman (1980).

Archaeological research has not yet detected the beginning of the Dena'ina presence in the Cook Inlet region, and Pacific Eskimo occupation of the Middle Inlet is better documented (see Reger 1977 for the Soldotna area, for instance). Dena'ina sites are found on the Kenai Peninsula as far south as Seldovia and on the west side of Cook Inlet as far south as Chinitna Bay. Some researchers have attempted to integrate ethnohistory with differing archaeological theories about the transition dates between the Kachemak and Dena'ina presences in the Cook Inlet area (Braund and Behnke 1980:46-153; Fall 1981:49-53), *but the fundamental questions remain unanswered: when did* Pacific Eskimo occupation of the area terminate, and did Dena'ina displace Eskimos or enter an abandoned territory?

The Dena'ina are a regional and linguistic subdivision of Northern Athabascan Indians. Like most Athabascans in Alaska and many others outside Alaska, the Dena'ina are matrilineal and hence trace descent through females. Those persons claiming common descent comprised "sibs," or "clans." Persons of the same generation and descended through the same female were, in effect, "siblings" and were proscribed from marrying due to incest prohibitions. Named clans (or sibs) were the principal social units among the Dena'ina, though the clans were organized into moieties.[2] The clans and moieties were exogamous, so one married only into the opposite moiety--and, as a consequence, into a different clan. Among the Dena'ina, these moieties were not named. Both moieties would be evident wherever the Dena'ina lived (due to the fact that one must marry into the opposite moiety), but not all clans would be evident in every settlement. Clans often were associated with particular sites or areas, which is common for many Alaska Native societies with descent groups, including non-Athabascan groups such as the Tlingit; see Fall 1981; Osgood 1966; Townsend 1965, 1981. The clans

[2] A moiety is dual social organization of two sets of clans, with reciprocal obligations and responsibilities to one another in terms of marriage recruitment, mortuary practices, and memorial services for the dead.

can therefore be considered local descent groups. Dena'ina and Ahtna moieties contrast with other Alaska Athabascan phratries (which entail three groups of clans); and moieties also are common to the Tlingit, who lived directly to the east of the Ahtna and Dena'ina.

Dena'ina society was not clearly stratified, but members were ranked on the basis of prestige and wealth. Rank was closely related to clan membership, inasmuch as some clans were highly placed in particular locales; and, all other things being equal, individuals tended to assume the rank of their clan. In addition, because clans were associated with particular sites or locales, local resources--and hence wealth--might be linked to those clans. Often, clans also were associated with qualities or reputations such as hunting prowess, wealth (see above), and spatial orientation (such as "inland" and "coastal," which restates their ties to specific territories). Origin stories, color symbolism, *and facial painting styles also may be prerogatives of specific clans (see Fall 1981:230).*

Wealth, prestige, and kinship were integrated; for instance, prestige was achieved in part through generosity, which in turn required wealth or the ability to mobilize wealth through the descent group. Males who occupied a leadership position called "qeshqa" were senior clansmen who controlled wealth and exercised nominal authority in a settlement. In practical terms, they had little real power over persons outside their descent groups. The close kinspersons of those men comprised the aristocracy, the highest ranked group. Commoners (those who lacked affiliations with the highly placed clan) comprised a second and lower group (see Fall 1981; Osgood 1966; Townsend 1965, 1981).

Settlement patterns followed the model termed "Central Based Wandering" in some literature (see VanStone 1974). This model entails seasonal movement from and to a relatively stable core area, often containing fixed village sites. In this respect, the Dena'ina are less nomadic than most interior Athabascans. Although ethnohistoric sources and oral histories suggest that the Dena'ina prefer inland hunting (perhaps due to relatively recent relocation from mountainous inland areas), their indigenous economic cycle is well adapted to marine resources as well as riverine and inland

resources (see Osgood 1966). The Dena'ina are unique among Alaska Athabascans because of their adaptations to the coastal environment of Cook Inlet; they have adopted Eskimo marine-oriented traits, such as using skin boats, hunting seals, and whaling. The Dena'ina engaged in trading relationships with other Athabascan groups (mainly with the Ahtna and bordering groups in the interior to the north) and in wars with Pacific Eskimo groups on the more southern edges of Kenai Peninsula and Alaska Peninsula, Prince William Sound, and Kodiak Island.

Fall has considered the challenge of classifying Alaska Athabascans, noting that "Until recently there was no political organization transcending individual bands or villages. Few sharp sociocultural or linguistic boundaries exist . . . [but] language is perhaps the best criterion for designating regional groups. These can then be subdivided by territorial, cultural and social criteria" (Fall 1981:17). Some possible classifications are presented in Table 2, based on several criteria and authors. Special notes regarding Table 2 are as follows:

- The dialects form two principal groups, Upper and Lower Inlet, and the latter is further subdivided.
- Townsend's "societies" are classified on the basis of similarities in sociopolitical organization, intergroup interaction, and resource use.
- Osgood's "food areas" classify common species, subsistence routines, climate, and land and marine characteristics.
- Because the accessibility of marine resources diminishes as one moves north toward the Knik, Matanuska, and Susitna watersheds and because climate extremes also vary over the north-south dimension, a loose continuum of "food areas" is established: more inland and riverine resources to the north, more marine resources and a more moderate climate to the south.

Beginning with spring, the seasonal subsistence cycle starts with the return of migratory waterfowl and open-water sea mammal hunting. The Dena'ina hunted waterfowl in estuaries, lakes, and coastal tidal flats in spring and then later in fall as they left staging areas and began flying south. They often hunted seals by clubbing them on

Table 2

DENA'INA LINGUISTIC, SOCIAL, AND SUBSISTENCE DIVISIONS

20th-Century Village	Dialects	Societies	Food Areas
Knik	Upper Inlet	Susitna	Upper Inlet
Susitna	Upper Inlet	Susitna	Susitna
Tyonek	Upper Inlet	Susitna	Middle Inlet
Kustatan	Lower Inlet (Outer Inlet)	Susitna	
Kenai	Lower Inlet (Outer Inlet)	Kenai	Lower Inlet
Seldovia	Lower Inlet (Outer Inlet)	Kenai	Lower Inlet
Pedro Bay	Lower Inlet (Iliamna)	Interior	Iliamna
Old Iliamna	Lower Inlet (Iliamna	Interior	Iliamna
Nondalton	Lower Inlet (Inland)	Interior	
Lime Village	Lower Inlet (Inland)	Interior	

Sources: Kari (1975), Townsend (1981), and Osgood (1933).

beaches, which were approached from the ocean by hunters who swam ashore; and they generally harpooned belukha whales from skin boats and then speared the whales after they became exhausted or drowned, although they occasionally used hunting platforms to to hunt belukha at narrow channels. The Dena'ina harvested all five species of Pacific salmon from about mid-May through October; they collected berries and greens late in the summer; they hunted or trapped inland game (moose, caribou, sheep, bear, and small mammals) from mid-August through October; and they periodically hunted moose, bear, and small game throughout the winter. During midwinter, the moose, bear, and small game were subject to greater hunting emphasis because they were then a primary source of fresh food. By April, the Dena'ina shifted the emphasis to migratory waterfowl and marine fish and mammal species. They harvested freshwater fish year-round (Fall 1981; Fall, Foster, and Stanek 1984).

On the basis of linguistic evidence, James Kari (1988) proposes the following explanation for the entry of the Dena'ina into the Cook Inlet area:

> It is suggested that the headwaters of the upper Stony and upper Mulchatna rivers west of the Alaska Range is the most ancient home of the Dena'ina. The Dena'ina moved in a southerly direction on two fronts, into Iliamna-Lake Clark and into Cook Inlet basin. Movement into upper Cook Inlet basin preceded other movements into middle and lower Cook Inlet (Kari 1988:319).
>
> The degree of dialect divergence between Upper Inlet Dena'ina and the Lower Inlet dialects has led me to posit that the first band to depart from an earlier Dena'ina homeland on the western slopes of the southern Alaska Range may have entered the Upper Inlet area through the complex of passes in the Rainy Pass area. This may have been 1,500 to 2,000 years ago. . . .
>
> I have suggested that a Dena'ina band migrated from the western piedmont through Merrill and Telaquana Passes to Kustatan. . . . My guess is that they have been there for 700 to 900 years. . . . From there the group crossed the Inlet to East Foreland and then occupied the Swanson and Kenai Rivers, and the Kenai Mountains--gradually moving south down the Kenai Peninsula to Kachemak Bay. The arrival of the Dena'ina in Kachemak Bay may be as recent as 250-300 years ago (Kari 1988:332-334).

The physical terrain and habitation patterns are not uniform in this area, and it is likely that the southwestern coast of Cook Inlet was inhabited intermittently or on a more seasonal basis. Based on documents from the Russian explorations, we know that the Dena'ina were evident at Kamishak Bay (the largest southwest bay opposite the tip of the Kenai Peninsula) in 1796; and the overland portage from this bay to Iliamna Lake was used frequently. But this coastal portion of Cook Inlet is flanked by steep mountains, and very little flat terrain at the coast is available. There is no evidence of stable year-round villages in this area, whereas to the north and east there were such villages, most linked by networks of trade.

The historical Dena'ina period begins after 1778, when Captain James Cook encountered the Dena'ina for the first time. Subsequent explorations made contact with the Dena'ina in 1786, 1788, and 1794. The first Russian settlement in Cook Inlet Dena'ina territory was established near Kasilof in 1786. In 1805, Lisiansky estimated 3,000 Dena'ina in Cook Inlet in 14 villages; Wrangell estimated 1,299 in 1821; Veniaminoff estimated 1,628 in 1839; and Petroff counted 739 in the 10th Census of 1880 (Osgood 1966).

I.C. Historical Periods

Displacement of Indigenous Societies (1778-1895): Immediately after Russian contact, the indigenous population and aboriginal economic patterns shifted dramatically. First, the indigenous population declined precipitously, mainly as a consequence of introduced disease (smallpox, diphtheria, and influenza). Second, Russian military and trading posts were established at English Bay, Kenai, Iliamna, and Tyonek; and, in accordance with a Russian model of entrepreneurship and political manipulation used in the Aleutian Islands and Kodiak, trading compacts and brokering arrangements were established to set up permanent exchange relationships. The Russians instituted the concept of "toyen" or "doyen," sometimes translated as "chief," but functionally equivalent to "middleman" or "trade liaison" because the main roles of the person so designated were economic and diplomatic. The Dena'ina had no tribes or chiefs, and the "qeshqa" role was merged with this Russian invention. In fact, the qeshqa continued to act in accordance with traditional expectations, but with additional roles subsequent to Russian intervention (Fall 1981).

But a new economic and political pattern soon emerged as a consequence of the large volume of trade and the results of decimation due to disease. Whereas villages were once sets of families clustered around a nucleus of matrikin, the abandonment of old villages and aggregation of the surviving populations created new and larger villages that were composed of distantly related or unrelated kin groups. Because the indigenous system had few means to integrate several semiautonomous, independent clan segments (each with acknowledged qeshqa) together on a sustained basis, aboriginal social

organization began to decay. Among other things, the Russians would not recognize all qeshqas in a settlement whereas the Dena'ina would; and to some extent this introduced disequilibrium in the political balance of power.[3]

Some conflict and bloodshed between Russians and Dena'ina occurred during this earliest stage but diminished after 1800. The Russian American Company was formed in 1799; explorations continued, chiefly on the Susitna River, and Ninilchik was founded in 1835. The single most critical event of this era occurred between 1836 and 1840, when a smallpox epidemic killed half of all the Dena'ina. More recent events, such as the founding of the Russian Orthodox Church at Kenai (1845), the Treaty of Cession (1867), the establishment of the first cannery at Kasilof (1882), and the discovery of gold along Turnagain Arm (1888-1894) are significant but secondary in importance. After the Treaty of Cession, the American Commercial Company took over operations of the Russian American Company and established its first Cook Inlet outpost at Tyonek. Tyonek was briefly a staging area for gold prospectors in the Turnagain Arm area, but Anchorage quickly eclipsed Tyonek in that role after 1914.

Commercial Expansion (1895-1960): Inmigration after 1895 increased population size, opened up larger consumer markets, and eventually resulted in more diverse economic opportunities. The fur industry, an important source of cash to many Dena'ina, faltered in 1897 and collapsed by the time of the Great Depression. The Cook Inlet area was explored in greater detail by U.S. Geological Survey teams after 1898, construction of the Alaska Railroad started at Seward in 1903, and by 1914 the site of Anchorage was being surveyed for an eventual town. The Alaska Railroad reached Knik Arm in 1918, thereby connecting a major enclave of the Dena'ina with the growing metropolis, and in the same year the global influenza epidemic struck the Dena'ina population and killed many if not most of the oldest Dena'ina generation (Fall 1981).

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[3] A similar situation occurred on the Northwest coast, principally in British Columbia, where competitive potlatches developed after populations were consolidated. Here too the interaction between multiple and incompatible hierarchies led to instability.

After the 1920's, economic opportunities generally expanded but were increasingly centralized as urbanization began. Federal Indian legislation mandated services, facilities, benefits, and rights for Natives; and this body of law was systematically extended to Alaska. This period is marked by the establishment of Bureau of Indian Affairs (BIA) schools, health facilities, the Mount Edgecumbe school, Indian Reorganization Act (IRA) councils, IRA cooperatives, BIA Native allotments, and specific protections and regulations affecting administration, social services, laws, health, and education of and for Alaska Natives. One of the study sites, Tyonek, was designated an Executive Order Reserve in 1915, which permitted the Bureau of Education to lease and administer lands there "for the benefit of Natives." (In this case, land was leased for a cannery.)[4]

The urban and Caucasian population of Alaska doubled over the war years (1940-1950). Village sites were abandoned, populations merged, and to a great extent Anchorage became a regional hub for regional Dena'ina. By the end of this period, Anchorage dominated the economy of the entire State. Localized economic developments, such as Swanson River/Kenai-area oil exploration and development, provided opportunities outside the metropolitan hub. It is likely that by 1960 most of the Dena'ina lived in cities (Anchorage, Kenai, and Homer) in which they were minority populations.

Land Claims and the Oil Economy (1960-Present): Tyonek was one of the first Alaska Native communities to successfully challenge Federal policy during the early years of the land claims struggle. The Federal Court sided with Tyonek in its argument that the BIA could not lease village land without permission of the IRA council (the BIA had sought to control leasing of Native land to oil companies for petroleum exploration). Subsequent to this decision, in 1965 the Tyonek IRA council negotiated $12.9 million in drilling rights.

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[4] About 150 such reserves were created in Alaska. See Case (1984:86).

The Alaska Native Claims Settlement Act (ANCSA) of 1971 created 12 regional Alaska Native corporations, a 13th out-of-State corporation, and about 200 village corporations. The ANCSA also provided a land and cash settlement of approximately 44 million acres and $1 billion. Cook Inlet Region, Incorporated (CIRI), is the regional ANCSA corporation that represents most of the Dena'ina today. Chugach Alaska Corporation comprises the coastal portions of Prince William Sound and the eastern, southern, and southwestern portions of the Kenai Peninsula. Although most shareholders are Alutiiq or Pacific Yupik, some Dena'ina or mixed Dena'ina-Alutiiq shareholders live in the vicinity of Seldovia, English Bay, and Port Graham. The Tyonek Native Corporation (TNC) is entitled to 112,500 acres under ANCSA, most of which has been conveyed. The ANCSA revoked the Executive Order Reserve at Tyonek, but Tyonek's historical reservation status is even now influencing judicial proceedings. A landmark lawsuit that tests Tyonek's claim to sovereign authority on its land was decided in Tyonek's favor in 1992 by the 9th Circuit Court, reversed on appeal, and now is again under appeal. The Seldovia Native Association is entitled to about 100,000 acres under ANCSA, most of which has been conveyed.

The most pressing issues in the post-ANCSA period for both Seldovia and Tyonek are identical: economic viability under conditions of uncertainty, with declining State and Federal revenues and few options for sustained economic activity. The CIRI is by all measures the most successful regional ANCSA corporation, with a net income more than three times greater than the second-ranked corporation (Sealaska) and a 1990 equity of over $357 million (Colt 1991). Chugach Alaska Corporation, on the other hand, is now undergoing Chapter 11 reorganization and probably will sell its fish-processing and timber operations before the end of 1992. Although there are modest prospects for future development of coal reserves and possible on- or offshore oil development in the vicinity of Tyonek, the residents have never registered strong support for such activities. The Seldovia Native Association has deliberated with State officials for years over land sales in the Seldovia area, but no agreements have ever been finalized in what most observers perceive as a bitter negotiation with no end in sight.

II. THE EFFECTS OF THE EXXON VALDEZ OIL SPILL

II.A. The Context of the Spill: The Contemporary Villages

In contrast to most of the larger and more cosmopolitan hubs in southcentral Alaska such as Anchorage and Valdez, both Tyonek and Seldovia are by local standards very old communities. Although Seldovia was not the site of an early Russian settlement, English Bay (about 30 kilometers away) was, and the outer portion of Kachemak Bay where Seldovia is located was exploited heavily by early Russian entrepreneurs. Both Seldovia and Tyonek can be accurately considered sites of original Russian influence in the New World.

Decennial census reports from 1890 on tabulate residents for both communities, and Table 3 depicts populations for these villages since 1910. Over this interval, Tyonek posted a net growth rate of about 44 percent, whereas Seldovia grew by about 83 percent despite a drop in population after 1970 because of reductions in cannery operations.

Table 3

POPULATION ESTIMATES, 1910-1990
(20-Year Intervals)

Community	1910	1930	1950	1970	1990
Tyonek[a]	na[b]	78	132	232	154
Seldovia	173	379	437	437	316

Source: U.S. Census (*1910, 1930, 1950, 1970, 1990*).

[a] The 1990 Tyonek figure compares to a 1989 count of 171 and a 1991 count of 152 by Jon Hofmeister, who conducted Social Indicators Study field research there.
[b] The 1900 population was 107. Tyonek was not enumerated in 1910.

The total school enrollments for Tyonek and Seldovia, respectively, were 44 and 101 in 1989 and 43 and 102 in 1991. A comparison of their school enrollments and total

populations suggests that Tyonek has fewer resident children than would be expected otherwise and that some Tyonek families with children are now living outside the community. Many informants confirmed that numerous Tyonek families live outside the town, principally in Anchorage (the Tyonek tribal enrollment totals 489 in 1989, hence about 300 Tyonek Natives live outside Tyonek). In fact, both Seldovia and Tyonek have unusual demographic characteristics. In Seldovia, some dozens of seasonal residents arrive in the summer and then depart in the fall. Note that these are not transient workers common to many fishing towns, but long-term seasonal residents with homes in town. Figure 1 presents a population pyramid for Tyonek. Males are heavily over-represented, and the population is concentrated in the adult age intervals. This pattern is consistent with outmigration (temporary or permanent) of young families and females.

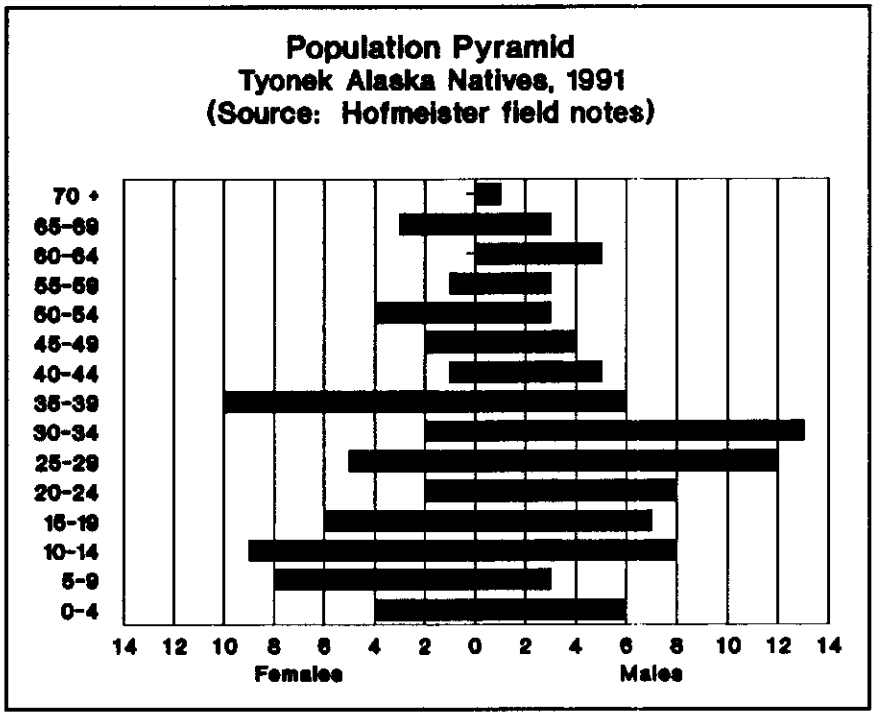

Figure 1

The employment base is extremely narrow in both communities. In 1989, Jon Hofmeister counted 17 full-time, year-round jobs in Tyonek (tribal government, 4; school, 6, not including teachers; Tyonek Native Corporation, 2; Chugach Electric Association, 2; village store, 2; post office, 1). The village store also accounted for 1 part-time job; VECO hired 23 residents for oil exploration and oil-spill-cleanup work on a temporary basis; 13 seasonal jobs were offered through the Cook Inlet Tribal Council

during the summer; and 2 temporary positions were supported by Job Training Partnership Act (JTPA) grant funds. Wages are low by southcentral Alaska standards--most jobs pay less than $12.00 per hour. Blue collar skilled and semiskilled hourly rates for plumbing, construction, electrical, and related labor range from $8.00 to $11.00 in Tyonek and $20.00 to $40.00 in Seldovia. According to KI's in Tyonek, hourly rates for labor have declined somewhat since 1989 for unknown reasons. One KI whose agency works with both villages contrasted the communities in this way: "Seldovia and Tyonek are different villages. Seldovia has more of an economic base than Tyonek. Tyonek is struggling more, economically." Another KI responded to questions about economic needs in Tyonek in this manner: "Village needs? Jobs for people. We need industry in Tyonek. Without it Tyonek will continue to slide."

Local prices are high by southcentral standards. Most goods bound for Tyonek are shipped out of Anchorage, and Homer is the staging point for shipments to Seldovia. Based on marketbasket surveys conducted in both towns in 1989 and 1991 (see Table 4), Tyonek prices were an incredible 47 percent higher than Seldovia's in 1989 and were 28 percent higher in 1991. Although we cannot put exact figures to our calculations, our hunch is that these prices in Seldovia were only a few percentage points above those in Homer and even those in Anchorage. In 1991, prices for our marketbasket of goods were 16 percent higher than 1989 in Tyonek and 33 percent higher than 1989 in Seldovia. The marketbasket totals (foods only, for goods available all years in both communities) in Tyonek were $60.97 for 1989 and $70.76 for 1991. In Seldovia, they were $41.59 for 1989 and $55.22 for 1991.

II.B. Reactions to the Oil Spill

The effects of the Exxon Valdez oil spill on the residents and institutions of Tyonek and Seldovia can be arbitrarily but usefully divided into two categories: (1) immediate disruptions and displacements and (2) subsequent effects that resulted from these disruptions and displacements. We avoid the dichotomy of "direct" and

Table 4

RETAIL PRICE COMPARISONS, TYONEK AND SELDOVIA, 1989 AND 1991

Commodity	Tyonek		Seldovia	
	1989	1991	1989	1991
10 lb flour	$7.59	$8.15	$4.09	$4.45
12 oz evaporated milk	1.09	1.25	.75	.89
1 lb onions	.89	.89	.50	.75
48 oz oil[a]	5.36	6.25	4.35	3.69
6-pack cola	4.25	4.55	3.99	4.19
10 lb sugar	8.95	9.55	6.89	8.05
18 oz corn flake[a]	1.59	3.75	na	2.69
24 oz bread	1.95	1.99	1.99	2.19
1 lb bacon	2.93	4.75	2.59	3.69
39 oz coffee	11.35	13.35	11.25	10.49
1 lb butter	2.85	2.69	2.79	2.59
12 qt powdered milk	9.27	12.45	7.55	9.99
22 oz punch mix	4.49	4.89	1.95	4.25
2-D batteries	4.69	4.69	4.49	2.79
1 gal gasoline	na[c]	2.30	1.00	1.71
Pampers[b]	18.05	24.60	12.50	12.69
1-gal Coleman	na	na	na	5.95
ax handle	na	na	4.19	10.39
1 qt motor oil	2.49	3.25	1.35	2.05
Coleman lantern	na	na	31.99	31.99

Source: Social Indicators Study field notes.

[a] Adjusted prices for various sizes.
[b] 32-count Huggies in Seldovia, 44-count Huggies in Tyonek.
[c] The abbreviation na means not available.

"indirect" because indirect often carries the connotations of "obscure" or "remote," neither of which are warranted in this analysis. "Primary" and "secondary" are valid categories, but they may connote rank of importance or severity; and, again, these are not warranted meanings. "Immediate" and "subsequent" specify sequence and draw attention to chain reactions of effects. An example of an immediate effect would be diversion of municipal staff from customary duties to oil-spill activities; subsequent effects would be costs of overtime salaries to deal with customary duties, shortfalls due to unbudgeted expenditures related to those costs, and hidden costs of delayed business (penalties, lost contracts, inefficiency, deviations from fixed schedules, and so on).

Immediate Effects:

Tyonek: Within days of the 1989 oil spill, many residents of Tyonek feared that the Upper Cook Inlet area could be oiled, and they anticipated environmental damage and tainted fish (which would affect both subsistence and commercial harvests). According to all reports from villagers and agencies alike, however, oil never reached Upper Cook Inlet, and marine resources were not affected. Commercial fishing was never prohibited or restrained in the Upper Cook Inlet area, so commercial restrictions did not diminish anticipated seasonal incomes in Tyonek. By all accounts, the subsistence fishery was not affected, and residents did not fear contamination once the initial concerns were dispelled. Tyonek officials organized a clearinghouse effort to sort applications for cleanup employment from villagers and then submit the applications to VECO. However, VECO did not take advantage of these efforts; and, according to Tyonek KI's, VECO ignored Tyonek efforts to secure employment, at least initially.

Seldovia: Although little oil reached Seldovia,[5] oil-spill impacts were more immediate and intense here than those in Tyonek. Residents and their institutions reacted within days of the spill to mobilize a mitigation plan, 150 residents volunteered to help in a locally initiated cleanup effort, and the Director of Public Works was assigned to liaison duties with the Homer-based Multi-Agency Coordinating Committee

[5] Morse Cove and Tuka Bay near Seldovia were "heavily oiled" (Impact Assessment, Inc. 1990b:172).

(Impact Assessment, Inc. 1990b:172-173). This effort occurred in relative isolation inasmuch as State agencies and private industry responded first in the vicinity of the spill in Prince William Sound. The schools were closed and the students were dismissed so that they could assist other residents in building booms to protect the shoreline. Initial concerns focused on the physical hazards of the spill itself (principally on the potential damage to marine resources and the regional ecosystem); but by summer 1989, local officials were staging meetings to discuss related and subsidiary issues, such as (1) the economic stability of the town itself, which hosts a modest tourism industry that might be affected by the spill and (2) impacts related to spill mitigation, such as the potential hazard of human exposure to granular and liquid fertilizer used to promote degradation of petroleum products on the shore. Many Seldovia residents were eventually hired to work on the cleanup effort; during 1989, monthly cleanup employment ranged from 13 to 110 Seldovia residents (Impact Assessment, Inc. 1990c:17).

Subsequent Effects:

Tyonek: Several clear oil-spill impacts in Tyonek followed closely on the heels of the immediate effects described above. First, Tyonek subsistence fish harvests were unaffected, but Tyonek residents knew that residents of other communities, such as Tatitlek and Chenega Bay, curtailed their harvests due to fears of contamination. Tyonek residents initiated a subsistence sharing program, administered by village officials, to transport Tyonek salmon to affected villages in Prince William Sound. Tyonek planned to donate about 600 king salmon to those communities; the size of the eventual distribution is unknown. According to local KI's, VECO finally responded to entreaties for oil-spill cleanup work in Tyonek after the subsistence fish-donation program became public knowledge. Tyonek residents were viewed as generous and selfless, and so VECO began hiring residents as a goodwill gesture. According to our records, between 23 and 30 residents worked on the spill-cleanup effort in 1989 and 1990.

But second, the fish-donation program and subsequent VECO employment resulted in other effects. Residents who were hired were diverted from other community jobs;

and some community maintenance and administrative work was delayed, with unknown costs. Some jealousy and antagonism was generated by the hiring, inasmuch as some persons who were not hired felt deprived of economic benefits that they believed they deserved. (Some KI's minimized this complaint, observing that everyone who signed up was hired; hence, malcontents who didn't apply merely regretted their choices in retrospect.) Also, some persons who took cleanup work did not have a significant opportunity to fish, thereby giving up either (1) incomes that may have been higher than their cleanup wages or (2) subsistence harvests, or (3) both. (Some residents worked for a very short period--e.g., some workers terminated after minor injuries--and earned little but nonetheless were unable to fish commercially.) But this observation was not validated by all KI's; according to some, the residents who took cleanup jobs typically fished the least.

Some residents also deferred personal commercial fishing efforts until after the fish donations were completed and then were unable to recoup their expected commercial earnings. The fish-donation program and cleanup work therefore introduced unanticipated opportunity costs. Nonetheless, subsistence and commercial harvests were judged acceptable overall, though fish prices were judged low, and some respondents considered the harvests low as well.

Finally, institutional actions at the time of the spill caused subsequent impacts in Tyonek. After the spill, regulations for transporting fuel changed. Fuel could not be transported by air, and most barges in Cook Inlet were diverted to the cleanup. This resulted in a fuel shortage in Tyonek and higher costs for those residents who bought from expensive alternative sources.

Seldovia: The immediate impacts in Seldovia were organizational (i.e., institutional) and occupational (i.e., employment-related), as described above. Most of the subsequent effects clearly stemmed from these immediate impacts; other effects are difficult to trace to their origins.

Seldovia residents and institutions were quick to mobilize grass-roots mitigation efforts and sought to maintain a continuing role in this mitigation; but by all local

accounts, this effort was displaced by VECO as soon as a coordinated, regionwide cleanup commenced. Some local KI's went so far as to say that VECO "prevented" trusted and knowledgeable residents from exercising any serious role. The existing organization of persons and agencies that evolved over the shortterm in Seldovia was not used by *VECO, who made decisions about Seldovia from a distance. After VECO (and* Exxon) assumed control of the cleanup effort, bureaucratic constraints were instituted that tended to impede the cleanup; a resident stated that "once VECO took over it took 2 weeks to get the same items, because of the paperwork you had to fill out" (Impact Assessment, Inc. 1990b:173). Although the existing network of persons and institutions created new and positive leadership opportunities by opening avenues of participation to a broad coalition of residents, that network was disempowered by VECO. The Save Our Sound (SOS) coalition that formed in several communities was and is active in Seldovia, and persons affiliated with that grass-roots organization are still active in city and regional affairs related to the spill.

Social service and public safety officials initially (in 1989) predicted and then confirmed that caseloads and emergency activities increased as a consequence of the spill (chiefly as a result of neglect of children during the cleanup, stress related to dislocation, and instability caused by an influx of outsiders), yet those effects are hard to assess and validate. For instance, few outsiders came to Seldovia for any extended visits for work, and in retrospect some KI's said that 1 or 2 years later the apparent emergency was worse than the reality. The chief of police specifically noted that disruptions were mild or nonexistent, despite his earlier fears. Social service workers asserted that caseloads increased and that domestic abuse and alcohol-related disruptions were severe. However, no frequency data were made available to us for an assessment of these problems, especially in comparison with other years. A physician stated that some recent divorces were related to oil-spill stress.[6] Also, there is evidence of domestic dislocation

[6] Impacts of recent events are very difficult to assess using indicators such as divorce, mental health counseling caseloads, and so on. Since psychiatric disorders and domestic disruptions can be related to an (continued...)

related mainly to absences of parents or other caretakers for long periods. Parents would "dump" their children at locations such as the library because there were few alternative sources of childcare (see Impact Assessment, Inc. 1990a:77).

The hidden costs of deferred institutional business--caused by displacement of staff, overwork, inefficiency, and shifting priorities--probably were severe in Seldovia. The spill delayed public-works projects, jeopardized funding as a result of scheduling slowdowns, and caused the staffing of existing projects to fall below optimum levels after teenagers were hired to replace adults who were working on the cleanup. Staff burnout was said to be high in most institutions. The membership of the city council turned over completely between the first and second field visits (1989, 1991), and another study found "increased factionalism" and "widespread disruption" in municipal affairs after the spill (Impact Assessment, Inc. 1990b:174-175). In order to deal with unexpected expenses, unbudgeted payments stripped existing financial resources and forced further work delays. One study places the dollar value of these spill-related expenses at $154,200 in Seldovia (Impact Assessment, Inc. 1990a:103). We do not know if any part of these expenditures has been reimbursed yet, but to our knowledge efforts have been made to collect from Exxon. Members of the Seldovia Native Association allege that the spill has made it more difficult to sell its land for recreational purposes, which may not change the land's book value but may influence the eventual sale prices.

Cleanup jobs provided employment in the community, but our observations (confirmed by KI's) suggest that this employment provided different money but not more money than would have been earned in conventional occupations had the spill not occurred. Commercial fishing was restricted in the Lower Cook Inlet area during 1989,

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[6](...continued)
indefinite range of factors and are only very rarely related to specific causes, it is hard to determine how great the role of the spill was. For instance, domestic disruptions, including divorce, often have some sort of economic component (economic insecurity, disagreements over resource allocations in the household, etc.). But if a divorce occurs, how is it possible to identify the specific economic impulse that put the individual(s) "over the edge"? Furthermore, domestic disruptions and divorces usually have historic antecedents and seldom erupt spontaneously. This makes it difficult to attribute these problems to discrete events.

and tourism came to a virtual halt. In fact, tourists could not have been accommodated due to the diversion of resources (including personnel and facilities) to the spill.

III. CONCLUSIONS

The communities of Seldovia and Tyonek both have deep historic roots in Cook Inlet and share a great reliance on renewable marine resources. Their principal differences lie in the ethnic composition of their populations and the bases of their economies. The Tyonek population is largely Alaska Native, while Seldovia is a mixed community; and the Tyonek economy is based on government transfers, commercial fishing, and subsistence harvests, whereas the Seldovia cash economy is somewhat more diversified by limited tourism and timber sales.

Also quite different for these communities is the sequence of events played out during and after the oil spill, despite some strong parallels. For example:

- In both communities, local organizations developed plans to respond to the spill, and in both communities the organizations were ignored and displaced by VECO and Exxon.
- The roles sought by community organizations were quite different: in Tyonek, the Tribal Council focused on employment issues; in Seldovia, multiple institutions developed joint plans to address virtually every facet of the spill.
- The level of displacement in Tyonek was very low; in Seldovia, it was very high.
- Tyonek residents and institutions contributed subsistence fish to affected communities; in contrast to Seldovia, Tyonek made efforts to help other communities in ways that provided no benefit whatsoever for local residents.
- Residents from both communities were hired for cleanup work; but relatively few were hired from Tyonek, and even those hirings came about only after VECO or Exxon perceived the gesture to be a public relations advantage.

Domestic and individual impacts on mental health and social adjustment may have *varied dramatically across the communities. We have no record of such problems* related to the spill in Tyonek. Many claims of such impacts were made in Seldovia, but they are very hard to interpret. In both Tyonek and Seldovia, however, gloom and

disillusionment were common responses to the spill. It is possible that persons from Tyonek who worked on the cleanup suffered these effects more than their neighbors who stayed at home, suggesting that an individual's exposure to the spill itself, even if away from home and working wholly in a mitigative (and hence "positive") role, had negative effects. One Tyonek respondent summed up his feelings by uttering the common wordplay "Val-disease" (as opposed to "Valdez") to refer to the chaos, disappointment, and frustration that workers associated with the town closest to the spill.

In Seldovia, direct financial costs to institutions were caused by the spill. Tyonek may have incurred some costs, but they probably are so minimal that no officials there have calculated them. Tyonek residents faced some costs due to higher fuel prices, and other indirect costs probably occurred; but Seldovia paid far higher direct and indirect costs. Commercial-fishing restrictions were severe in Lower Cook Inlet, so impacts in this category were pronounced in Seldovia but did not occur in Tyonek.

It is obvious that some impacts of the oil spill were fairly uniform or at least were caused by fairly uniform effects that should not have caused unique impacts on only some communities. Higher fuel costs due to diversion of barges to the spill and new restrictions on transportation of fuel are a case in point. Tyonek, for example, was not uniquely positioned to sustain impacts, though it did indeed experience them. Commercial fishing in the Tyonek area was not curtailed, and in fact their harvests may have been improved somewhat by the fact that boats farther south were grounded. But any community in the Upper Cook Inlet area would have faced similar circumstances.

It seems that the most significant variable in distinguishing between these communities is answered by this question: what did Exxon and VECO choose to do? Decisions and assumptions on the part of Exxon and VECO seemed to determine the trajectory and scope of most of the immediate and subsequent impacts of the spill. Where VECO or Exxon exercised a uniform policy (i.e., displacement of existing institutions), impacts were fairly uniform. Where Exxon and VECO spent more time, social and economic effects were pronounced. Where Exxon and VECO introduced new levels of bureaucracy, responses and decisions slowed down. Where Exxon or VECO

appropriated community facilities (such as buildings), resources were diverted from other uses.

This conclusion may seem to merely restate a now common adage in Alaska: the impacts of the spill cleanup were worse than the impacts of the spill itself. But that interpretation is misguided because it seems to allege that remedies are worse than the affliction. The cleanup effort--a unique event with a particular organization, administrative frame of reference, set of operating assumptions, and tacit goals--was a product of interactions between Exxon, some other private-sector businesses, and some State and Federal agencies. There is no compelling reason to think that this cleanup was like any other that might have evolved under independent circumstances. In fact, there is good reason to conceive of it as an exceptional case that is a product of specific times, places, and actors. These impacts, in other words, are not inevitable in general terms, though they may be inevitable once the specific players and situations interact. This seems to be the view of activists in regional communities who now seek to prevent the "inevitable" decay of real restoration efforts.[7]

[7] The first $90 million payment from Exxon to the State to cover spill damages will mainly reimburse the government for studies and legal expenses. Only $9.6 million will be left for restoration, and most of that will go for restoration studies. Over $7 million of the first payment will be spent strictly on overhead for administering the payment. Local officials and organizers are fearful that history will repeat itself and that Exxon will discharge its debt while local communities pay the costs and receive few if any benefits. See Anchorage Daily News (1992).

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Kodiak Area Communities

Kodiak Area Hub Community: Kodiak City

THE KODIAK REGION

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Rachel Mason

Joanne Mulcahy

Jon Hofmeiser

THE KODIAK REGION

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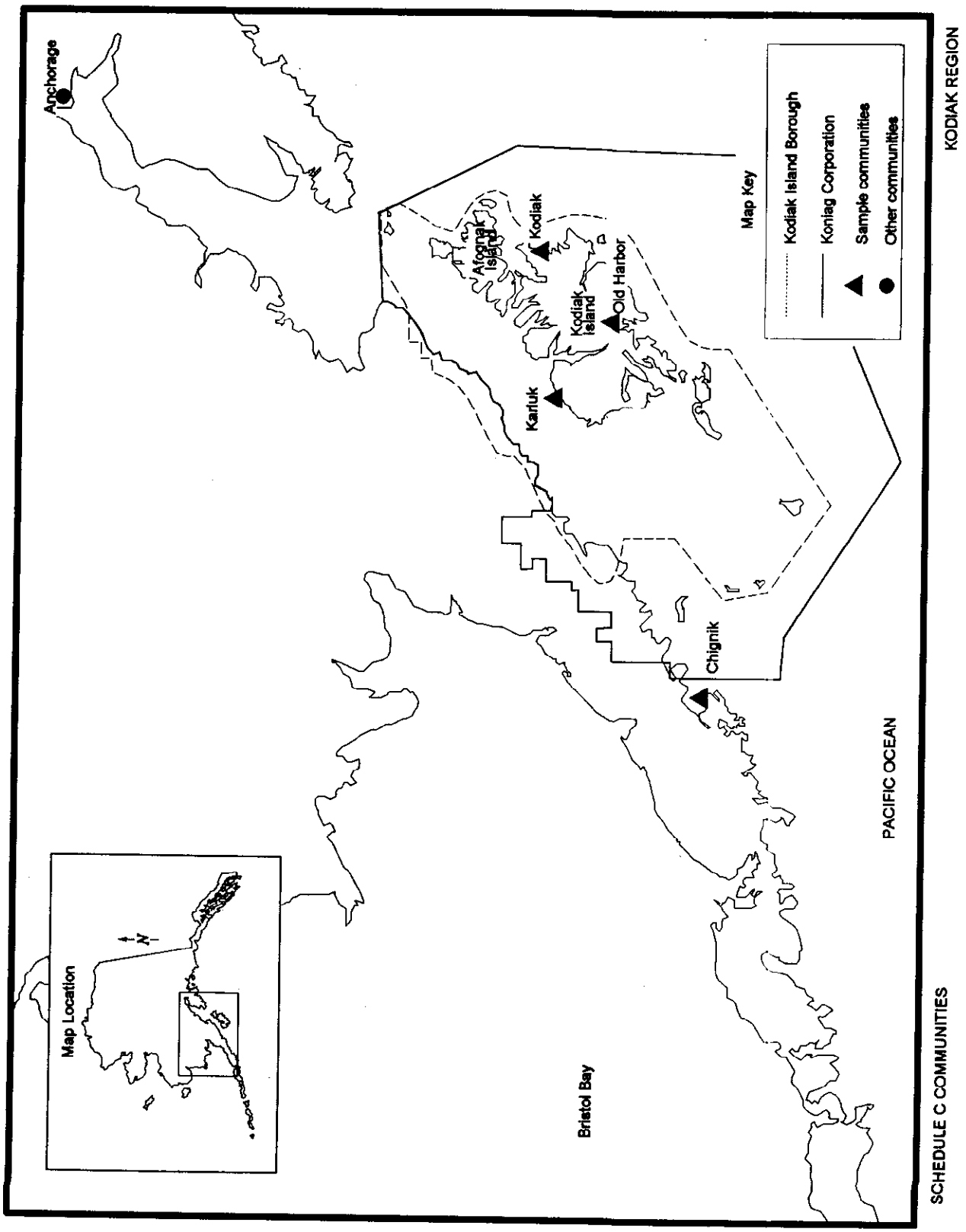
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THE KODIAK REGION

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

[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."

(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 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 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 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

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.

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.

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.

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.

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

[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.

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 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 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

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.

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 this 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

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, l 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.

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.

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). 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 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.

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.

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,

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.

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.

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KARLUK

I. HISTORICAL BACKGROUND

The history of settlements at the mouth of the Karluk River on the southwest side of Kodiak Island is long and varied. The abundance of salmon and steelhead in the river, marine invertebrates in the ocean waters nearby, and a wide-variety of residential and migratory sea mammals in quest of marine invertebrates and migratory fish, made its mouth a prime settlement location for subsistence extraction. Native peoples have occupied this site (now known as Karluk) since at least 4000 B.C. (Barsh 1985). Harbor seal rookeries and haul out areas and the nesting areas of sea otters were abundant in the Karluk region in the 18th century. These animals were the prime targets of the Russian traders who arrived at what is now Karluk in 1786 and established a trading post there. The local population was Koniag (also known as Kaniagmiut) Eskimos, Alutiiq speakers[1] whose congeners resided on the Alaska Peninsula northwestward across Shelikof Strait from Kodiak Island. In at least the 17th century, and probably earlier, Koniag Eskimos and Aleuts practiced slave-taking (see Townsend 1983:120-132 for an assessment of the pre-Russian practice). Slaves were used to hunt for sea mammals and sea otters and to prepare the pelts and skins for trade throughout Native trade networks. Slaves also hunted for, and maintained the households of, wealthy families.

The Russians established a trading post at Karluk for several reasons, most of them obvious: strategic resources were abundant and localized; Natives knowledgeable about the area occupied a viable community there; and Natives produced by-products from their extractive pursuits--skins and pelts in particular--that they exchanged through Native trade networks. Russian traders took advantage of these circumstances, all of which benefited their own interests. They seized the opportunity to intervene in the Native trade networks that connected island to mainland residents. They also seized the

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[1] Alutiiq was formerly known as 'Pacific Yup'ik,' one of three Yup'ik Eskimo languages spoken in Alaska. The other Yup'ik languages are 'Siberian Yup'ik' spoken on St. Lawrence Island, and 'Central Yup'ik' which has three mainland dialects: Cux, Chevak, and Central (see Woodbury 1984). Kaniagmiut are currently referred to as 'Koniag.'

opportunity to adopt the local Native practice of slavery, using slaves for their own purposes and also conscripting local Natives to provide labor for them (Townsend 1983:127-129). Whether the residents of Karluk, in particular, were treated harshly by Russian traders is not known, although the harshness--even the brutalizing and murdering of Koniag persons by some Russian traders in the late 18th century--is well established.

In addition to acquiring slaves from the Koniag while also forcing the Koniag to hunt for them, three of the most brutal Russian traders relocated Aleut Natives from the Aleutian Chain to Kodiak Island (Lantis 1970:282-284). These Aleuts became "indentured servants" according to Lantis (1970) and Townsend (1983). In establishing hegemony over the local Natives, creating a trading post, conscripting local labor, and perhaps relocating Aleuts to Karluk, significant changes were wrought in daily affairs, including the subsistence pursuits of local Natives.

Nearly a century later, commercial fishing altered Native life and local culture. Within two decades of America's purchase of Alaska in 1867, Karluk had become "the most important fishing station in Alaska, and perhaps on the whole Pacific" (Porter 1890:79). Five canneries were located in the village before the turn of the century. Commercial fishing operations throughout the Kodiak area were owned and operated by non-Natives, as were the canneries established at Karluk. The Karluk canneries provided some employment to local Natives, while expropriating Native land and the fish that Natives had traditionally harvested and exercising dominion over both.

The canneries created jobs and drew more than 1,000 non-Natives to Karluk by 1890. The majority were seasonal residents, but some remained year-round. Non-Natives outnumbered Natives by a ratio of 5.5:1 at that time (180 Natives). The fishing fleet that sold to the canneries was neither wholly owned nor operated by non-Natives or by the cannery companies. Some Natives were selling portions of their salmon catches to the canneries; and most, if not all, Natives were surviving by harvesting naturally occurring resources. By the late 1890s, they were harvesting those resources in fewer favorable locales than they were a generation earlier--prior to the advent of the

canneries in prime locations on the river and before the influx of commercial fishermen and cannery workers.

Although Natives were selling portions of their catches to the canneries, this is not to suggest that Natives and non-Natives alike sought jobs in the industry and were hired at equal rates for equal pay. In 1896, 34 Natives were employed in the canneries. In 1897 not a single Native was employed in a cannery. Davis (1979), the principal ethnographer-historian of the region, was unable to discover the reason why Natives were not hired. She (Davis 1979) suggests that alcohol abuse may have been a factor in causing cannery management not to hire Natives. The Russian Orthodox Priest Shalamov visited Karluk in 1896 and reported that Natives were being devastated by the importation of alcohol by cannery workers (Davis 1979).[2] On a return visit in 1898, Shalamov commented that alcohol abuse in the village had increased; and the Native population had been further devastated. Whatever the cause for the failure to hire Natives at the canneries, there were many negative consequences to Natives from the establishment of the canneries in Karluk and from the use of Karluk by commercial fisherman as a staging and offloading area. If alcohol abuse by Natives was the factor that caused them not to be hired, the social dislocations that accompanied the introduction of alcohol do not appear to have been addressed by, nor were conditions improved by, cannery officials or government agents. Shalamov's reports described Natives being murdered, raped, and assaulted by cannery workers and fishermen, and suffering from a proliferation of disease introduced by these non-Natives.

The canneries had many negative consequences for Natives; but they also contributed to the development of the local infrastructure, much of which was paid for and staffed by the Federal Government. Cannery buildings, docks, and housing were constructed; and as early as 1890, Karluk boasted a Government schoolhouse--one of the earliest schools on Kodiak Island (Davis 1979). The record is unclear as to whether the school was created for the children of cannery management and laborers, or whether it

[2] Nancy Yaw Davis (1979) is the source for the Shalamov reports.

was founded to educate the local Native youth, or both. Photographs of the school's student body, found in Porter's 1890 study, indicate that most of the students were Native. From this we can infer that education of Native children was at least one of the charges given to the school's administration. However, despite this apparent charge, the strength of the commitment was short-lived, because the school apparently was closed when the non-Natives departed (Davis 1979). Thus, we can assume that the education of Native children was important only as long as non-Natives found it profitable to expropriate the resources of the immediate locale.

Overall, the growth of the salmon industry brought prosperity to non-Natives and various dislocations to Natives. As the canneries increased in number, Native fishermen found themselves in ever stiffer competition with better capitalized non-Native fishermen. They also were caught between competing canneries. Natives were coerced and threatened into selling their catch to one cannery or another. Spawning stock returning to the Karluk River dwindled. Capital obtained from fish and fish by-products flowed away from Karluk while very little remained. The industrial development in Karluk, but also in neighboring villages, ravaged the resource base on which the Native population depended while transforming the villages into small industrial camps dominated by non-Natives and occupied for only a few months each summer.

By 1911, the 4-decade boom of commercial fishing and canning at Karluk had busted. The canneries had relocated to other areas of Kodiak Island, principally Larsen Bay about 20 miles away, leaving Karluk abandoned as a processing site. The non-Natives who had resided in Karluk also relocated. Most Natives remained, harvesting resources as their ancestors had done. A few natives owned commercial equipment and continued to fish during the salmon season, hauling their catches to the canneries at Larsen Bay.

The next boom Karluk experienced was natural. In 1912 Mount Katmai erupted, dumping ash 18 inches deep over the region. The effects on the flora, fauna, and people were not overcome for several years (Federal Field Committee for Development and Planning in Alaska 1968:20).

Following the loss of the canneries in 1911 and the eruption of Mount Katmai in 1912, U.S. Census data records that the Karluk village population (194 in 1940) increased less than 8 percent over the next 28 years. With the onset of World War II the population began a steady, slow decline to 81 at the time of the Exxon Valdez foundering on Bligh Reef in 1989. A few families relocated to Larsen Bay and Kodiak City after the spill, with the population plunging by 12 percent to 71 in 1991 and another 15 percent to 60 in 1992. There is no evidence that the great Alaskan earthquake of 1964 speeded the exodus from Karluk, although the village suffered from its effects. The relocation of a few families to Larsen Bay and Kodiak City since 1989 may represent little more than a continuation of the out-migration that has occurred over the past 5 decades--quickened to be sure, by the oil spill. For the most part, relocation has been to larger communities with a greater variety of services, better transportation, more complex infrastructures, and more employment opportunities.

Historically, Karluk was located at the mouth of the Karluk River with settlements on either side of Karluk Lagoon. Old Karluk, the original village site, stood on the northeast bank while the more recent Karluk site was located on the lagoon's southeast shore. The two sites were connected by a spit and a bridge built by residents. On January 7 and 8, 1978, a ferocious storm with gale winds over 100 miles an hour breached the spit at the mouth of the river and destroyed the bridge. Karluk was declared a disaster area.

Remnants of the old village site remain in a very bad state of repair. There is a center with a rather amorphous layout of houses and other structures around it. The houses are located in close proximity to one another, each being defined by unique touches that accentuate its distinctiveness. A few houses are built into the hills above the main section of the village, about 50 to 100 yards away. On the highest point above the old village site sits the Russian Orthodox Church. The layout of the old village suggests an intimate setting in which a village member had little structural privacy, yet the individual nature of the buildings gives evidence to personal autonomy and taste.

The residents are ambivalent about the help they received after being declared a disaster area following the storm of 1978 and becoming entitled to Federal assistance. Representatives of several Federal and State agencies became involved in the cleanup and resettlement of Karluk. Plans were not hatched nor policies implemented over-night. Residents reported that discussions with government representatives were frequent, lengthy, and often confusing. In the view of the residents, they reluctantly agreed with the Federal Government's recommendation that the village be relocated and constructed on higher ground about three-fourths of a mile inland from the Old Karluk site. More than 20 houses were built at the new location with Housing and Urban Development (HUD) funds. The new location separated villagers from their traditional homes and their church.

The church, in particular, had been a principal reason for which villagers were most reluctant to relocate from the old village site. The Ascension of the Lord Russian Orthodox Church was built in 1888 during the height of the commercial fishing boom and over a century after the Russians established themselves at Karluk. It is apparent to all interested observers that the Russian Orthodox Church has provided solace, and its priests and lay helpers have provided guidance to Karluk residents for over a century. The church building, which is the oldest standing church in Alaska, symbolized this important part of Karluk history. It was also the case that Karluk residents did not want to be separated from the homes into which they had invested time and energy to make distinctive.

Many of the pre-1978 buildings remain in a sort of ghost town on the southwest village site. Remnants of the old canneries and their docking facilities are still prominent. The Ascension of the Lord Russian Orthodox Church remains in use, although it has suffered extensive water damage. A statewide campaign for funds for restoration of the church was begun in 1991. Early response to this campaign has been encouraging, although contributions have been modest (Reeves 1992:A1,A6).

II. THE PEOPLE

II.A. Impressions After the Spill

We intended to incorporate Karluk into our social indicators study in 1988 but were unable to do so because of persistent foul weather during January of that year. Our research design, coupled with financial constraints, did not allow us to enter the village until 1990, a year after the spill. At that time we were able to administer questionnaires to one adult in each of 12 households (about 50% of the village's households at the time) and talk with some of the village leaders, but we were unable to administer protocols or stay for a sufficiently long period to speak with persons representing all of the village's institutions. Not until 1991 did we have sufficient funds to administer protocols and engage in more protracted and deeper interviewing, much of it open-ended, with the residents of Karluk. At that time we also administered questionnaires to persons in 5 households we had not interviewed in 1990. By 1991 we had interviewed an adult in 85 percent of Karluk's households. Although we have spoken to the majority of adults in Karluk, because we spent so little time there in 1990, this report is based on fewer observations than the reports for other villages, with the exception of Tatitlek. As a consequence, the following report is narrative in form. There are several places below where information is scanty, so the generalizations are impressionistic. Yet the impressions seem to be of a piece with the empirically warranted generalizations, so the impressions are presented here. They should be understood as concluding hypotheses that require confirmation.

In any event, in the winter of 1991, the Karluk population was 71 persons comprising 20 households. Adults represent roughly 50 percent of the population, and the ratio of females to males is about 1:1. Virtually all permanent Native residents of Karluk identify themselves as Aleut[3] despite any degree of mixed Koniag-Aleut,

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[3] The people of Karluk refer to themselves as Aleut rather than Koniag. This is a common practice on the island. In addition, they identify their language as Aleut [there are two Aleut languages, Eastern and Western], rather than Alutiiq (see Footnote 1). It is certainly possible that Aleuts were relocated to Karluk in the late 18th century, and it is plausible that they married Koniag women (only Aleut men were relocated). Yet there

(continued...)

Russian, European, or Asian ancestry they might have. During the winter of 1991, there were two non-Native residents in Karluk; only one resided there year-round.[4]

Initial discussions with villagers, particularly residents over 50 years of age, were not simple affairs. Villagers reported that some social science researchers and historians have misrepresented life in Karluk. These experiences have taught the villagers caution. Some elders no longer talk with social scientists. A mute reception from elders is rather chilling, but it also calls for some understanding; and understanding is difficult to obtain if conversation is not forthcoming. Much of what was learned in the village did not require conversation on delicate topics; but with a little time, some information that *appears important to understanding Karluk after the spill was gathered.*

First, and ever so obvious, we learned that Karluk is in dire economic straits. Faced with no immediate prospects for economic development, most young people of the village must decide between financial solvency through wage employment elsewhere and living in their home community. Some leave the village to earn money to assist relatives left at home. Others leave in frustration, intending never to return.

Although some out-migrants claim they will not return, many do return. Some do so because of family obligations--an ailing parent or overburdened sibling needs assistance. Others return because their attempts to make livings outside the village have met with failure. For some the migration out and return to the village is a cycle in which returning to Karluk is used to gain balance before attempting to live on the outside again.

Above all, it appears that the basic reason behind the actions of most returnees is that Karluk is home. It is the place where children are reared, relatives and friends are

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[3](...continued)
is little evidence that the local language is either Eastern or Western Aleut. Linguists (see Woodbury 1984) identify the language spoken in Karluk as 'Alutiiq.' The Kodiak Regional Cultural Center uses Alutiiq (Pacific Yup'ik) for the language of Kodiak Island Native residents. Although the local convention for referring to residents of their language is 'Aleut,' I use 'Alutiiq' when referring to the language and Koniag when referring to the ethnic background of the people of Karluk.

[4] This person was married to a Karluk Native.

buried, resources are harvested, stories are told, history is recounted, and lives are lived. To returnees, Karluk represents a place where they feel safe, a place to regain balance, a place in which they fit, and a place where they belong. One respondent talked about her return as a celebration of life. For this person, the return to Karluk was precipitated by her victory over alcoholism. Now sober, she has realized the importance of the village, stating "I came home because I wanted my children to know Karluk and because this is where I am from."

The downside of Karluk's situation is quick to impress an observer. Village life appears to be rife with conflict. A sense of fatalism appears to prevail among the village youth. A second impression soon alters the first. After a few days of discussions and observations and interviewing, it is apparent that residents care deeply about their village and that adults are filled with pride and hopefulness for it. This sentiment appears to account for the emotional conflicts that swirl around issues of village governance. Factions in small villages or on Indian reservations usually comprise two groups competing for power and control. Factions can form and dissolve rather quickly, or they can persist for generations. But whether membership in factions changes in relation to issues (known as 'pervasive') and are short-lived, or whether membership in a faction is firm and the faction is pitted against its opposite on various issues as they arise (known as 'schismatic'), their confrontations can be divisive. Factions compete in Karluk over some issues, yet a second level of conflict may be more important for the well-being of the community. Teenagers and young adults express frustration with the inability of village leaders to provide economic opportunities for village residents. Their frustration, to be sure, is rooted in financial deprivation but also in a desire to remain in the village. It is my distinct impression that many of Karluk's youth would choose to stay in Karluk if jobs were available and they could earn enough income to meet minimal needs.

In this regard, it is certainly noteworthy that all young adults in Karluk have resided in places other than Karluk. Karluk does not have a high school, so at about age 14 all adolescents are sent away to high school. Most students are sent to Kodiak City;

others are sent to Chemawa, a Bureau of Indian Affairs (BIA) school in Oregon's Willamette Valley. At both locations, the youngsters live in dormitories.

Relocation for high school is usually the first encounter with culture shock for erstwhile Karluk residents. Boarding school life provides freedom from direct observation by parents and family. Many of the young adults with whom I spoke said that boarding school was where they first enjoyed unrestricted access to alcohol and drugs. One young man described early adventures at high school during which partying went from an occasional activity to a lifestyle. He noted, "At school, in Oregon, there was so much freedom. I start smoking pot and then it became a problem. I had to leave. Right now I'm home trying to get settled. Then I want to get some job training, maybe in Seward." Some Karluk high schoolers become dependent on alcohol or other drugs. According to Impact Assessment, Inc., (1990) researchers, 55 percent of all the adults they interviewed in Karluk during the summer of 1989 reported that alcohol and drug abuse were serious problems for the community.

Among Karluk's young people, the Native language rarely is used except for a few words or phrases. Middle-aged Natives can communicate in Alutiiq. They use the language primarily to talk with elders. Within our sample, none of the younger people were satisfied with their Native language skills. Of those who speak Alutiiq, only 1 person--a 64-year-old--was completely satisfied with his skill in the language. There are no formal programs or classes where these young people can learn the language of their elders.

II.B. Household Organization and Kinship

In March 1991, there were 20 households in Karluk. Most households included nuclear families; a few comprised single mothers with their children. The availability of HUD housing made it possible for nuclear families and single-parent families to occupy independent houses. However, independent houses do not imply independent and autonomous social units. Despite separate residences, kinship ties among people in separate households provide the structure for the exchange of goods and services, ranging from food to babysitting. To understand domestic relations in Karluk, it is

necessary to understand how people in separate houses are related and how the relations are expressed in behavior.

For example, a man who resides alone in a house goes to his sister's house--a single parent with children--each morning at dawn to prepare breakfast for his sister's family. He returns to her house for lunch and dinner as well. These siblings occupy different houses, but they comprise a single functioning social unit. The brother and sister rely on one another for certain domestic activities much as a couple in a nuclear household might. Sharing resources and labor are vital components of kinship relations in Karluk. Sharing extends through kinship networks whether or not kinspersons reside in the same structure.

In all Native households, nieces, nephews, cousins, siblings, and visitors share frequent meals without formal invitation. This occurrence is so common that it often goes unnoticed by village residents. For example, during an interview a respondent was asked a series of questions regarding the number of meals shared with relatives not living in the same household. Despite the fact that the respondent's niece had just finished eating there, the answer was "none." When queried about lunch with the niece, the interviewee responded, "Oh yeah, I never think about her, she eats here all the time." Close residential proximity and cultural traditions make the household part of a larger social unit such that distinctions about individual members becomes blurred.

Kinship forms the basis of social relationships. Two kin groups dominate the village. A third family that had been influential in the village during the 1970s and early 1980s has relocated in Larsen Bay. However, intermarriage between the families serves to connect most individuals in the village. Currently, young adults look outside the village for marriage partners, and some of their spouses are Natives; some are not. In most cases where a resident villager has married an "outsider," the woman is from Karluk, and the man is not. That a non-Native male chooses to reside in his Native wife's village is not unusual and occurs in small villages throughout our sample. What seems unusual is that Native males from outside Karluk choose to reside in their wives' home village. This type of post-marital residence pattern was not observed in the other

Native villages I visited. The in-marrying males (those who marry Karluk women)--Native and non-Native--are quite active in village issues.

II.C. Social Activities

Visiting constitutes the most recurrent social activity in Karluk. Even in the harsh, cold winds, one sees neighbors bundled up and traveling between homes. A hot cup of coffee or tea awaits visitors, and a game of cribbage or Parcheesi usually is at hand. Visiting usually brings together members from two or three households in someone's house. Several adults reported that they enjoyed walks to visit others at the old village site, where they would often reminisce about the adventures of their youth.

Subsistence activities in Karluk are social activities; thus, they serve two functions: (1) securing needed foods (see Sec. IV.B, Subsistence) and (2) affirming the collective culture of the village. During the winter months, the men go out in groups to hunt, fish, and gather wood. On these often rigorous excursions, the men have time to enjoy one another's company along with sharing the fun of the "chase." Additionally, these forays provide the basis for stories shared among all village members--a vital part of the oral tradition of the Aleut (Koniag) culture.

Summertime brings subsistence activities to all villagers. While the men and older youth, usually males, engage in fishing, the women and children gather berries and clean and "put up" fish. Here again, subsistence activities constitute social gathering. The household visits of the winter, predominantly engaged in by women, are replaced by subsistence task groups. While attending to tasks, women are able to visit. Excursions away from the village provide the adventures for the women's stories.

Social activities in the form of subsistence tasks provide valuable opportunities for intergenerational bonding and sharing knowledge, and for bringing together multiple households. In this way, information and emotional support is exchanged while villagers assist in the very survival of their neighbors.

Informal activities for children included watching television and videos and searching for artifacts along the river bed and near the old village site. Gender-specific activities also were witnessed. Elementary school-age boys often were seen heading for

the river with fishing rods in hand. The boys with whom I spoke bragged about past catches, declared who among them was the best fisherman, and expressed pride in bringing food home for the household. I do not have as much information about the village-based activities of the elementary school-age girls. Several of the older girls (in junior high) were accomplished game players; and as with adults, visiting and game playing were frequent informal activities.

Formal social activities included various children's events at the grade school, women's night, and men's night. As with most villages, the school's multipurpose auditorium/gymnasium provides facilities for evening activities for the children of the community. Basketball, tag, and other games are played. These activities are geared to younger children, because the village school provides only kindergarten through 10th grades; high-school-aged youth do not reside in the village during the school year.

Organized by the village Community Health Resource counselor,[5] women's night activities consist of arts and crafts (beading, latch-hook-rug making, crocheting, and knitting), game playing (cards, Parcheesi, and the like), conversation, a shared meal, and occasionally a topical discussion. The location of the meeting rotates weekly between the women's homes. Each woman takes her turn as hostess. The women look forward to this formal gathering despite frequent informal visiting throughout the week. It appears that the convening of all women in the village reaffirms their common identity and provides a forum for discussing their collective concerns. The rotating of the obligation to host the gathering serves to alleviate social-status distinctions by allowing each woman the opportunity for validation as leader and member of the group.

Men's night brings the men together in larger groups than the task groups that hunt or fish together. Men's activities tend to be less organized and less frequent than those sponsored by women. Gatherings usually are at the school gymnasium, and basketball is the game of choice. This is particularly popular among the young males.

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[5] The Community Health Resource Counselor is a professional position sponsored and paid for by the Kodiak Area Native Association (KANA), the Kodiak region's non-profit corporation.

III. THE VILLAGE

The new village, now less than 14 years old, follows a housing formula approved and funded by HUD. Each home has essentially the same layout and architecture. The houses are very similar to other HUD houses throughout village Alaska. The village is laid out on a rectangular grid with all homes arranged in two rows. A boardwalk built in 1983 runs along an east-west tangent down the center of the rows. The village is approximately 300-yards long. The flat and treeless site offers no landscaping to lend character to a given residence. Most homes are painted a deep reddish color with a few homes painted blue or brown. At the west end of the central walkway are located the village offices, post office, and village store. Perched above and to the south of the village is the school. All in all, the "new" village stands in stark contrast to the uniqueness of its precursor.

III.A. Village Government

Karluk remains one of the few Alaska villages that did not incorporate as a city. The village government is the Tribal Council, and its authority comes from the 1934 Indian Reorganization Act (IRA), as revised for Alaska tribes in 1938[6] and as revised again for Alaska tribes after the passage of the Alaska Native Claims Settlement Act

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[6] The IRA has a particularly complex history in Alaska which, prior to the passage of ANCSA, had several types of Federal-Native arrangements. In southeast Alaska several IRA tribes occupied reservations whose land was held in trust. There were also several 'Reindeer Reservations' owned by IRA tribes. Most IRA governments did not possess reservations whose land was held in trust (impaired title). In brief, the 1934 IRA was extended to Alaska in 1938 (52 Stat. 393). The IRA created non-shareholder corporations with constitutions. The intention was to establish constitutional "democratic" governments in which all enrolled members were enfranchised. The intention was also to create limited sovereignty and self-governance for Native governments, but not to dissociate them from the Federal Government or to limit Federal obligations to the IRA governments, henceforth called 'tribes.' The BIA provided a boilerplate constitutional document to all potential tribes which they were free to alter, within limits, and ratify. They could also reject the provisions of the IRA. Upon ratifying a constitution, an IRA government could then ratify a charter, which gave the tribal government the authority to conduct business as a corporation and to borrow Federal funds to do so. All decisions rendered by an IRA government were (and are) subject to the veto power of the Secretary of the Interior. One of ANCSA's provisions was the dismantling of all IRA governments under the provision of 52 Stat. 393. Villages could create new IRA governments but not as corporations of non-shareholders with land held in Federal trust. The new IRA governments provided access to BIA and other Federal grant and assistance programs, and provided for governance of Natives. Yet if village populations are mixes of Natives and non-Natives, IRA authority extends only to Natives.

(ANCSA) in 1971. ANCSA dissolved all IRA governments while allowing for the creation of new IRA governments much different from those that preceded them. Although 20 years have passed since Karluk's original IRA government was dissolved, the village has not written a new constitution for its current IRA government. The current IRA government doubles as the village's not-for-profit corporation, which is another option made available by the provisions of ANCSA. A major task confronting the Karluk IRA government is drafting and passing a constitution to replace the boilerplate document made possible by ANCSA when the original IRA government was dissolved.

Because Karluk has an IRA government, local politics are complicated: enfranchised membership is based on tribal enrollment, not village residency. Thus, power is distributed beyond the geographic boundaries of the village, which can generate conflicts, particularly regarding tribal land issues (see discussion below).

The advantage of the IRA government doubling as the village non-profit corporation is that the Karluk Tribal Council can gain access to programs and services for the village that are made available through Federal grants. Most of those grants are gained in conjunction with KANA, the regional non-profit corporation. The Karluk Tribal Council also can gain resources and administer Federal programs available to tribes through the BIA.

The tribal council of Karluk consists of the council president, vice chair, secretary/treasurer, and two non-officer members. Two men and three women held these positions during the winter of 1991. A man served as council president and women filled the remaining council officer positions. All were members of the same kinship group. To convey the flavor of village politics, let us summarize three issues the Tribal Council faced during the winter of 1991 and the positions that were struck on these issues: (1) village debt and fiscal management; (2) economic development and wage-labor opportunity for village residents; and (3) tribal land ownership and reconveyance. It is interesting how the Exxon Valdez oil spill, including the increase in fuel prices,

cleanup employment, and the way in which workers used the funds they earned as cleanup workers are woven into the political exchanges that animated villagers.

The first issue is especially poignant because of its similarity to problems experienced by the electorates and the political amateurs who attempted to lead them 2 decades ago in the energy boom towns of the American West (see Little 1978: 63-85; Gold 1978; Jorgensen 1981). At first glance the contexts for energy boom towns and for Karluk are very different. The former comprises small, rural towns undergoing rapid and large-scale industrial developments. Karluk is a little Native village responding to an oil spill that damaged its economy and its environment.

Charles Perrow (1984) would classify the Exxon Valdez oil spill as a "normal accident." The responses in Karluk and in other villages I have studied to the spill are similar to local responses to rapid, large-scale industrial developments in rural areas--areas with modest infrastructure, few resources, a paucity of skilled labor, little access to power, and little access to capital. Elected leaders in rural areas are invariably political amateurs, people who may be held in high esteem locally but who are relatively ignorant of large corporations, have little access to state or Federal sources of power, have little access to capital, exercise little suasion beyond their home community, and are absolutely powerless to resolve large problems, either political or economic. While addressing large problems beyond their influence, they are overrun by the immediate, pressing problems that affect their constituents as a consequence of normal accidents or during periods of boom growth that is controlled by persons or corporations whose decision-makers are located outside the area.

Extremely cold temperatures, rough seas, and high fuel-oil prices coalesced in the early winter of 1991, causing an increase in fuel consumption and rendering oil tankers unable to offload and the Tribal Council unable to pay for the village's fuel. One village leader attributed the village's plight to the Exxon Valdez oil spill, which prompted Exxon

to increase the price of its oil.[7] (Whether the escalation of fuel prices throughout the United States was a consequence of the oil spill, oil prices shot up immediately following the spill.) Karluk requested and received the status of State disaster area, making it eligible for emergency loans. The village received and allocated over $50,000 from the State Fuel-Oil-Emergency loan program, a large debt for a small village with no obvious means to generate income. The village's financial embarrassment caused residents at a March council meeting to question the village leadership's fiscal management. In response, tribal leaders explained that there were two primary causes for the village debt. First, due to a misunderstanding about the profit status of the village power company, the village had to pay the Internal Revenue Service (IRS) a large sum in taxes and penalties. (The leaders, nevertheless, held to their contention that the IRS erroneously levied the taxes.) Second, many individuals in the village failed to pay their heating and electric bills for 3 or 4 years.

Villagers, particularly young males, wanted to know why their leaders were not better educated about the tax status of Karluk's utility, making such statements as, "This shouldn't have happened in the first place." At no time did the young males display any empathy with the village leaders' misunderstanding of the complexity of the tax issue.

As for the nonpayment of utility bills by some village residents, several young men were openly critical of the leadership for not collecting monies from delinquent villagers immediately following the spill cleanup in the fall of 1989. Some debts were owed by persons who gained employment in the cleanup. One man explained how he had worked on the cleanup in Karluk and then relocated to continue to work on the cleanup so as to earn enough money to pay off personal and family debts. He saw no reason why all

[7] Fuel oil prices rose 18 percent--from $90 to $107 per barrel--during summer 1989. These prices remained high through early 1991 despite the loss of the "boom" wage rates avaialable for oil spill cleanup and the absence of work in the village. Whether price hikes and the maintenance of high prices for oil is solely attributable to the spill does not yield a simple answer. Most Alaska villages have a single supplier, but whether Karluk is dependent on a monopsonist supplier or whether there is competition for their business is not known. If there is competition, it is not known whether competitors collude on prices. Whether discounts are given to villages that purchase more oil than Karluk is not known.

members of the community did not do the same or why the Tribal Council had not insisted that debtors do so. As the criticisms mounted, village leaders concurred and offered in their defense that chaos reigned after the spill and during the cleanup process. Collecting back debts was not a priority to village leadership when they faced so many problems beyond their skills and resources to resolve.

It was not established that all persons delinquent in their fuel payments to the Tribal Council had worked on the cleanup. In 1990 we learned that 4 households among the 12 in our sample had members employed in spill-cleanup-related work. The Alaska Department of Fish and Game survey of Karluk households that year reports that 11 persons gained some employment in oil-spill-related work (Fall 1990). It is evident that the jobs were not evenly distributed among Karluk households. Nor did the younger critics express empathy with the Tribal Council for allowing some of their fellow villagers to heat their homes either when they were unable to pay for it, or when they used funds available to them for purposes other than their utility bills. It is interesting that the Exxon Valdez oil spill was specified as a major cause of the village's predicament in regard to its delinquent fuel oil bill, as well as the source of income through cleanup employment that could have assisted residents in clearing fuel debts owed to the village's utility. There is little doubt that oil-spill-related work was important to Karluk residents: 42 percent of all jobs in the community from April 1989 through March 1990 were spill-related.

The discussion turned to seeking remedies for nonpayments and to the elimination of village debt. Although many solutions were proposed for both, no resolutions emerged.

Young men dominated the next topic before the Tribal Council--jobs and economic development. The tribal president announced that Karluk had secured funds to repair local housing and that job applications were available. Two other projects were in the offing--construction of a bulk-fuel tank and a feasibility study for a boat harbor. Should either materialize, they could provide work for the local residents.

Villagers, speaking from experience, expressed concern that the projects the president mentioned would not include local hires, even when skilled craftsmen were needed and locals possessed the requisite expertise. They knew that in the past jobs most frequently went to non-Natives off the benches of the union halls in Anchorage and Fairbanks, so they reasoned that the future would be like the past. They were told that certification of skilled labor training was required for the housing repair jobs and that few nonskilled positions were available. The credential requirements infuriated the villagers. Village officials had no say in establishing the qualifications for employment or in the hiring process, so they had no power to give assurances about the potential for hiring locals. Thus, prospects for summer work were negligible for village residents.

The final issue discussed at the Tribal Council meeting focused on a land conveyance agreement[8] with Koniag, Inc., the regional for-profit Native corporation. The Tribal Council sought advice about what to do with the land it was to receive through conveyance: (1) divide the land in severalty among tribal members (resident and nonresident); (2) place the land in trust for the village; (3) sell the land and divide the proceeds among the shareholders; or (4) lease the land long-term to the Bureau of Land Management with a wilderness-retention clause.

Although this issue appeared to have the greatest long-term significance to villagers, it was not an issue that yielded to a quick or simple solution. Villagers offered no concrete proposals. It is reasonable to surmise that an issue dealing with ownership

[8] ANCSA mandated that every village shall have a village for-profit shareholder's corporation and these corporations shall receive some regional land through conveyance. As an enticement to get individual Kodiak for-profit village corporations to join together in a regional for-profit corporation (*the present Koniag, Inc.*), each village was offered regionally owned lands adjacent to the village in exchange for the right to act on behalf of the villages as a Kodiak collective. While the entire agreement is too long and complicated to detail in this report, suffice it to say that Koniag, Inc., needed the cooperation and support of all Kodiak villages to become a viable entity. ANCSA also provided for the conveyance of land from regional corporations to city governments. Throughout the Kodiak region most villages adopted forms of city government through State charter, and these governments received land through conveyance. Inasmuch as Karluk did not adopt a city form of government, although it is a member of Koniag, Inc., the land conveyance issue is complex. Whether the IRA government should receive the land conveyance, or whether conveyance should take some other form, was the issue discussed.

of the territory in which the residents were born and reared, as were their parents and grandparents, would not yield to facile solutions.

The desire for jobs is an immediate concern, as is misfeasance and mismanagement by the public sector. What was evident at the meeting is that persons in attendance did not demonstrate expertise to assess the consequences of the several alternatives for the conveyance, but there was an undercurrent that impressed me: Natives were reluctant to make a decision that could dissociate them from their home, their space.

Outside the council meeting villagers expressed concerns about land conveyance, which raised the specter for residents that nonresident enrolled tribal members/corporate shareholders will choose projects for short-term gains that portend irrevocable damage to villagers. Nonresident shareholders outnumbered resident shareholders in 1991, and the discrepancy between the two has increased since then. A tribal initiative to sell upriver land could result in the loss of resource areas traditionally used by residents, the degradation of spawning areas for anadromous fish, and even the loss of hunting and fishing rights. If a shareholder does not live in the village, this may not be a concern; but to village residents, the prospects of the sale of land in fee-simple represents a major threat to their access to subsistence food and changes to places about which they hold special memories and to which they have assigned significant symbols. This land is not recognized as a commodity, per se.

The issues villagers discussed with their Tribal Council in the winter of 1991 point out Karluk's inability to exercise political influence. Leaders in other Native villages throughout Bristol Bay, Kodiak Island, and the Alaska Peninsula with which I have first-hand knowledge express similar frustrations. Even legislation that seeks to ensure "high" wages, such as the Davis-Bacon Act (designed to keep locally hired people working on federally funded projects from being exploited (40 U.S.C. SS 276a-276a-5), backfires against local Natives. The $25-per-hour rate established by the Davis-Bacon legislation causes contractors and subcontractors not to hire untested and untried local labor. They hire persons from outside the village and often outside the region, selecting workers who

by union membership and verification meet the credentials established for the local projects. Most persons hired are White. Natives are passed over and become even more dependent on government programs because they have few opportunities for wage labor. The local Native government is powerless to influence the hiring of Natives, and this powerlessness demoralizes villagers.

III.B. Human and Social Services

KANA serves as the regional human-services agency for Karluk. It provides the village with a year-round community health resource counselor, a health aide, a preschool program, a gymnasium supervisor, and a Village Public Safety Officer (VPSO). Generally speaking, Karluk Natives hold all positions except that of VPSO.

The community health clinic is open 6 hours a day, Monday through Friday. Five to six persons per week use the services of the health aide. Doctors and dentists make regularly scheduled visits to the village. Emergency evacuation to hospitals or facilities outside the region is provided when needed.

KANA provides instructional programming and entertainment events for the village. For example, high-school and college counselors hold information sessions two to three times a year; and during income-tax season, a tax specialist assists residents. Also, Santa Claus makes his yearly visit to Karluk via a KANA-sponsored helicopter.

III.C. The School

Karluk's village school provides education for grades kindergarten through 10th grades. Enrollment numbered 23 in January 1990 and 25 in January 1991. Distribution of students over the grade levels is fairly even. In 1990, boys outnumbered girls 14 to 9; and in 1991, the ratio was 16:9. The principal, two teachers, local-hire aides, and a janitor comprise the school staff. The principal, a non-Native married to a Karluk Native, is a year-round resident of the village.

III.D. Associations and Organizations

The Lord of Ascension Russian Orthodox Church provides the only formal organization in the village that is not political. Most Native village members acknowledge some connection with the church. Roughly 70 percent of the village women

form the Sisterhood Women's Auxiliary. This group looks after the church building and plans most of the church's social events. A most important current task for church members is the restoration of the church building, which, as reported above, is severely threatened by water damage. There is no resident priest, yet villagers remain active and hope to have one stationed in the village soon. Currently a priest from Kodiak City visits about once a month.

Karluk celebrates both the traditional western Christmas and the Russian Orthodox Christmas, the latter being more significant. Villagers spoke with pride and excitement about the Russian Orthodox tradition of "starring." (Starring is similar to the Protestant Christmas caroling tradition.) Easter is an especially important ceremonial in Karluk, including Lenten restrictions such as the abstinence from red meats and, for many, alcohol. The adherence to Russian Orthodox values and traditions varies by individual.

IV. THE ECONOMY

Karluk is a poor village with few sources of income other than transfer payments. Our winter 1991 sample reflected the generally low income levels, with 9 of 11 respondent households recording annual incomes of less than $20,000. All 9 were Native households. The 2 respondent households with larger incomes have at least 1 non-Native adult residing in them. Both non-Native residents are teachers.

Infrastructure is very modest. The docks once used by canneries are no longer usable and there is no pier. Oil storage facilities are limited, requiring frequent fuel oil deliveries. Oil barges cannot or will not make deliveries when seas are high and transporting and offloading are dangerous.

IV.A. Housing

The homes in Karluk are a basic HUD type consisting of three- to four-bedroom units, designed as single-family dwellings. Most are prefabricated and shipped to Karluk on barges and then assembled. Originally designed for Lower-48 environments, these homes are ill-equipped for Karluk's environment. Insufficient insulation and the prevalent high winds in the area account for high heating-fuel use. Because almost every

household has either children or elders, the need for maintaining moderate temperatures within houses is imperative. The inability to obtain fuel oil during the winter of 1991 portended serious problems that were averted by State loans (described in Sec. II.A).

Wood-burning stoves augment the oil-heating systems in each home. The young men comb the beaches for wood drifting in from as far away as the Washington coast. Driftwood provides an adequate alternative fuel supply for most homes, but severe weather often hampers the villagers' ability to collect wood. Some storms deposit driftwood several miles from the village onto the beaches of Shelikof Strait. During inclement weather or high seas, the villagers cannot access these beaches.

IV.B. Subsistence

The harvest of wild foods (plants and animals) for subsistence engages Karluk residents year-round. Subsistence pursuits are crucial economic activities in Karluk households. These activities are deeply embedded in the kinship and social organization as well as the sentiments of local Natives. Any separation of economic activities from social and ideational activities is for analytical purposes only. People plan for coping with the rigors and dangers of fishing and hunting before they undertake harvesting activities. They have experienced adversity in these pursuits and thus prepare for the worst. The planning and preparation, as well as the conduct of the activities, are considered enjoyable by Natives. The joy, as well as the work and the distribution of the proceeds, is shared among kinspeople and friends.

Most of the men in Karluk engage in hunting, fishing, or wood gathering during at least a few days in each week of the year in order to provide for their families, wider networks of kinspersons, and elders in the village. Salmon, which are abundant off and on from June through October, and deer, which are plentiful year-round, provide the major sources of protein for Karluk residents. Seals are a preferred species, and to bag one is prized. Waterfowl, mainly ducks, also are preferred and add variety to villager diets. The mountainous terrain surrounding the village makes inland hunting difficult, except along the course of the Karluk River. Deer are generally hunted from skiffs as they forage near the water's edge along the Strait or along the river. When drifting and

looking for deer, or when cruising the coast and looking for deer, Karluk hunters often carry shotguns as well as rifles, prepared to bag seals or ducks should the opportunities arise.

Hunting from skiffs while drifting or cruising is almost always done in small groups of two to four men. There are 7 skiffs in the village, so members of two-thirds of the 20 households must share with persons in households that own skiffs in order to drift down the river or along the coast. Kinship, friendship, and need form the basis for the formation of hunting groups.

Weather plays a major role in the subsistence pursuits of the Karluk villagers. Because hunting generally is restricted to skiffs, blowing wind and rough seas greatly affect the frequency and increase the danger of subsistence outings. This is particularly true of winter hunting and fishing. Additionally, weather influences the delivery of freight of all kinds, especially food and fuel, from outside the village, as strong winds prohibit airplanes from landing and high seas make barge portage impossible. Thus, subsistence summer stores and winter harvesting are vital to the survival of Karluk residents.

Beach seining along the lower Karluk River is the prevalent form of subsistence salmon-fishing technology that takes place during the summer and fall months as salmon accustom themselves in the tidal regions before moving farther upstream to spawn. Four smokehouses service the village for preparing king salmon, seal, and any other meats that cannot be air-dried. Much of the prepared meat, whether smoked or air-dried, is then stored in freezers at villagers' homes. In the fall during the silver salmon and steelhead spawning runs, many residents fish with rod and reel. They do so as a subsistence activity and because it is fun to hook and land a big fighting fish. The distinction between subsistence and sport fishing is one of intensity. Sport or "fun" fishing occurs after sufficient stores for the winter have been harvested. Sport fishing for salmon and steelhead often entails competitive comparisons of the size and number of each person's catch. In the winter months when the seas are calm, fishing with rod and

reel or jigging for flounder, halibut, and cod augment food from the summer stores and winter hunting, as do market-purchased meats.

Berry picking is a social activity that facilitates harvests of several resources other than berries. Villagers hike to Sturgeon Beach (south of the village) or to Seven Mile Beach (north of the village) to gather berries and firewood and to hunt deer and birds as opportunities allow. Picnics often accompany these outings, stories are told about previous excursions, and the sites of certain incidents in villager memories are noted and the memories recalled. The resources gathered on these excursions are generally stored for winter use.

IV.C. Commercial Fishing

In 1991, only 1 commercial beach-seining permit was held in the village, and that permit holder had not fished for the past 2 seasons (1989 or 1990). By comparison, in 1980 villagers held 2 to 3 purse-seine permits, 9 to 10 beach-seine permits, and 3 set-gill-net permits (DOWL Engineers 1981). I was told that most permit holders sold their permits to non-Native fishermen. My informants did not know the prices obtained. A few Karluk Native permit holders relocated to Larsen Bay.

Inasmuch as commercial fishing was the major source of private sector income in Karluk, the relocation of some permit holders and the sale of permits wiped out most private sector income in the village. The reasons for the relocations are rather transparent. It is expensive to operate and maintain fishing equipment, particularly to buy new technology but also to pay for increasing fuel costs (see Jorgensen 1990:190-202). There are no buyers and no fish processing plants in Karluk, but both are found in Larsen Bay, 2 hours distant by skiff, and in several other Kodiak Island locales. Fishing from a base in Karluk always requires long-distance hauling of the catch if there are no offshore processors; and as the Karluk fleet dwindled, there was little likelihood that offshore processors would operate nearby.

As for sales of limited-entry permits, highly capitalized non-Natives can offer Natives high prices, prices they cannot afford to turn down, especially when permit holders are laden with debts from a previous fishing season and when they need

equipment repairs and new equipment for the coming season. The highly capitalized buyer will operate bigger and faster boats than the Native operated, boats that are loaded with advanced technology. Some Karluk residents almost surely sold their permits because of large debt loads and long distances to buyers. I could not ascertain how many of the sales occurred as a consequence of the 1989 Exxon Valdez oil spill, perhaps because the permit holders relocated after selling. As a not irrelevant aside, Natives who fear the consequences that might befall them should land conveyed to the village be placed on the market can observe the consequences of permit sales and the relocation of permit holders and draw a conclusion from the analogy.

IV.D. Wage Labor

In 1978, the public sector in Karluk had 5 year-round jobs, only some of which were full-time--a community health representative, 2 health aides, 1 tribal clerk, and 1 postmaster, and 3 seasonal jobs--1 school janitor and 2 school aides (Barsh 1985). Underemployment, which takes many forms (part-time year-round, seasonal, piece-work, short-term projects), is characteristic of marginal, rural economies dependent on the public sector for survival.

Windfall employment occurs from time-to-time, but is not predictable, such as the job opportunities created by the foundering of the Exxon Valdez. During the summer of 1989, prior to the spill there were about 15 jobs of all kinds in the village. Most were in the public sector and most were part-time. When the oil slick and oil balls ("turds") began fouling the beaches near Karluk in April 1989, work related to the Exxon Valdez oil spill brought short-term employment to at least 11 villagers. The total number of persons (26) with gainful employment represented a peak for the village. Some of the cleanup work was local, and some required that workers relocate for brief periods to other areas contaminated by the oil slick and oil balls. Spill-related work left just a little bit slower than it arrived, but its effect was considerable in a town starved for employment and cash, as we make clear above.

In 1991, specific employment--without disasters--was much as it had been in 1978. There was a modest increase in employment over 1978; but as was the case 13 years

earlier, almost all employment in Karluk was in the public sector or depended on it, and most of it was part-time. In winter 1991, there were 9 year-round jobs, predominantly part-time; 1 community health representative; 1 health aide; 1 tribal clerk; 1 postmaster; 1 fuel delivery person; 1 power plant operator; 1 airline agent; 1 airstrip and road maintenance person; and 1 local store clerk. About six seasonal positions were available in the public sector (school janitor and school aides). There was no VPSO in Karluk in 1991.

The tiny amount of private-sector employment within the village is concentrated in the guiding of visiting hunters and fishermen. Outside the village, a few men are crew members of fishing boats working out of villages other than Karluk.

The local store in Karluk is owned jointly by a Karluk non-Native resident and an absentee investor. Family members operate the store, which is stocked with most essential food items. It also provides snacks, candies, and movie rentals. Most villagers purchase at least some of their food through bulk orders placed with Kodiak-based supermarkets.

IV.E. Tourism

In addition to the store, the sole other private-sector business in Karluk is tourism. Karluk is renowned for its king salmon fishing, a favorite among sportsmen, and also the other four Pacific salmon species and steelhead. The huge Kodiak brown bears, the largest of the subspecies, are also numerous as are deer. All of these animals, but particularly king salmon, draw a few sportsmen to Karluk. The Karluk Lodge, operated by an absentee owner, does most of the business in the village. It appears to be operated without contact or assistance from the village. Residents spoke very little about the lodge and seem content with their coexistence.

A local Native entrepreneur has opened a "lodge" and guiding operation during the summer months, housing sportspeople in extra bedrooms in his house or in tents. This entrepreneur uses family members as guides and service providers for his patrons.

A few residents rent rooms and provide meals for casual visitors, employees of the regional corporations, and researchers. The Karluk Lodge does not operate in the

winter. Employees of State and Federal agencies normally stay in a room at the school or in residents' homes.

IV.F. Future and Planning

No long-term economic development plans existed as of March 1991. Discussions about development possibilities revolved around building a boat harbor and docking facility. Such a facility would enhance the village's ability to attract tourists and might prompt Native commercial fishermen back to the village or prompt locals to become commercial fishermen. The building of a boat harbor and docking facility does not appear likely in the near future. Karluk has no capital to fund such a project. In order to improve the local infrastructure, including larger fuel-oil-storage facilities, and to maintain its airstrip and roads, Karluk would have to rely on funding from the State and Federal Governments to undertake capital improvement projects.

In any event, development of a harbor near Karluk would be extremely expensive. High seas make a Shelikof Strait facility impractical; thus, to gain protection from storms, the mouth of the Karluk River would need to be dredged in order to provide vessel access to a docking facility in a sheltered location upriver near the current village site. The ecological consequences of a project of this scale would have to be carefully studied, particularly with regard to the effects on the Karluk River salmon and steelhead populations.

In 1988, Karluk's Tribal Council and an employee of KANA developed plans to obtain a grant to fund a village-owned sportfishing lodge. According to Impact Assessment, Inc. (1990:66), the person responsible for the plan left KANA during the spill and the planning came to an abrupt halt. This rather modest proposal was not mentioned to me in 1991. Such a lodge could provide some employment for cooks, guides, maintenance people, and a manager for 4 or 5 months each year. A very few jobs can make a big difference in a village with 20 households.[9] By early 1992 the

[9] The Alaska Department of Fish and Game tallied only 18 households during its survey for 1992; so two households have either moved out of the village or coalesced with other households in the village since March 1991.

documents were being pulled together and the village was seeking to complete the proposal and submit it for a grant.

The village government continues to work on developing and organizing its files and ledgers. The updating of the tribal roll (the list of enrolled tribal members), the framing and ratifying of a new constitution, and the closing of all open grants will allow the village to request funding from Federal, State, and regional sources for infrastructure maintenance and enhanced social services.

V. IDEOLOGY AND INFLUENCES OF CHANGE

At the turn of the century Karluk was in the twilight of its brief period as a bustling cannery center. Eighty years ago the fish processing boom ended in Karluk; and faster than it grew, the village withered. In the interim its residents have endured three natural disasters and one normal accident: the ash from Mt. Katmai, the shake from the great Alaska earthquake, the violent storm of 1978, and the oil from the Exxon Valdez. Some benefits have come to the village from the growth of the public sector since the passage of ANCSA, but a sustainable private sector economy is not one of them. The resilience of the villagers who have stayed in place while fellow villagers have relocated is remarkable, although the pace at which families have relocated from the village since mid-1989 (9% per year) is a bleak harbinger. It is my impression that those who stay do so because of their love of the space in which they extract the resources that sustain them; the community with which they share that space; the memories they recount about places within their space; and their affection for the church that binds them together. And even for those who leave, their ties to the village, to their kinspersons, and to the Ascension of the Lord Russian Orthodox Church draw them back for Easter, Christmas, Orthodox Christmas, and other significant events.

The residents of Karluk expressed deep emotion when referring to their village. Sturgeon River and Seven Mile Beach, for example, are important to subsistence extraction and as locations for family and village outings. The old village site, now abandoned, continues to be held dear by those who grew up there; and the survival of the Ascension of the Lord Russian Orthodox Church is a major concern of villagers.

Their collective well-being is tied to its maintenance. Outside influences from Czarist Russian traders to fish processors from the Lower 48 states expropriated Native resources, exploited Native labor, and dominated Natives off and on for more than 1 century. The passage of ANCSA at the behest of United States (Standard Oil of Ohio, Exxon, ARCO), Dutch (Shell), and British (British Petroleum) oil interests had the effect of increasing public-sector transfers and public-sector employment, while absolutely limiting villager access to the naturally occurring resources on which their lives have been based for centuries. The new dependency is nothing like the old dependencies.

Large, structural, economic forces aside, lives in Karluk are played out on a real, every-day, particularistic level. Prominent among the influences that have changed Native practices and sentiments in the past 2 centuries are (1) the Russian Orthodox Church, which had the effect of obliterating traditional beliefs, replacing them with Christian beliefs, and providing salve for wounds inflicted by the Czar's merchants and traders, a salve that seems to work about as well on the wounds inflicted by agents working under the umbrella of democratic capitalism; (2) alcohol, for which any entrepreneur, dim-witted or bright and regardless of intent, can find a market; and (3) new technologies that facilitate secure travel, increase the probability of success on the hunt, and contribute to comfortable lives. As for the last, Karluk's Natives never have had access to capital to allow them to purchase the technology that would allow them to compete successfully and on a sustained basis in the commercial fishing enterprise. And the consumption of alcohol apparently rendered them uncompetitive at a very early stage in the development of the fishing industry in Karluk. This is not to say that Karluk's Natives sought to enter the commercial fishing enterprise on a tooth-and-claw basis. After all, the annual period of commercial salmon, steelhead, and marine-invertebrate harvests conflicts almost exactly with the period of most intensive subsistence harvests. Karluk Natives are now, and always have been, subsistence harvesters.

Adherence to the principles of the Russian Orthodox religion provides spiritual glue for the community. The church building renovation project gives the people a

positive activity that averts their attention from the persistent problems that the village faces. Adherence also provides a means for putting personal and factional disputes aside, if temporarily. This pull of the restoration project and the observation of religious ceremonies is so powerful that residents who have relocated to other villages on Kodiak Island return to Karluk and participate with vigor in the renovation project. They are happily welcomed by Karluk residents who appreciate their efforts. While adherence to doctrinal practices and traditions of the Russian Orthodox religion varies by individual, church membership provides a strong sense of identity. Furthermore, the shared profession of faith serves to connect the Karluk residents with Russian Orthodox Aleuts throughout Kodiak Island, the Alaska Peninsula, the Kenai Peninsula, and the Aleutian-Pribilof Islands.

At present, alcohol is often cited as the most detrimental influence on persons and households in the village. Village residents noted that alcohol and other substance abuses plague some individuals in their community. They were especially saddened about the youth who encounter such difficulties. In 1991, there were no village-based substance-abuse programs.

As for technology, Eskimos and Aleuts have always sought new technologies that work better than old technologies, whether it be polarized and insulated goggles rather than snow goggles, 20-foot aluminum skiffs with twin 55-horsepower outboard engines rather than bidarkas (2-seat kayaks), or electronic beaming devices to guide mariners to port through dense fog rather than memory and kinesthetic sense. In the recent past, two technologies in particular have influenced Karluk villagers--the airplane and television.

The airplane allows villagers more frequent contact with the outside, increases access to nonsubsistence goods, provides a means for residents to leave the village with relative ease, and expands the scope of travel. As in other small villages, daily mail service reduces the isolation that marked village life in the past. While personal contact with those outside of Karluk has certainly increased, so has access to markets via the mail order catalog. Consumer goods and fashions are no longer beyond the means of

the villagers. Such access frees young people from the necessity of learning traditional skills such as skin sewing. Thus, contact between generations may lack the discipline and urgency it did in the past, when such interaction involved the transference of survival skills.

Air freight has had a similar effect. If the weather allows, a telephone call to the market in Kodiak can replenish one's food stores within 1 to 2 days. Although subsistence continues to provide the majority of meat proteins in villager diets, villagers enjoy the variety of (very expensive) foods available in Kodiak City. Households in which food stamps are crucial to sustenance must rely on store-bought goods, modest extracting activities, and whatever foods local residents share with them. Some cash is required to conduct subsistence hunting and fishing. Skiffs, outboard motors, 4-wheel all-terrain vehicles, snowmachines, fuel, guns, rifles, ammunition, nets, rods and reels, sleeping bags, lanterns, portable stoves, knives, hatchets, caches, freezers, and the like require cash to purchase and to maintain. If a person or a household cannot pull together the resources necessary for successful extraction activities, they must receive resources from others, share meals with others, and rely on transfer payments and processed foods.

Most villagers with whom I talked traveled to Kodiak City more than once each year. Such trips were rare prior to the development of a landing strip at Karluk. When funds can be marshalled, villagers might even travel to Anchorage to shop. Such excursions often are combined with other purposes, such as medical checkups.

Television and other forms of electronic media are pervasive in Karluk. Many of the older respondents commented that television has changed relations within the village because people no longer visit as much. However, the most common objection to television is that children watch too much of it. Adults said their children seem beguiled by the glamorous lifestyles they see on television, claiming that appreciation of their Native heritage has been diminished because of it. A Karluk youth, it is suggested, focuses at least one eye on Los Angeles, whereas the other eye--not to mention the feet, hands, and stomach--remains on the Bush.

VI. EFFECTS OF THE 1989 EXXON VALDEZ OIL SPILL

Oil from the Exxon Valdez spill of March 24, 1989, began fouling beaches and rocks on Kodiak Island in mid-April, about 1 month before the king salmon began to enter their spawning waters. Salmon comprised about 65 percent of the total subsistence harvests by Karluk's residents for the preceding decade. The percentage of salmon in the total subsistence harvests for Karluk households was 76 percent in 1991 (Fall 1990: Table 5). At first blush the increase in salmon procurement suggests that the oil spill increased the amount of salmon available to Karluk residents for harvest. Given the *restrictions placed on commercial salmon fishing by the Alaska Department of Fish and* Game (ADF&G),[10] there were many more salmon available to some commercial fishermen (set-netters) and to subsistence harvesters than in almost every year since 1982.[11]

One question is, if the proportion of salmon harvested for subsistence increased, what resources decreased? Seals, which comprised about 8 percent of previous harvests comprised 2 percent of the 1989 harvest. Birds dropped from 4 to 2 percent, and other fishes from 10 to 6 percent (see Fall 1990:Table 5). Sea mammals and many varieties of ocean birds, especially diving birds, suffered from oil contamination. The evidence that they die from toxicity is not great, although toxins remain stored in the livers of sea mammals longer than in the livers of fish. The problem for seals is that when they are coated with oil, they often freeze to death. Birds covered with oil cannot fly; and they, too, die. The reason Natives give for the reduction in harvests of birds and sea mammals and certain ocean fishes is that they are contaminated. In particular, seal oil, so prized and eaten with dried salmon, smoked salmon, smoked blackmeat, and all manner of "greens" (edible wild plants) and berries, was feared to be contaminated.

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[10] Areas within the spill's oil slick were closed to fishing; drift net fishing was prohibited; the duration (in hours) and numbers of openings were reduced.

[11] Following the extension of the U. S. territorial boundary to 200 miles offshore, salmon stocks returning to spawning waters increased from 1978 through 1982. New technologies and new agreements that made greater harvests on the high seas beyond the territorial limit possible but that also made larger harvests possible near the Alaska coast, reversed the trend.

A second question is quantity: how many pounds of resources were harvested per household? In 1989 Karluk residents harvested 237 pounds of wild resources per person, 38 percent less than the amounts harvested 3 years earlier (Fall 1990:Table 4). So the proportion of salmon increased, but the proportion of wild foods harvested per capita plunged. There is little doubt that the reduction in the size of the harvest was influenced by the spill: ADF&G's restrictions on commercial fishing increased the availability of salmon and fear of tainted resources influenced residents to harvest fewer sea mammals, ocean fishes, and birds than in previous years. The spill undoubtedly influenced harvests in another way: 11 persons in the village gained spill-related employment during the summer of 1989, thereby restricting the harvesting activities of every one of the 11 during the period in which the most intense subsistence extraction occurs. Twenty-five percent of the households in our 1990 sample had at least one member who temporarily relocated from the village for spill-cleanup work in 1989.

It is not clear that the oil spill is the sole cause for the reduction in the amount of wild resources harvested by Karluk's residents. According to ADF&G surveys, Karluk residents harvested 832 pounds of wild resources per capita in 1983, 381 in 1986 (54% less than 1983), and 237 in 1989 (38% less than 1986). The trend began at the time the size of the salmon stocks returning to spawning waters in Alaska began to dwindle. It is surely the case that resources other than salmon were not harvested because they were presumed to be tainted. Whereas 100 percent of Karluk households harvested wild plants and 93 percent harvested salmon in 1989, only 57 percent harvested seals. As for use of the resources that were harvested, 14 percent of the households discarded resources because they were thought to be contaminated (Fall 1990:Tables 7-10). Thus, fewer resources were harvested because of fear of tainting and because able extractors were working on the spill cleanup; and fewer of the harvested resources were retained because they were presumed to be tainted.

No one we spoke to in Karluk claimed that they lost property, such as a boat or buoys or nets, because of the spill. Yet one-quarter of the people with whom we spoke said someone in their household suffered a financial loss because of the spill (those

persons could not engage in some aspect of the commercial fishing industry). All filed compensation claims with Exxon. By a ratio of 2:1 the claimants thought that the compensation they received was adequate.

No one claimed that they, or their families, were forced to relocate from the village because of the spill--with the exception of the persons who gained cleanup employment. On the downside, 25 percent of the households claimed that at least one person had lost employment because of the spill.

The simple facts with which I began this section provide one glimpse at the consequences of the spill: subsistence harvests went down, temporary employment went up, tainting was feared, most losses were adequately compensated. It is appropriate to dig a little deeper and convey an impression of the context in which the spill was addressed and the way in which decisions were made.

The cleanup activities orchestrated in response to the Exxon Valdez oil spill were similar to the creation and abandonment of the canneries in Karluk at the turn of the 20th century, and the framing, enacting, and implementing of ANCSA as it pertained to Karluk. Cleanup activities associated with the spill overwhelmed the village of Karluk. Fairly isolated since the loss of the canneries in 1911, the village, bereft of infrastructure, was besieged by representatives of Exxon; the regional corporations; and Kodiak Island Borough, State, and Federal Governments. Although they wore different hats and sought to control different aspects of the spill's consequences and the cleanup operation to take place nearby, the various roles played by various representatives were confusing and intimidating to the residents, particularly to local officials. The corporate and government representatives were followed by reporters from the print and electronic

media, the Oiled Mayors[12] legal personnel, and several research teams. As one village official stated:

> So many people were telling us what to do and what not to *do, who to let in the village and who not to let in the village.* It was very confusing. Finally, we decided to keep the reporters out. I remember getting on the radio when a plane showed up and telling the pilot that if there were any reporters on the plane don't think about landing. They are not welcome here!

In late April the Tribal Council president sought equipment and supplies through KANA, Exxon, and eventually VECO, the firm contracted by Exxon to direct the spill-cleanup. He was deeply immersed in spill-cleanup logistics while trying to assist villagers with their mounting problems and complaints. A boom at the mouth of the Karluk River desired by the villagers was put in place and used to skim oil from the tidewater. The Tribal Council president who had worked so hard on logistical issues left the village for 2 months during the cleanup operation, and the VPSO was assigned as the local VECO coordinator (Impact Assessment, Inc. 1990:65).

Karluk residents wanted to deal directly with Exxon but could not do so. They reluctantly worked with VECO, which used the local school for a few meetings. Residents aver that the local VECO coordinator was prejudicial in his hiring practices and unable to maintain reasonable working relations with the beach-cleaning crews. Impact Assessment, Inc. (1990:67), report that the VPSO officer assigned to coordinate VECO operations in Karluk subsequently was fired from his VPSO position. The part-time janitor and the part-time tribal clerk left their jobs for better remuneration in

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[12] The Oiled Mayors group (an ad hoc subcommittee of the Alaska Conference of Mayors) was composed primarily of the mayors of villages and cities impacted by the Exxon Valdez oil spill. This group was represented by Lloyd Miller, an attorney, in its legal actions against the Exxon oil company. Additionally, this group, with the assistance of a grant from the Alaska Department of Community and Regional Affairs, funded a study conducted by Impact Assessment, Inc., on impacts of the oil spill on communities most affected by the spill (see Impact Assessment, Inc. [1990], "Economic, Social, and Psychological Impact Assessment of the Exxon Valdez *Oil Spill." LaJolla, California).*

cleanup employment. Although school was in session for another 2 months, neither job could be filled until the cleanup work was concluded.

There is little doubt that many of Karluk's residents, particularly the leaders, reacted to the stresses created by the situation. In the winter of 1991, 2 years after the spill, the members of the Tribal Council felt that they had not recovered completely from the deluge of outsiders. They expressed a prolonged weariness. The elected leaders of the Karluk community were powerless to select the VECO coordinator, hire cleanup crews, oversee cleanup operations, house temporary workers and visitors, or satisfy complaints. In the opinion of Karluk residents, it did not matter whether an outsider was working for Exxon or VECO or for Native interests--the village's sovereignty was proved nominal. By 1991, the consequences of the 1989 oil spill extended to issues that at first glance did not appear to be connected to the spill at all.

A large portion of the income that was earned from spill-cleanup employment was spent outside the village. Food, dry goods, and supplies of many kinds were ordered from Kodiak City and Anchorage, where prices are lower and choices much greater than in Karluk. Some of the earnings were spent on vacations out of the village.

Exxon and VECO regarded the spill-cleanup operations as an economic windfall with positive benefits for villages like Karluk; but village leaders in Karluk contend that the wage labor provided by the spill cleanup has had long-term negative consequences for the village. Young men who earned wages from $16 to $25 per hour during the cleanup are dismayed at the $7 to $8 per hour the village pays when it garners grants and contracts to provide employment for local residents. On their part, village leaders confide that these young men overvalue their labor. (I heard similar opinions from village leaders in several small villages in the spill area.)

Elected leaders anticipate that projects that will benefit the village and for which they have struggled for funds, such as the fishing lodge whose planning was interrupted by the oil spill, will not be constructed when funds are available. The young men do not view occasional stints of piecework at half the cleanup pay rate as good opportunities. In 1991, at least, the memory of cleanup pay was still fresh in the minds of many

residents. Some had secured some cleanup work in the spring of 1990. The contrast between spill-cleanup wages and public-sector wages (and opportunities to earn those wages) in Karluk was part of what was at issue during the Tribal Council meeting I attended in March 1991. Many youths act as if Karluk's future is bleak and village leadership cannot make it bright. That the youth question authority is not the central issue; youth in most cultures challenge leaders. However, the intensity and tone of the challenges in Karluk seem unusual, especially given the Aleut culture where kinship ties and age are revered.

Village officials described additional indirect effects of the income earned by several villagers from the Exxon Valdez oil spill. Residents and leaders claim that vendors servicing the village have raised prices because of the high wages received by Karluk residents. The price of freight, particularly of fuel oil, was given as one example. Inflation plagues boom towns and towns suffering from natural disasters or normal accidents. Inflation surely accompanied the spill in all the villages I visited that were directly affected by the spill and its cleanup. Inflated prices were reflected in higher rents, increased prices of dry goods, transportation, and food. Oil was not the only commodity to become dearly priced. The high rates of pay generated by spill-cleanup operations had a variety of effects on individuals within the village: inflation affected the entire village.

I do not have sufficient evidence to evaluate inflation in Karluk beyond some comparative prices from the local store, the price increase in oil, and the complaints of residents. The reports of village residents about price increases are important and can be described. Village leaders realize that they must purchase oil for village needs, including household uses. They well recognize that prices have jumped and have remained high. They also report that cleanup activities increased costs of all kinds in the village, while cleanup dollars earned by local residents generally were spent outside the village. Village leaders feel trapped by businesses they cannot control and powerless to assist villagers. The villagers' euphoria generated by VECO employment and income

gave way to the realities of price gouging. In the long run, the villagers were unable to get ahead, despite boom wages.

The bureaucracy created by the spill severely strained the few resources of the village. Village government staff worked many additional hours to deal with spill-related charges, payments, and documentation. Subsequently, village government business did not receive full attention or was left unattended. Demands on village personnel continue today as leaders respond to researchers and requests by regional and State officials regarding oil-spill litigation and impact studies.

There is no good time for a massive oil spill, but the Exxon Valdez spill occurred at a difficult time for the residents of Karluk. There was confusion and ignorance over the land conveyance owed to the village by Koniag, Inc. (Kodiak region Native for-profit corporation), and fear and dismay about Karluk's economic future. The spill, it appears, allowed some residents to leave; and the consequences from the spill pushed others to leave--21 persons or 25 percent of the population left in a little over 2 years.

The degree to which the spill exacerbated existing factions is not known; nevertheless, villagers reported that the spill drained emotions, energy, and resources away from the mediation of their community's problems.

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Old Harbor

Curtiss Takada Rooks
Contributions from Joanna Endter, Ph.D.

Special Note

The Social Indicator data on Old Harbor were gathered over a 4-year period. Joanna L. Endter, Ph.D., was responsible for an earlier draft of the Kodiak Region Key Informant (KI) Summary and is one of the co-authors of the Schedule C Kodiak KI Summary. I have utilized Dr. Endter's reports and writings in sections of this report. Special note is given to her primary authorship of Section III.C (Old Harbor Village Corporation) and to her contributions in Section III.A (City Government).

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I. HISTORICAL BACKGROUND

The written historical record begins with Grigori Shelikov's establishment of a Russian American settlement in 1784 (Davis 1979; Cultural Dynamics Ltd 1986). This settlement became known as Three Saints Bay and served as a staging area for the Russian fur trade. Subject to geological disturbances, the settlement was destroyed by a tsunami in 1788, followed by two very damaging earthquakes in 1792. The settlement then was relocated to what is now Kodiak City in 1793. Although the record is not clear, *most certainly the relocation involved only non-Native people; the Natives remained in* Three Saints Bay to rebuild their lives. The next mention of a settlement in this area occurs in 1893, when the census refers to the settlement by the name Staruigavan, meaning "old harbor" in Russian.

Anthropologist Harumi Befu (1970), based on the 1890 U.S. census report, notes that prior to the turn of the century Old Harbor was a small village. Befu further outlines that between 1900 and about 1925, the village remained modest in size with its growth cycle beginning during the mid-1920s. Old Harbor grew from a 1920 census count of 84 to 337 in 1985--roughly 300 percent (Cultural Dynamics Ltd 1986:180). In 1926, Old Harbor's first school was established; and in 1931 a post office was built in the village. On Good Friday in 1964, an earthquake followed by devastating tidal waves (tsunami) wiped out the entire village except for two houses and the Russian Orthodox church building. The survival of the church building proved an important sign to the people of Old Harbor and in large part inspired the residents to rebuild on the village site.[1] A small neighboring village, Kaguyak, also was destroyed; and a handful of its surviving villagers decided to relocate in Old Harbor. Other Kaguyak Natives relocated to Akhiok (Davis 1970).

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[1] See Nancy Yaw Davis, "The Role of the Russian Orthodox Church in Five Pacific Eskimo Villages as Revealed by the Earthquake", in The Great Alaska Earthquake of 1964 (National Academy of Sciences: Washington, D.C., 1970) for a detailed treatment of Old Harbor Native attitudes and decisions relating to relocation and resettlement after the 1964 Earthquake.

I.A. The Setting

Located on the southeast coast of Kodiak Island, Old Harbor sits on a flat between Sitkalidak Strait and steep mountains. Across the strait eastward from the village is Sitkalidak Island, which protects the village from the open seas, while Sitkalidak Strait provides ready access for the village fishing fleet. The cliffs above the village provide homes for bald eagles, giving visitors breathtaking opportunities to observe these powerful raptors that inhabit the area year-round. Ptarmigan, ravens, sea gulls, and song sparrows are among the birds that join the eagle in nonmigratory residence. Over 120 species of birds call Kodiak Island a temporary home in their migrations. Ducks, geese, and swans (among others) make seasonal stops in the area around Old Harbor.

Brown bear, the largest of the land mammals in the Old Harbor area, are a common sight around the village dump site and streams during summer. Deer, an introduced species, are the major subsistence land mammal, while rabbits also are hunted. Some Old Harbor residents are able to hunt elsewhere in Alaska and bring back elk, moose, and caribou to add to winter land mammal stores.

The sea, however, dominates Old Harbor both in subsistence and cash economy participation. Salmon and halibut are major sources of subsistence foods and commercial catch. Herring, along with bottom fish such as cod, round out the commercial stock. Crab (dungeness, tanner, and king), clams (butter, razor, and horse), sea urchins, cockles, geoducks, scallops, mussels, bidarkis, octopus, and shrimp comprise the marine invertebrates that augment the fish proteins and add variety to the subsistence diet. Due to overfishing in the region, marine invertebrates such as the king crab no longer comprise a major commercial harvest.

Sea mammals such as seals, sea lions, and sea otters can be found off the coast of Old Harbor; and residents continue to hunt seals and sea lions for food. Though not hunted by the Old Harbor Natives, whales and porpoises also can be found in neighboring waters.

Onshore, the hills are a rich source of salmonberries and cranberries in summer and fall. Grasses cover the hills above the village, while willows and ferns can be found along the creek and river drainages. Few trees spot the landscape.

The present-day village is divided into three residential areas--"downtown," "new town," and "uptown." The traditional village site was downtown. New town and uptown are newer areas spread among the rolling foothills to the northeast of downtown.

II. THE VILLAGE

Old Harbor represents one of the larger small villages in the AOSIS sample. The 1990 U.S. Census reports a population of 284. The 1991 winter census, conducted with the assistance of a city office employee, numbered only 248. Variation in seasonal residence could account for this discrepancy since a number of individuals spend winters outside of the village. Also, a few households resided outside of the village while adult members received advanced professional or academic training. In all, some 13 households were absent in the winter of 1991; and it was expected that these residents would return in the spring or upon completion of training.

Old Harbor is affluent by Alaska Native village standards. Wealth accumulated through participation in the fishing industry has enhanced the economic well-being of its residents. However, fishing income and the market economy have not totally replaced the Native traditions of Old Harbor. Sharing continues to be vigorously practiced, and financially successful villagers invest their earnings locally.

Divided into three distinct housing areas, the village is spread across a considerable area reaching approximately 2 miles end to end. The downtown area--the original village site--houses the airport, school, city offices, Sitkalidak Lodge, library, former clinic (relocated in summer 1991), city pier, city harbor, post office, two stores, and the Russian Orthodox church that presides over the area. New town includes the new clinic, day care center, and tsunami shelter and is primarily residential. Uptown is entirely residential.

II.A. The People

The population of Old Harbor is predominantly Natives who refer to themselves as "Aleut."[2] Historically, contact with outsiders resulted in a number of interracial unions between Native women and non-Native men that produced offspring. Almost all mixed-blood individuals consider themselves Natives. In some cases, the non-Native ancestry is known and preserved. For example, a few of the families with Scandinavian ties have researched their European roots and possess genealogies and birth records tracing their kinship connections throughout Alaska. However, this knowledge does not seem to be equated with ethnic or racial identity as much as it does with family history. In cases where the "father" is unknown or has abandoned the family, identification with non-Native ancestry tends to be publicly eschewed. Some mixed-blood adults related childhood incidents wherein they were teased because of their mixed-blood ancestry by other children who considered themselves to be of purely Native ancestry. If a child's father was a resident in Old Harbor, the teasing was usually avoided.

Today, interracial marriages continue to occur; but unlike the past, these unions also involve Native men married to non-Native women. The childhood stigma of mixed-blood ancestry experienced by adults does not seem to be an issue for current mixed-blood children. Perhaps this is because most of the non-Native parents of the mixed children are intimately involved in village activities.

Generally, the non-Natives and their families who reside in Old Harbor are either fishermen, school personnel, lodge employees, or church officials.

Since the passage of the Alaska Native Claims Settlement Act (ANCSA) and the introduction of limited-entry fishing permits, more families have blended their traditional values with those of the market economy. One extended family that has accumulated

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[2] Scholars have established that the indigenous peoples of Kodiak Island are in fact Pacific Eskimo of the Koniag group with linguistic ties to the Yupik Eskimo language (Davis 1970; Dumond 1965). Today the Native language of Kodiak is recognized as Alutiiq (formerly known as Pacific Yupik).

Because the people of Old Harbor refer to themselves as "Aleut," I also use this term (in quotes), though most times I use the word Native. It is my feeling that self-determination by the Old Harbor Natives supersedes other scholarly considerations for this report.

wealth reported investing heavily in the village and also is seeking long-term financial opportunities. While these families have succeeded financially, there remains a strong commitment to the village and its people. The families recognize an obligation to support other community members. As a family member stated, "I'll give anyone from the village a chance to earn a living on the [fishing] boat."

Additionally, this family network combines resources to capitalize younger family members as they come of age and begin to fish independently. For example, virtually every younger member of the family has started out fishing in the same 20-foot wooden boat, where they gain experience as skippers and financial managers.

Housing patterns within Old Harbor reflect some general differences in socioeconomic circumstances. The uptown section houses some of the more affluent residents and homes are generally large. The residents of downtown tend to be elderly and less financially successful. School personnel also tend to live downtown. The new-town residents generally are younger families now coming of age. As development continues, new town will most likely become the center of the village. The new health clinic and day care center--scheduled to open in late spring 1991--are located here.

The possession of a limited-entry commercial fishing permit is a clear division *between socioeconomic groups. Those residents who do not hold permits generally serve* as crew members for villagers with permits. The ability to obtain a commercial fishing permit is limited by the fixed number of permits issued, the cost of acquiring an existing permit (about $140,000 in 1991), and the lack of available venture capital. Some villagers view this as creating a socioeconomic structure that locks them in a position of dependency on permit holders for their financial livelihood. This was a source of frustration for some young men who do not have access to a permit.

While crew members can earn a reasonable living--many earn $20,000 to $30,000, there are few avenues for upward mobility. The only real possibilities for financial independence for these individuals lie in leaving the village or achieving success in education and returning to the village as teachers.

Youth in the village see fishing as defining the economic future of Old Harbor. Although most young men see the "big" money made by more successful fishermen as too great an opportunity to pass up for alternative career possibilities, a few were exploring technical-trade education and college. One young man had recently received a Kodiak Area Native Association (KANA) scholarship to attend the University of Oregon. He planned to major in secondary education. Young women find opportunities in village and regional government and in the school system. They appear to see a college education or some alternate post-high school training as essential for their future. However, not all youth in the village envision their futures with optimism. During class discussions with high-schoolers, I heard a number of students express a great deal of anger. When talking about their interests and futures, few if any saw themselves as owners of boats or businesses. Some of these students looked forward to leaving Old Harbor upon graduation, but they did not have clear goals or concrete plans for making a living.

As a whole, however, Old Harbor high-schoolers are very aware of village issues. An analysis of essays written by the students on village leadership revealed that virtually all the students could identify the major issues facing village government. Like their parents, the youth were concerned with improving the infrastructure of the village for future and long-term economic development. While this awareness could be interpreted as simply a parroting of their parents' concerns, it would be too simplistic to see these essays in that light. Many of these students have had the opportunity to travel outside of their village and Alaska. They know of economic opportunities elsewhere. This knowledge, along with the economic activism of their parents, has informed them of the economic requirements for a viable village in the future.

Conversations with students convinced me that concerns over the long-term welfare of the village were real. While a number of students realized they would have to leave the village for further education, the majority of those with whom I talked desired to eventually live in Old Harbor.

II.B. Household Organization and Kinship

The majority of the households in Old Harbor appear to be nuclear families. This seems to be more a function of Housing and Urban Development (HUD) housing, which has provided low-cost housing, than of traditional practices. In a number of households, multiple generations reside; in others, siblings live together due to economic hardships encountered by at least one sibling. Where economic conditions allow, single parents maintain separate households. Despite the prevalence of single-family households, kinship ties appear strong. Visiting and sharing link the households emotionally and economically.

As is the case in virtually all Alaska Native villages, most families in Old Harbor are related. Almost all of the Native and many of the year-round non-Native residents are related either by marriage or by birth on at least second- or third-cousin levels. Among the 22 winter 1991 respondents to the AOSIS questionnaires, only the 3 non-Natives working at the school or church did not have extended family living in the village.

II.C. Social Activities

Subsistence activities also are social activities. Task groups for berry picking, clam digging, sea urchin harvesting, hunting, and fishing all allow for socializing. These task groups vary in composition and can cut across kinship lines. Some are primarily, though not exclusively, single-gender, e.g., berry picking for females and fishing or hunting for males. Both men and women participate equally in other activities. Individuals are free to join a variety of different task groups from day to day. Occasionally, subsistence activities are combined with family outings such as picnics.

The Russian Orthodox church is the religious and social center in Old Harbor. The church brings together virtually all members of the village as they celebrate religious holidays and traditions. For example, "starring" (akin to the Protestant caroling) is a major activity during the Russian Orthodox Christmas season. Another important church event is church camp for the village youth--involving a pilgrimage to Three Saints Bay

(south of Old Harbor), a place that has both religious and historical significance to Old Harbor Natives because it was the location of the first Russian trading post.

Adults generally spend their leisure time with their immediate families. Villagers spoke of regular family picnics and outings during the warmer months. Winter activities are home-centered and involve watching TV or video movies. Interaction with others involves primarily kinship ties. Visiting is the most frequent informal activity. During the daytime, the lodge restaurant serves as the central meeting place for most people who meet friends for coffee or share a meal together. Evening activities include home visits and steam baths.

Young people enjoy playing sports. Every week night during the school year features various games at the school gym. Early in the evening, the younger children play. Around 8:00 p.m., the high-schoolers and younger adults take over and basketball becomes the game of choice--complete with up-to-date electric timekeeping and an electronic scoreboard. Teams are co-ed, although males are the primary participants.

II.D. Associations and Organizations

The Russian Orthodox church provides the primary nonkin-based organization in Old Harbor. The church is very influential, and virtually all Natives are members. The presence of a priest-in-residence and the local church building provide the village with activities, such as daily prayers, beyond the Sunday service. The Sisterhood, a women's church auxiliary group, is active. Members participate in the selling of homemade crafts to raise monies for various church projects. Governance of the church and its activities is shared between the priest and a local church board.

II.E. The School

In February 1991, the Old Harbor school had 76 students in Grades K through 12. Villagers participate with the administration in governing and developing policies for the school. The 1990-1991 school year marked the first time in 3 years that the school board had been able to meet regularly throughout the year. The five elected members of the 1990-1991 school board consisted of three men and two women--either Alaska Native or married to an Alaska Native. The school principal also sits on the board. Local

participation is vital to the school and accounts for the school's receptiveness to local cultural concerns.

Teachers at the Old Harbor school appear very concerned with the future and cultural identity of the children. Many focus lesson plans and general class discussions on career opportunities. They do not hesitate to ask visitors in the village with a variety of career backgrounds to speak with the junior- and high-school classes about their occupations. Unfortunately, the spread-out geography of the village has limited active interaction between teachers and parents. One villager noted that when everyone lived downtown, teachers would frequently stop by to visit. Still, the teachers try to become involved in the village; and many participate in traditional activities such as "steaming" (steam baths) with locals. One teaching family has adopted an Old Harbor Native child, who is now one of three children in the family.

II.F. Social Services

Social services in Old Harbor are provided by KANA. Medical and health care heads the list of programs and services. Through KANA basic health care is provided by a local health aide; and doctors, nurses, and dentists make regular visits to Old Harbor. Physicians and nurses rotate through the village one to two times a month, while dentists' visits are less frequent. The Old Harbor health clinic is equipped primarily for outpatient treatment needs; and the new health clinic has the ability to function as an infirmary, if needed. Serious cases are treated in the regional hospital at Kodiak City, while the most serious are referred to Anchorage's Alaska Native Hospital. Because of the physical size of Old Harbor, the health clinic offers a shuttle service for those without transportation.

Meals for the elderly is another social program that is sponsored by KANA. According to the program director, winter 1991 saw regular attendance by 15 elderly, while 27 elders (13 males and 14 females) were registered with the program. The program serves dinner, Monday through Friday, at the Senior Citizen Center located above the city offices. Shuttle service transportation is offered. No meals were being home-delivered during my visit.

A pre-school program also is available in Old Harbor. This program, also funded by KANA, generally runs from around 9:00 a.m. to mid-afternoon. Winter 1991 enrollment numbered 12 girls and 8 boys. The availability of this program is vital for parents, especially mothers; it allows mothers the freedom to work in wage jobs or in family enterprises. Perhaps the greatest benefit of the program is socialization of the children. Pre-1964 earthquake housing patterns in the downtown area allowed children to interact easily with all the other children in the village. Since the rebuilding of Old Harbor, residents of the village have increasingly been spread across the housing areas, making it more difficult for pre-school-aged children to play casually with one another. Today, the pre-school brings all of the village's pre-school-aged children together and serves to break down separation caused by the distance between the housing areas.

Other KANA-sponsored programs include income-tax-filing assistance, college counseling and scholarships, Indian Child Welfare programs, alcohol abuse counseling, and family violence shelter and counseling programs. All of these programs are based in Kodiak City but provide both regular and need-based visits to Old Harbor. Lastly, with KANA's assistance, Santa Claus finds his way to Old Harbor.

III. VILLAGE GOVERNMENT

Governance and village planning are provided by three organizations in Old Harbor. Foremost is the city government, followed by the Old Harbor Village Council (the Bureau of Indian Affairs-recognized Native government), and the for-profit Old Harbor Native Village Corporation that is involved in village economic development issues.

III.A. City Government

Old Harbor is a second-class city with a strong mayoral form of government. The city government is totally run by local residents; during winter 1991, all personnel were Native. Village government in Old Harbor has been extremely stable. The mayor, during the winter of 1991, had been in office for over 20 years. This stability may account for the village's ability to cope with many changes over the years. Moreover, the

mayor's experience with both public and private institutions assisted the village in making its needs and concerns heard in larger political arenas at both regional and State levels.

Infrastructure improvements and long-term economic development were the greatest concerns to the Old Harbor city government in winter 1991. Deteriorating infrastructure is a major concern for almost all rural Alaska communities, and Old Harbor is no exception. Declines in State and Federal revenues to Old Harbor help to explain the deterioration of infrastructure and administrative services. For example, State municipal assistance, the largest source of revenue for Old Harbor, has declined. From FY 1987 to FY 1988, this decrease was partially offset by maintaining the same level of State revenue sharing, increases in the raw fish tax (the 1988 fishing season was particularly lucrative), and the receipt of several grants. Old Harbor anticipated a decrease in total revenues (from $239,159 to $195,357) and expenditures (from $257,550 to $204,766) from FY 1988 to FY 1989. The nonexistent fishing season in 1989 due to the Exxon Valdez oil spill resulted in no raw-fish-tax revenues.

Since at least winter 1989, the city has tried to raise additional revenues locally by collecting boat harbor and moorage fees and delinquent sales taxes (the city has a sales tax of 3%). The city also considered charging local consumers for water, sewer, and garbage, which in the past have been charged to floating processors and boats that stopped in Old Harbor but not to local residents (Alaska Department of Community and Regional Affairs [DCRA] 1988:A13-A16; 1989). The collection of fees and taxes in a rural village where residents are friends and relatives is a much more difficult task than may be imagined. During the February 1991 city council meeting village trustees continued to grapple with this issue, now at least 2 years old. In particular, they addressed the collection of harbor fees. Part of the fee-collection difficulty lies in the city officials' knowledge of individual village residents' financial situations. Often they know who is in financial trouble and, as a result, do not insist on payment. In fairness to others not in financial trouble, the officials do not press anyone else to pay. In this way, no one is shamed because he or she cannot pay.

In Old Harbor, the collection of fees and taxes appears to be antithetical to Native cultural norms. Sharing, not extraction by means of taxation, dominates relations among village members. In a way, the absorption of costs by the village for community projects, like the harbor, can be interpreted as a form of contemporary sharing. In the past, if a family or person in the village did not have resources (e.g., food), others in the village would share part of their provisions with the needy. Today, cash as well as food is the greatest need of indigent and some elderly villagers. The "letting slide" of tax bills, which seems to be a political norm in village Alaska, can perhaps be viewed as a proxy for sharing in that the needy have their obligations met by the collective body by means of the village government's absorption of costs or revenue losses. When viewed from this perspective, it is hardly surprising that the Old Harbor city government continues to debate the issues of fee and tax collection. However, dwindling State finances and the continued bleak outlook for world oil prices (Alaska's prime source of revenue) mean less fiscal assistance for villages from State sources and create the need to raise revenues from within local communities.

Turning again to the specific infrastructure problems of Old Harbor, social indicators research conducted in 1989 notes that the sewage treatment system was not operating and sewage was being dumped into Sitkalidak Strait after minimal treatment (Endter 1989, fieldnotes). I was unable to ascertain if this problem had been remedied in 1991. Further, village officials contend that the small, 24-vessel harbor built by the U.S. Army Corps of Engineers and the State of Alaska needs to be enlarged and redredged. Also, the large cargo dock near the village's fuel reserve tanks is deteriorating and may become unusable for larger vessels, such as fish processing boats.

State and Kodiak Borough officials were present in Old Harbor during my winter 1991 visit to assist village leaders in laying the ground work for moving forward on infrastructure improvements and the village's long-range economic development plan. This plan includes the building of a new airport, a land swap with the Russian Orthodox church for beach-front and docking properties, and relocation of the city dump. DCRA personnel advised the City Council on requirements the city would have to comply with

if it desired to move forward on these programs. State officials were keen on helping the City Council identify extramural capital project funding sources.[3]

Village leaders also were concerned about securing a less expensive energy source. Village electricity presently is provided by fuel-oil-powered generators. This makes electricity very expensive, not only for residents but also for potential business ventures. However, these energy concerns were centered not only on economic development. The mayor expressed fears about upcoming State funding cutbacks to an energy assistance program for individual residents--a program that has subsidized Old Harbor's energy costs. Should this program be cut significantly, many of the elderly and less affluent in Old Harbor would suffer greatly. Leaders spoke about a variety of alternatives ranging from sponsoring a capital project, to running electric lines across the island from the Terror Lake power grid near Kodiak City, to developing a hydroelectric facility in the mountains above Old Harbor.

During winter 1991, the city government was in the final phase of constructing a new health clinic and day care center (now complete) in the new-town section of the village. Also, a tsunami shelter located next to the new clinic was being finished.

[3] The relationship between the City Council and the DCRA seemed quite solid and trusting. This is particularly noteworthy because the DCRA most often is a major means of access to political power within the State Government's administration for rural villages in Alaska.

III.B. Old Harbor Tribal Council[4]

The Village Council concerns itself with the general welfare and administration of social programs for the residents. Winter 1991 activities were dominated by a re-organization effort. Following the oil spill, the previous council president resigned. At that time (1989), the tribe had a number of program grants that were left unattended. As a result, these grants were not closed out. The new leadership, with the assistance of DCRA officials, was able to close out grants and begin the application process for new grants.

One particular interest of the Village Council was the involvement of village youth in tribal affairs and Native culture programs. During winter 1991, the Village Council, in concert with the City Council and the for-profit corporation, agreed to sponsor two high schoolers to attend a Native youth leadership training workshop in Juneau during the upcoming spring. Also, the Village Council president was exploring funding for youth to participate in regional and village Tribal Youth Council projects.

Village Council concerns also were focused on the emotional needs of the village. During my visit, the leadership discussed the possibility of securing a full-time, onsite counseling psychologist for the village. Leaders felt that Old Harbor was large enough and that issues were widespread enough to warrant such coverage. Of primary concern were alcohol abuse and family counseling, but there were no discussions of specific cases during the council sessions. Instead, leaders talked about preventive measures and alluded to problems experienced by other Native villages in the region and throughout Alaska. Leaders feel that the acquisition of a psychologist would alleviate many of the

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[4] The 1934 Indian Reorganization Act (IRA) and its 1938 revision sought to establish "democratic" governments for all Indian tribes, to establish a direct link between the Federal Government and also to empower the Indian people. When ANCSA was enacted, Alaska Native villages were given the right to choose between incorporating as Alaskan cities or as Bureau of Indian Affairs (BIA) IRA governments. Those villages that incorporated as Alaskan cities did not, however, lose IRA "tribal councils," which protect the rights of tribal members as Native Americans and ensure their access to BIA and other Federal grant and assistance programs.

Old Harbor opted for city status, and the Old Harbor Village Council serves as the IRA-established governing body or "tribal council." Thus, the residents of Old Harbor use the term "village council" synonymously with "tribal council" and the term "village council president" synonymously with "tribal chief."

problems commonly faced in Alaskan Native villages and give residents a place to turn to. Leaders were just beginning the process of researching grant possibilities to acquire such services.

III.C. Old Harbor Village Corporation

The Old Harbor Village Corporation is the for-profit corporation organized under ANCSA. The corporation originally had 330 people enrolled. In 1975, the corporation joined with two other village corporations to form Kodiak Island Seafoods, which purchased the Alaska Packers Association facility in Larsen Bay. Kodiak Island Seafoods was unable to make the cannery profitable. Koniag, Inc., purchased some of the stock in 1978 and took over the facility in 1980 when it merged with the three village corporations. The facility was sold in 1982 to a group of local fishermen with backing from a large Seattle company (Roppel 1986:225). Old Harbor Corporation also is involved with Koniag, Inc., and other Kodiak village corporations in the Afognak Joint Venture. Old Harbor Village Corporation was involved in the 1980 merger and subsequent 1984 de-merger of Koniag, Inc., and several village corporations, after which the Old Harbor Village Corporation was reorganized.

Presently, Old Harbor Village Corporation is negotiating a land exchange with the Federal Government for oil and gas rights in ANWR. It is seeking to exchange 90,000 acres, or 78 percent of the original entitlement of 115,200 acres that it received under ANCSA, for mineral rights in ANWR. The corporation's main source of income at the present time is the lease option payments it receives from an oil company for the rights the corporation hopes to obtain in ANWR if the land exchange goes through.

Old Harbor Village Corporation had looked into investing in fisheries projects in Old Harbor. One shareholder explained that they wanted their own fish processing outfit in order to provide local employment, benefit the village, help each other get better boats and newer equipment, and gain some bargaining power. In this way Old Harbor Natives could fish for their own corporation instead of for the non-Native processors. But they could not do this without capital investment from outside the village, and they continue to come up against the established seafood companies that

have power and influence with the banks. Discussions with local residents revealed the opinion that local and regional banks are reluctant to provide loans to small businesses that would compete with their established clients. Instead of attempting to profit from the fish processing enterprises that have been the basis of Kodiak City's wealth, Old Harbor Village Corporation's only alternative was to explore possibilities for production of a gourmet seafood item for a small, specialized market. They have not yet chosen to do this but continue to weigh the pros and cons of such an investment. Additionally, city and village corporation officials report that they have sought negotiations for obtaining venture capital from both national and international investors.

IV. THE ECONOMY

IV.A. Basic Economy and Employment

Salmon fishing provides the mainstay of the Old Harbor economy, though a few boats now fish year-round, participating in crab and winter bottom fishing along with spring herring fishing. Commercial fishing is the major source of income for individual villagers. This, in turn, provides revenues for local government because residents have more disposable income to spend in local stores to generate greater sales tax revenues, even if inconsistently collected. Commercial fishing also provides direct revenues to the city. When a floating processor ties up at the village dock, the city shares its raw-fish-tax revenue with the State. In addition, laborers from the floating processor insert cash into the local economy by shopping in village stores and eating at the village restaurant.

Because of the prowess of its fishing fleet (based on net earnings, perhaps the most successful rural fleet on Kodiak Island for the past two decades), Old Harbor has a reasonably strong economy (Cultural Dynamics Ltd 1986:127-128). Many successful Old Harbor Native fishermen have reinvested heavily in the village rather than outside of the community. This has created jobs and the basis for further economic development.

Presently, all (2) stores and services are owned and operated by village residents; and all but one are Native-owned or co-owned. Old Harbor supports a cable company, a fuel oil company and distributor, a lodge and restaurant, and two stores. A pool hall and

video game parlor for the youth also is operated. All of these enterprises employ a total of 10 to 15 villagers in full- and part-time positions.

The public sector provides the other source of employment--roughly 20 positions. Jobs at the school, city office, senior citizen center, post office, health clinic, and day care center are almost all occupied by Native or non-Native affines.

The two local stores and larger bulk orders from Kodiak and Anchorage augment the subsistence-dominated diets of Old Harbor with a variety of complementary consumer goods. The competition between the stores, along with villager access to bulk markets (e.g., COSTCO in Anchorage) via air freight, have kept prices reasonable. The *social indicators market basket average food cost for the two Old Harbor stores totaled* $67.25 (see Table 1).

IV.B. Subsistence

Although Old Harbor is fairly affluent for a rural Alaska village, subsistence continues to play a major role in the lives of its residents. In winter 1991, residents who relied heavily on seafoods such as salmon, halibut, clams, crab, and sea urchin also consumed waterfowl and deer. Harbor seal and sea lion are favorites in Old Harbor; however, villagers told me that the 1990-1991 harvest and availability appeared to be down. Berries of all varieties, including salmonberries, blackberries, and cranberries, comprised the largest source of nonprotein subsistence foods, although leafy vegetables like wild parsley also were harvested.

During winter 1991, 21 households in Old Harbor were administered AOSIS survey questionnaires. Of those 21 households, 9 were selected for a second, in-depth key informant (KI) interview. All of the 9 KI households reported that greater than 25 percent of their yearly protein intake came from subsistence foods; 2 of the 9 KI households reported 25 to 49 percent, 3 reported 50 to 75 percent, and the remaining 4 reported that greater than 75 percent of their annual dietary protein intake was from subsistence foods. One respondent in the 25- to 49-percent category indicated that recent illness restricted his household's subsistence activities, and their usual level of protein intake from wild foods was around 80 percent.

Table 1

ADJUSTED MARKET BASKET PRICES FOR OLD HARBOR WITH TWO-STORE VILLAGE AVERAGE FOR FOOD ITEMS

Commodity	Harold's Store	Walt's Store	Two-Store Average
10 lb White Flour	$7.20	$6.75	$6.98
12 oz Evap. Milk	1.10	1.25	1.18
1 lb Onions	0.95	0.75	0.85
48 oz Cooking Oil	6.35	4.25	5.30
6-Pack Cola	5.00	5.00	5.00
10 lb Sugar	6.45	8.25	7.35
18 oz Corn Flakes	4.45	5.45	4.95
18 oz White Bread	2.40	2.25	2.33
1 lb Bacon	3.70	4.25	3.98
3 lb Coffee	12.00	10.75	11.38
1 lb Butter	3.25	3.25	3.25
12 qt Milk Powder	11.35	8.25	9.80
22 oz Punch Mix	4.55	5.25	4.90
Total	$68.75	$65.70	$67.25

Source: Rooks 1991.

The evidence for heavy reliance on subsistence foods provided by the KI interviews appears to be supported by the more general survey questionnaire data. Of the total 21 households interviewed (KIs included), 13 reported eating at least one meal in which subsistence foods were a prominent portion of consumption 2 days prior to the survey. Of the 8 households that did not eat subsistence foods, 2 were living in or visiting Kodiak City at the time of the survey and emphasized that had they been in Old Harbor, subsistence foods would have been part of their daily diet. These findings, consistent with data from previous Old Harbor social indicators interviews, indicate that reliance on

and usage of subsistence foods is an ongoing, important aspect of Native life in this village.

This reliance on subsistence underscores the important point that increased wealth or income does not necessarily lead to a decrease in culturally held practices, such as the eating of subsistence foods. It is very possible that the opposite might be the norm: where Natives have the financial resources (i.e., they own skiffs, boats, and other fishing equipment) to actively participate in subsistence harvests, they rely on subsistence foods as the core of their own diets and share them widely throughout the community. Where financial resources are scarce and there is a greater dependency on government transfers, proteins purchased at the grocery store appear to have become more important, although the Natives prefer subsistence foods. This is not to say that poorer Natives in the villages do not depend heavily on subsistence foods. They do, but the changing economic system and restrictions on transfer-payment expenditures (i.e., food stamps) have impacted the poorest Natives more adversely with regard to subsistence practices.

IV.C. Tourism

Tourism is the newest industry in Old Harbor. Two local investors and their affinal kin, using proceeds from their fishing operations, have invested well over $100,000 (cash) in the renovation and development of the Sitkalidak Lodge. The lodge offers private and bunkhouse rooms, with food service provided by the lodge's restaurant, which also is open to the public. Investors are negotiating fishing and hunting vacation-package deals with regional hotels and airline services. The lodge is primarily a family-run operation with a few nonfamily members hired as cooks and waitresses.

In concert with the lodge improvements, a few residents have certified themselves as charter skippers. Lady Luck charters, owned and operated by a Native resident, is based in Old Harbor. Other residents serve as guides for local fishing and hunting.

Tourism also may revive traditional arts and crafts skills, and shop openings are possible. Classes in grass-basketmaking and various forms of carving are attended with enthusiasm. One Old Harbor artist is noted throughout Kodiak Island for her jewelry and photography.

IV.D. Economic Future

The future of Old Harbor's economy lies in its ability to develop its private sector, but first infrastructure concerns must be addressed. During winter 1991, the city was negotiating a land swap with the Russian Orthodox church that would give the city a valuable strip of shoreline. This access would allow the development of improved docking facilities, opening the way for a variety of potential maritime industry interests. The city also is seeking approval and funding for a new airport with large-airplane capabilities.[5] Should these improvements be made, village leaders are hopeful of coaxing a land-based fish processing plant to locate here. Other options, such as shipping-container storage and glacier bottled-water production, also were being discussed. The short-term outlook for Old Harbor's economy is positive, in part because local Native residents have invested heavily in village enterprises.

V. IDEOLOGY AND INFLUENCES OF CHANGE

Many things have contributed to change in Old Harbor: the division of housing areas into three locations, technology, commercial fishing, and intermarriage with non-Natives to name a few. Yet it seems that Old Harbor has accommodated the changes while maintaining a sense of itself as a Native village.

The housing division seems to have created some difficulty. Some residents report that the distances between them impede a number of traditional activities, particularly visiting. They say that a person needs transportation to visit friends or relatives across town. Rather than spontaneous drop-ins, one must call ahead to announce the visit so as not to waste the trip. Telephoning has made the process a bit more formal. Distance has made the visiting less available, especially for the elderly and children. As noted earlier in this report, teachers now also find it more difficult to "stop by" for informal chats with parents.

The new housing areas, coupled with technology, have contributed to the loss of some past village activities. Long-term Native residents told about the time when

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[5] Since my winter 1991 visit to Old Harbor, approval for the new airport has been obtained and construction of the facility was scheduled to begin in November 1992.

everyone assisted in the delivery of fuel oil to each home. All of the males age 5 and above would gather on the beach and roll the 55-gallon drums of fuel oil to each home. Though a difficult and somewhat arduous task, it was a time when everyone in the village joined together. Today, oil is distributed by a delivery service. The geographic locations of homes, particularly in the hills, and the addition of new technology (i.e., fuel trucks, lifts, and storage tanks) have made the delivery service both necessary and possible. Some residents described feeling a sense of loss, however, regarding such now-obsolete communal village tasks and the interdependence they required.

Television is another technological advance that has had mixed reviews. Parents and teachers complain about the amount of time children spend in front of the TV. Elders say that TV watching has impinged on visiting practices. Most adults also worry about the children's sense of identity as television brings a Hollywood view of life, as evidenced by the fads and fashions of village youth. The children see very little in mainstream TV programming that validates the Native way of life--and some youth seem to have developed unrealistic expectations about life and opportunities elsewhere. Even some adults succumb to television's alluring fantasy. But television assists the villagers in staying current with the world outside of Old Harbor and Alaska. Children learn of different places and parents stay abreast of world news and changing economic trends.

Technology, however, has improved the everyday life of the villagers. Improved boats and fishing equipment provide larger and more profitable fishing seasons for the village fleet. Power skiffs provide transportation for winter halibut fishing and deer hunting. Navigational equipment and radios have made fishing somewhat safer. Telephones allow for convenient and foul-weather visiting. Additionally, family members and friends can maintain contact after they have left the village. Airplanes link Old Harbor with the outside world by bringing daily mail (weather permitting) and air-freight deliveries; by providing transportation for medical personnel, evacuation, and other social services; and by opening the village to outside visitors and tourists. Lastly, automobiles, trucks, and snow machines give Old Harbor residents greater mobility.

Harvesting of wild foods and commercial fishing are the economic mainstays of the village, and participants provide important role models of skill and responsibility for the youth of Old Harbor. Sharing, both in terms of providing jobs as crew members of boats and in distributing subsistence foods to anyone who needs them, is widely practiced. The financial success of some of the fishermen has not caused them to abandon the village or their cultural values as they give back to the village in terms of financial investment and jobs. Other villagers have learned traditional Native crafts and are passing on these skills, sometimes in formal classes. Villagers who have gained academic educations often return to the village as teachers, lay church readers, and the like, thus providing a variety of role models for career choices. Importantly, adults in the village, regardless of their area of expertise, express through their actions and words a strong commitment to the village and their traditional values. In this way, the youth can see that Western influences need not be antithetical to the survival of Old Harbor or their ethnic heritage.

Non-Native residents of Old Harbor also have influenced this village but perhaps not as much as the village has influenced them. Natives in Old Harbor have welcomed these newcomers as neighbors, friends, and family. Non-Natives work actively in the development of the village and serve diligently in a variety of public offices. Yet these non-Natives do not try to make Old Harbor into a non-Native town. They respect and participate in the values and attitudes of the village. Many of the non-Natives bring with them particular skills and knowledge. They employ their knowledge not solely for personal gain but share their talents with the village. Many also have invested their money in the village, declaring Old Harbor home.

VI. EFFECTS OF THE EXXON VALDEZ OIL SPILL

The effects of the March 1989 Exxon Valdez oil spill on the village of Old Harbor are evident on multiple levels. For the purposes of this study, the effects are categorized into first-, second-, and third-level effects that are not mutually exclusive but rather

overlap to some degree.[6] First-level effects are generally those that occurred during the spill crisis and cleanup or immediately following the cleanup. There was a time lag between when the spill crisis and the cleanup period occurred and when second-level effects became apparent. Third-level effects are generally those that resulted as consequences of first-level effects. This terminology was chosen in order to emphasize that each level of effect was a direct consequence of the spill--whether immediate, time-lagged, or in response to earlier effects. Still other effects (e.g., sorrow) are immeasurable.

VI.A. Effects on Households and Individuals

The spill caused a great deal of chaos in Old Harbor. Fears that village beaches would be oiled consumed residents. Tribal and Village Council presidents from Kodiak Island had brought back reports of the devastation in Prince William Sound. As the Old Harbor Village Council president recounted:

> At first we didn't realize or think the spill would impact Kodiak, and in Old Harbor people were in denial about the possibility. Anyway, KANA organized a trip for the Tribal Council presidents to fly to Valdez. We flew out of Seward, all the [tribal] presidents. While traveling to the spill, there was lots of nervous joking--then we saw the oil and then everybody was suddenly quiet. Now the spill was real. From then on the joking became quite resentful toward Exxon. It seemed that everyone was scared or something. It was awful. Valdez was chaotic. When we returned home, things got serious and **real!**

Not long after this trip, the Old Harbor Village Council president sighted oil north of Old Harbor while flying home from Kodiak. "It was like long, awful, snaking fingers," he reported. Crews were immediately signed up to battle what now seemed inevitable: oiled beaches in Old Harbor. In this atmosphere charged with fear and panic, all normal routines seemed trivial. Additionally, commercial fishermen were faced with the loss of

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[6] I have refrained from using the terms "direct" and "indirect oil-spill effects" to avoid the idea that direct effects somehow are more pertinent or real to the villagers. Similarly, I have not used the terms "primary," "secondary," "tertiary" and the like because of the connotation that any effect other than primary ones are somehow less important or devastating.

their livelihood. Many jumped at the opportunity to earn income that was bound to be lost because of fish closings. Faced with impending financial doom, all normal seasonal thoughts and tasks were subsumed with the scramble to provide for families as well as meet financial obligations incurred during the winter months.

No one with whom we spoke in Old Harbor felt that the oil spill has had long-term positive effects on the community. Village leaders indicated changes in subsistence activities and cases of depression among residents that occurred as a result of the spill. All the Natives in our sample suffered both financially and emotionally deleterious effects from the spill. The two non-Natives reporting no financial losses resulting from the spill were not residents of the village or spill-affected areas in 1989.

First-level effects on individuals are divided into two categories--financial and emotional or spiritual. Roughly half (9) of the respondents felt that they had incurred a financial loss as a result of the spill. Those who felt they had not incurred a loss generally were not engaged in the fishing industry or were not present in the region at the time of the spill. Old Harbor's economy is almost solely dependent on commercial fishing (salmon, herring, halibut, crab, and cod). Only participation in the Bristol Bay herring openings prior to the Exxon Valdez spill kept the 1989 fishing season from being a complete loss for the several highly capitalized fishermen who routinely participated in the herring opening. Other Old Harbor fishermen who did not have the equipment to facilitate a journey to Bristol Bay could only seek work on the cleanup and accept whatever compensation was offered by Exxon and VECO. Most of these "smaller" operators accepted a $30,000 compensation offer from Exxon with the perception that this was to be an initial payment, with additional payments to be made during the claims process. For some, no additional payments were forthcoming. Only 2 respondents reported feeling adequately compensated by Exxon, and 6 reported not receiving any compensation at all. These 6 respondents were generally crew members rather than permit holders.

Emotional and spiritual first-level effects prevailed throughout the village. In talking with respondents and village leaders, this became quite evident. As one leader

stated, ". . . something [subsistence foods] you've had for all your life . . . taken for granted . . . suddenly [was] taken away [by the spill] . . .." The presence of oiled wildlife and fish caused great concern among Old Harbor residents. Local leaders told us that many people did not harvest subsistence foods from the sea in 1989 because of the fear of using "oiled" foods. The older people were particularly frightened. Villagers reported that since the oil spill, the fish were acting strange, e.g., humpies were jumping out at locations where they had never jumped previously. Also, many complained that while fish (particularly salmon) flesh was red and healthy looking, the skin on the fish looked old and dry. The sea urchin harvest also was reported as being lower. Strange fish behavior, bad fish skin appearance, and low sea urchin numbers all reinforced the contamination fears of the residents. Some older residents were reported to have said, "We'll never have fresh fish." The experience was so difficult for many residents that, as one leader noted, they "want to pretend it didn't happen." They seem to feel it is better to put the spill out of their minds than to think about its consequences.

Second-level, long-term effects can be seen in the attitudes of some young children.[7] Traditional foods, already challenged by television advertising and Western influences among the village youth, were further challenged by the oil spill. In winter 1991, adults reported that the younger children, especially those of elementary- and pre-school-age, declared traditional food "yukkie." Adults attributed this response to a lack of consumption of subsistence seafoods during the summer of the spill and a reflection of adult fears of contamination. In a rapidly changing world in Native villages throughout Alaska, subsistence-harvest activities and traditional foods are one of the important links of shared experiences between generations.

The spill and the tension in the village during cleanup operations impacted family relations in Old Harbor. Without fishery openings, cleanup employment became the only source of income for almost all village residents. Cleanup employment was not

[7] This section is based on conversations with a small number of parents because a survey of all households with children was not possible. These generalizations are based on the observations, perceptions, and fears reported by these parents in 1991.

"regular" in the sense that residents could apply for a year-round, 8-to-5 job. Crews were often called up on a moment's notice. Residents who were unavailable when the call came out were passed over for the next available person. Thus, the summer was marked by waiting and hoping. As one resident explained, "You waited and waited and waited because you didn't want or couldn't afford to miss out on anything."

The waiting made for tense and anxious moments in households. Village leaders reported that relations between husbands and wives became strained as depression and anxiety increased. The waiting suspended normal activities, e.g., projects around the house were left undone. Also, when work was available, it was a totally different type of work that created stress even though the individuals were employed; people became short-tempered. Some community members said that this anxiety also affected children when parents had less patience and the normal summer activities were abandoned.

"Summers in Old Harbor," explained the Mayor, "are busy, but all the time you see families going off to have picnics. Enjoying nature. That didn't happen during the spill. People were too afraid of missing a chance to work." The mayor explained further that he felt there was little quality time shared between parents and children during the spill summer. Normally, fishing is the major source of employment--fathers went off to fish, and mothers stayed home with the children. Older children, once they are large enough, would sometimes accompany the father or other kin, usually an uncle. Smaller children and mothers would gather berries, put up fish, and perform other tasks. During summer 1989, both fathers and mothers went to work on the spill; and children were left at child care. Important interaction between children and parents was lost. Moreover, time spent together was tense.

VI.B. Effects on Subsistence and Commercial Fishermen

For some individuals, however, the spill was an economic boom, with wages as high as $18.00 per hour. The wages paid by VECO allowed a number of individuals who previously did not have employment opportunities or did not fish to earn some money. These new wage-earners tended to view the spill as an opportunity, while fishermen felt quite displaced. Local leaders informed us that the fishermen became upset at the

nonfishermen. Fishermen perceived nonfishermen as not understanding "the situation" and asserted that the nonfishermen were not empathetic to fishing losses and the threats to fishing interests. While the open statements of animosity abated, one respondent described the ill will created by the friction caused by the spill as "hibernating."

Although we were unable to verify this, locally owned stores most certainly received increased earnings during the spill, as did those enterprises involved with housing and feeding Exxon and VECO personnel.

Second-level effects on individuals ranged from the loss of boats to income-tax-payment difficulties. The most devastating second-level effect was the loss of fishing boats. Many of the older fishermen with small wooden boats were not able to fish or hire their boats out to VECO during the spill. As a result, these individuals took jobs on the cleanup and accepted the $30,000 initial payment from Exxon.[8] Financially, the wages earned and the initial compensation payment assisted these fishermen. However, an unforeseen consequence resulted. Because these fishermen did not "need" their boats during spring and summer 1989, they did not do the routine maintenance that normally accompanies preparation for fishing season. Boat engines were not overhauled or started, and corking of boat hull seams and caulking of other leaks were not done. Without this maintenance, a number of these older wooden boats sank during winter 1990 storms.

Some people might say that the owners of these older boats should have known better, that they should have performed these preventive maintenance measures regardless of circumstances. Such thinking is uninformed. Many of the losses were incurred by older men in Old Harbor--Native men who have seasonally responded to these tasks all their lives. Spring brings on the tasks of spring, such as maintaining boats in anticipation of the summer fishing season. The Exxon Valdez spring of 1989 was

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[8] In order to expedite compensation for fishing losses, Exxon made "initial" payments or advances of $30,000 to permit holders who proved they had fished during the previous 3 years. These payments were made without full documentation of "actual losses." *Application for, and full payment of, compensation were to be made at* a later date after the crisis period.

unlike any spring in their existence. There would be no fishing season; thus, there was no need to work on the boat and they needed to work on cleanup to earn money.

Also, these men had never failed to maintain their boats in the spring. Thus, they had no way of "knowing" what would happen to their boats in a winter following a spring where they had not maintained their boats. No one, not even the "experts" sent in to assist with spill impacts, anticipated the boat sinkings.

The victims of such losses are not "big-time" commercial fishermen; they are Native men who earn enough to provide for their families and stay off welfare. They fish to survive in a world where cash income is a necessity. With the loss of their boats, these men lost their means of support. Additionally, their crew members lost their source of employment. Because they are not "big producers," these fishermen cannot get loans for new boats from the canneries or fish processing outfits; neither do they have cash savings for such a purchase. Virtually no fishermen in Kodiak can secure a bank loan for a boat. Today, these older Native men must attempt to hire on as crew members for established boats that usually already have established crews. A few are trying to come back by leasing boats and "lending" their permits to nonpermit-holding boat owners. However, it remains to be seen if these strategies will prove successful. Long-term prospects may be bleak, and many fear that victims of such losses will have to sell their permits to obtain income in the future.

It is difficult for these men to talk about the loss of their boats. In a conversation with one individual, age 57, he merely acknowledged losing the boat. Despite repeated questioning, he spoke very little about it, nodding impassively when I asked if he had lost his boat in the winter after the spill. Hints of embarrassment at having lost his boat were detected although he never so stated. Perhaps as a result of this embarrassment, along with the lack of any information about claims procedures, he did not file a claim with Exxon for the loss of his boat. Additionally, the feeling was that because the boats had sunk during the winter (1990) after the spill, it was too late to file a claim. Because neither these men nor Exxon anticipated such losses, no provision was articulated for

claims of this nature. To date (winter 1991), there is no official knowledge of or accounting for these losses.

The terms "small," "medium," and "large" are used to differentiate between the commercial fishing operations in the village of Old Harbor. These categories generally are based on the level of capital investment (size of boat and equipment) and/or earning power (seasonal catch). Small fishing operations are those with 38- to 40-foot older wooden boats powered by a single engine, with little or no navigational equipment. These outfits fish the areas near Old Harbor, and the skippers' net earnings are approximately $30,000 per year. Medium operations have new and better equipped boats than the small outfits. These boats may have fiberglass hulls, two engines, and some navigational equipment, but they are not equipped for longer ocean voyages. However, their range is greater than that fished by small operators and net earnings are between $40,000 and $70,000 per year. Large operations have the biggest and most expensive boats with long-range voyage capabilities. These boats are 48 feet or longer and sport twin 350-horsepower engines or single 800- to 900-horsepower engines. Net earnings for large operators are in excess of $70,000 per year.

Small- and medium-sized operators, whether or not they lost their boasts, were impacted at income tax time. The initial cash payments of $30,000 and taxable cleanup wages brought unanticipated tax difficulties. At least two primary difficulties arose. Despite being acquainted with the income tax process, some fishermen were confused by the $30,000 cash advances. In essence, they interpreted the advances to be similar to nontaxable government transfer payments. Because their fishing season had been taken away by the spill, they did not interpret the $30,000 compensation as wages. After all, they had not "worked" for the money and they reasoned that, accordingly, there was no need to set aside money for taxes based on "earned" income.

For others who anticipated that the $30,000 might be taxed, many did not set aside enough cash reserves to pay their taxes. These operators calculated their 1989 "set-aside monies" based on past experiences. In the past, earnings of $30,000 (i.e., payment received from canneries for their fish) were not a taxable figure because business

expenses that were deducted left a considerably smaller taxable-earning figure. In 1989, there was uncertainty about business-expense deductions since the operators did not know when and if they would be able to fish. As it turned out, the normal calculations of cash reserve set aside for taxes proved insufficient.

There are further examples of the kinds of errors that occurred in the context of a totally new and unprecedented event. No one charged with assisting the villagers with the spill impacts anticipated either the misinterpretation of the cash advances or the cash-reserve miscalculations. As a result, both the counsel given by "experts" and the actions taken by some of the fishermen resulted in inadequate tax planning in 1989.

Third-level effects on Old Harbor's fishermen came primarily in two forms. The first affected mainly the medium-sized fishermen, who are moderate producers for the canneries. As such, they are able to receive cash advances and multi-year loans for capital improvements. Canneries and fish processors with outstanding debits against fishermen for 1989 could not place a lien on monies earned by fishermen from Exxon and VECO. The failure of fishermen to pay their debts during the 1989 fishing season left the canneries and fish processors "cash-poor" for the opening of the 1990 season. One medium-sized fisherman reported that in 1991 he was still unable to secure a capital improvement loan despite prespill promises from the cannery. While he understood the cannery's position, the respondent was clearly upset at the delays and saw it as cutting into his earning potential. He also noted that while financing for him is difficult, the trickle down of loan money to the smaller fisherman is almost completely dry.

Shortages in fishing industry cash flows have left even less capital investment funds available for small producers. The long-term effects are potentially disastrous for this group. Small operations generally have the oldest equipment and, subsequently, survive by constant maintenance, rebuilding, and upgrading because they cannot afford to buy new boats. Such maintenance is almost always financed by advances from the canneries or by the canneries' mechanic shops. Without this source of financing, shortcuts are taken in order to fish the current season. Such shortcuts lead to major breakdowns or maintenance in the future and, perhaps, to the loss of boats or missed fishing seasons.

The second third-level effect that impacted all fishermen in Old Harbor was the huge profits made by the Kodiak City fishing community from hiring out their boats to VECO. The cleanup work allowed many of the medium-sized fishermen in Kodiak to upgrade to larger boats with increased navigational ability. In winter 1991, Old Harbor fishermen reported that since the spill this had resulted in more crowded conditions in their normal fishing sites. With these newly equipped fishermen able to travel longer distances at higher speeds, more Kodiak fishermen now come to Old Harbor sites when there are reports of "hot" salmon runs. Increased numbers result in longer waiting lines for fishing sets and reduced catch for the smaller Old Harbor operators who depend on multiple sets. The increased numbers cut down on the number of sets the small operators can make during the time-limited openings.

VI.C. Effects on Village Institutions

Village institutions suffered first-level effects. As in all villages affected by the spill, city government personnel found themselves overworked and overwhelmed. Exxon and VECO set up their operations in the city offices; and although they paid rent for the space, their presence disrupted the normal flow of business. Apparently the city was still attempting to collect final payments for the rented spaces in winter 1991. In a November 1991 claims report[9] to KANA, city officials estimated minimal losses in labor and rent costs to be $67,022 (see Appendix A).

Beyond the inconvenience and imposition of outsiders in the city office, city officials found themselves constantly battling rumors in the community. During the cleanup operations, rumors dealing with Exxon reimbursements--particularly the possibility of Exxon reneging--caused great concern among villagers. City personnel spent many hours engaged in fact-finding missions and dispelling falsehoods. As a result, less attention was paid to routine city business, although there appear to have been no major consequences to city government. However, the Old Harbor city government is

[9] This claims report was included in a KANA report requested by Lloyd Miller, attorney for the Native villages in claims suits against Exxon. Copies of the KANA report were provided to the author by KANA staff with the understanding they would be presented in this chapter.

particularly stable (see Sec. III.A, City Government) and thus survived the stresses of the spill.

A second-level effect was the potential loss of revenue to the city. The lack of a fishing season also may have cost the village revenues generated by floating fish processors that tie up at the Old Harbor pier and operate as land-based processors. However, this is speculation because no agreements for tie-ups are made prior to the fishing season; and tie-ups vary from year to year. The spill eliminated any possibility of such revenue in 1989.

City officials believe that the spill had yet another third-level effect on the people of Old Harbor. In summer 1989, the Kodiak Housing Authority was to begin residential repairs by increasing the insulation and painting houses in the villages, starting with Akhiok. Old Harbor was to receive housing maintenance assistance in summer 1990. As of winter 1991, the housing maintenance project still had not reached Old Harbor. Old Harbor officials attribute this delay directly to the spill because cleanup activities drained the labor and financial resources from Kodiak Island. The additional cost of the delay is being borne by regional institutions and Old Harbor residents. At minimum, the delay has resulted in inflation and increased wage and material costs to the maintenance program. Additionally, it is reasonable to assume that minor repairs have increased in severity due to normal wear and tear. For example, a roof leak that requires patching in 1989 or 1990 may require replacement in 1991 or 1992. Individual residents have had to bear 2 additional years of high heating costs without improved insulation. In many ways, this deferred maintenance problem is much like the situation of the small fishermen who lost their boats--an extraordinary event so disrupted normal life that ordinary activities were displaced, resulting in greater longer-term harm.

The Village Council government suffered more appreciably than did city government. First-level effects entailed the virtual shutting down of Council operations. The president of the Village Council was hired by VECO as the "village coordinator," while other staff went to work on the cleanup. This loss of Village Council staff to spill-

related activities resulted in a lapsing of virtually all grants administered by the Council, leaving Old Harbor's Council ineligible for new grants--a second-level effect.

Old Harbor Natives feel as though they have lost out on grant opportunities because of the chaos caused by the spill and its negative effect on Village Council administrative obligations. One example cited was the Council's loss of a $17,000 Suicide Prevention Program grant (see Appendix A) that was denied--according to new Council administrators--because of the Council's unclosed grants and abandoned bookkeeping. It has taken 2 years for the Village Council to recover. In winter 1991, the new Council leaders worked long hours attempting to close out previous grants and contracts in an effort to restore their eligibility for programs such as the Suicide Prevention Program. Village Council officials estimated that a portion of their budget losses (including grant losses plus direct costs) amounted to at least $100,000.

Council leaders also imply a third-level effect--a loss of face. They feel that the image of the Old Harbor Village Council has been tarnished because of the potential for the Council to be perceived as incapable of grants administration. Beyond the potential financial and service losses that such a perception might entail, it appears that the character of the Old Harbor Native people has been impugned. They are a proud people and their success as fishermen has underscored their ability and motivation to work hard.

VII. CONCLUSION

Old Harbor's residents will not soon forget the trials of the Exxon Valdez oil spill, and they will not let the spill detract them from making a better life for themselves and their children. To be sure, the spill has wrought many devastating effects, both financial and emotional, to the village.

Financially, this commercial-fishing-dependent village lost individual and institutional revenues. Perhaps no one felt the loss as heavily as the older Native males, who with the loss of their fishing boats found themselves stripped of their livelihood.

Families suffered strained relations. The fear of oil-fouled foods and the lack of a full subsistence season left inadequate winter subsistence stores. More than depriving

Natives of their wild foods, lower subsistence food stores, fewer processing sessions, and curtailed harvesting impinged on the intergenerational teachings that subsistence activities provide, thus widening the generation gap. Likewise, some friendships were severely tested.

Village governments, both City and Tribal Village Councils, were turned upside down as leaders and staffs were drawn away from their normal duties. Opportunities were lost and social programs were sacrificed in order to cope with the chaos brought by the cleanup activities.

The Natives of Old Harbor are no strangers to tragedy. Following the destruction of their village in 1964, but bolstered by their religious faith, Old Harbor Natives rebuilt their homes and their lives. In the same way, Old Harbor residents will survive the effects of the 1989 Exxon Valdez oil spill. During the winter of 1991 the people of Old Harbor were concerned primarily with looking forward. Backed by a successful commercial fishing fleet, the village's economic outlook seems solid as villagers look to diversify their economy. Plans move forward for infrastructure and capital improvements.

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Appendix A

Old Harbor Claim Summary[1]

[1] The following are copies of documents provided to the author by KANA staff with the understanding they would be presented in this chapter.

Kodiak Area Native Association

402 Center Avenue
Kodiak, Alaska 99615
Phone (907) 486-5725

M E M O R A N D U M

TO: Lloyd Miller, S,C,S,M & M

FR: Jana Larsen, Health & Social Services Director

DATE: December 12, 1991

RE: Trans-Alaska Claim

Enclosed is KANA's claim for damages, etc. as a result of the Exxon-Valdez Oil Spill. This is the best we could draft with short notice.

Actually enclosed are several claims. KANA has submitted one as a result of services that were lost or denied and each of the villages (except Akhiok) has submitted an individual claim for the impact they felt individually.

If you have any questions, please contact me.

Village: Old Harbor

The most measurable negative effect of the Exxon Valdez oil spill on the village of Old Harbor was the collapse of the Tribal Council administrative body due to many of the extenuating circumstances already well document in official studies initiated in response to the oil spill such as the series of studies and findings compiled and published in reports from the Oiled Mayors Study. (Executive Summary: Economic, Social and Psychological Impact Assessment of the Exxon Valdez Oil Spill; Impact Assessment, Inc.)

In the case of Old Harbor, the disfunctioning of the administrative core of the Tribal Council, and the loss of several Tribal Council members to various other oil spill-related duties, basically rendered the Tribal Council inoperative, or at least, operative at such a diminished capacity as to restrict its performance towards such goals as financial management, grant proposal writing, grant reporting and other revenue generating efforts upon which myriad health and social programs at the village level were dependent.

The Tribal Council was able to maintain at least a minimum presence in the village through allocations from the City Council, a separate entity from the Tribal Council. A significant portion of this claim addresses reimbursement to the City Council for funding used to for salaries for a variety of clerk-level positions maintained by the Tribal Council from March, 1989 to present. Additional reimbursements are also due for rental space for the Tribal Offices.

Due to the governing structure of the Tribal Council, the current Tribal Council President, Fred Christiansen, performed some of the higher level administrative duties prior to assuming them directly upon his election as the president. That work effort has also been accounted for within this claim.

The cost to remedy the situation in Old Harbor is based on: 1) the projected costs to provide the clerical support needed to deliver the administrative infrastructure to the self-sustaining level it could have been had it not been disrupted by the spill. Based upon a current assessment of the Tribal Council, its current president estimates an 18 month recovery period. To monitor and assist in that timeframe, the Tribal Council president's salary and .5FTE schedule have been incorporated into this claim.

An equally significant impact of the oil spill on the capabilities of the Tribal Council is reflected in the delinquency of filing of grant reports to comply with the granting agency's close-out requirements. At least one grant was denied (Suicide Prevention Grant) for $17,000 because of the disfunctioning status of the Tribal Council administration at that time. This lost funding opportunity is expressed within the claim.

Lastly, the "image" of the Old Harbor Tribal Council and its ability to be accountable for grant administration has been

severely blemished by the disfunctioning of that body as an extended result from the affects of the oil spill. Such a "black eye" on the village council can have a significant negative impact on their accountability for other critical grant opportunities. While that may be an unmeasurable factor in terms of actual dollars awarded, it is clearly a factor that would have some bearing on their abilities as perceived by a granting agency.

OLD HARBOR CLAIM SUMMARY:

1. Labor cost reimbursement to City of Old Harbor.....	$ 27,422
2. Rent reimbursement to City of Old Harbor.....	$ 39,600
3. Cost to "remedy" disfunction/instability of Council...	$ 74,685
4. Loss of Suicide Prevention Program grant.....	$ 17,000
TOTAL.....	$158,707

CLAIM NARRATIVE, OLD HARBOR TRIBAL COUNCIL

1. Reimbursement to City of Old Harbor for payroll to various part-time positions (six) throughout term of oil spill to present (March, 1989 - December, 1991).....$ 27,422

2. Reimbursement to City by Tribal Council for offices rented from City of Old Harbor at rate of $1200 per month for duration of spill to current.....$ 39,600

3. Cost to re-establish and stabilize Tribal Council administrative accountability is based upon the following time frame and personnel structure:

a. One full time (1.0 FTE) Administrative Assistant @$7/hr for 18 mo. (18 mos. x 176 hours/mo. x $7.00/hr.).....$ 22,176

b. Fringe based upon 15% of total salary.....$ 3,326

c. One 1.0 FTE clerical position @$6/hr.....$ 19,008

d. Fringe based upon 15% of total salary.....$ 2,851

e. One half time (0.5 FTE) Tribal Council Administrator based upon 18 mo. x 88 hrs./mo. x $15/hr.....$ 23,760

f. Fringe based upon 15% of total salary.....$ 3,564

TOTAL.....$74,324

4. Community-based Suicide Prevention Program grant proposal was denied because it did "not adequately meet the criteria established for this program." That decision was based on insufficient documentation, the absence of which was grounds for denying the award. It was determined that there was marked disfunction within the Tribal Council at this time: "...unless the coordinator, the council and the community are committed to working together on the project, things tend to fall apart,...that appears to be what happened [in FY90] in Old Harbor." (Diana McBride for Susan Soule, Prog. Coord., Rural & Native Services, DHSS*). An opportunity to work toward a reapplication at a future date was expressed by the Department of Health and Social Services and technical assistance was offered to the Tribal Council in preparation for a new application.....$17,000

*(support documentation available)

TOTAL CLAIM/OLD HARBOR.....$158,707

Chignik

Curtiss Takada Rooks

CHIGNIK

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CHIGNIK

I. HISTORICAL BACKGROUND

No written documentation exists recording the origin of Chignik,[1] which--translated from Alutiiq--means "wind." One origin story credits five sisters with very large families as founding the village (USDOI, BLM 1979). Previous to the founding of Chignik, a village named Kaluak was located on or near Chignik's present site. Kaluak was destroyed in the late 1700's during the Russian fur-trade boom (Environmental Services Limited 1982). One of the first written accounts of Chignik cites its use in 1888 as a salmon-salting station for barrelling and shipping. In 1890, the village's population was recorded at 193 (Morris 1987). Since 1888, commercial fishing has dominated the village's cash economy.

Located at the head of Anchorage Bay on the south shore of the Alaska Peninsula, Chignik was a choice site for the installation of two canneries in the late 19th and early 20th centuries (Morris 1987; Environmental Services Limited 1982). Until the past decade, Chignik relied on the canneries for much of its infrastructure. For example, the Alaskan Packers Association cannery, currently the Aleutian Dragon Fisheries, provided a water source for the village during the times it was in operation. Otherwise, Chignik residents packed in needed water (USDOI, BLM 1979). Electricity also was provided by the cannery. Thus, the impact of the cannery on the village's economy extended beyond wage labor or the purchase of Native fishermen's catch.

Socially, the canneries have produced a steady outside influence on the people of Chignik by bringing in cannery workers each summer. Intermarriages have been quite common. Generally, the marriages involved village women with men from the outside. A number of these men settled with their wives in Chignik (Morris 1987). The men were Scandinavian, Italian, Chinese, Japanese, Mongolian, Hawaiian, and Filipino

[1] Today, three villages--Chignik Bay, Chignik Lagoon, and Chignik Lake--are located in close proximity to one another. Chignik Bay is the historical reference noted here and the site of the Social Indicators study. Chignik Bay is commonly referred to as Chignik by most people in the region. Throughout this report, I use Chignik to designate Chignik Bay unless otherwise stated.

(Morris 1987; Environmental Services Limited 1982; USDOI, BLM 1979). Evidence of the Scandinavian marriages can be found in the surnames of the prominent families such as Skonberg and Carlson. Russian names like Stepanoff also are present. No evidence, through surnames, of the Asian intermarriages seems to have survived. This suggests that Asians either took local names, their descendants took their mother's family name[2], or their descendants relocated.

II. THE SETTING

Tucked away in the protection of Anchorage Bay, Chignik is located in a spectacular setting; and breathtaking scenery dominates every venue in the village. Whether admiring the majestic mountains rising out of the sea or gazing at the backlit winter sky over the ridge behind the village, the viewer is overwhelmed by the area's natural beauty. Indian Creek runs the length of the village and provides access to the mountains behind Chignik. The hills and meadows surrounding Chignik support an abundance of grasses, berries, and leafy greens.

Three "Chigniks"--Chignik, Chignik Lagoon, and Chignik Lake--comprise a village network in which fishing and hunting areas are shared. These villages are connected by the Chignik River, which feeds Chignik Bay (located immediately beyond Anchorage Bay). There also exists kinship connections among residents of the three Chignik villages. Chignik and Chignik Lagoon appear to have most of these connections, with only a few relations residing in Chignik Lake.

The ocean waters in the vicinity of Chignik teem with fish species that have both subsistence and commercial value to Chignik residents: all five Pacific salmon, halibut, herring, Pacific cod, and smelt. All of these fish species are used as subsistence resources, and many are harvested commercially. A wide variety of marine

[2] Following the World War II imprisonment of Aleuts and Eskimos of Japanese descent, some Japanese descendants took their Native parents' names. We speculate that this an attempt to "shake off" the embarrassment and trauma of the imprisonment. Such trauma was documented among Japanese Americans during the redress and reparation hearings.

invertebrates are found in the region, including octopus, crab (tanner and dungeness), clams (butter, razor, steamer, and horse), mussels, sea eggs, chitons, and cockles.

The Dolly Varden, freshwater rainbow trout, and grayling are abundant in the freshwater lakes and streams.

Sea otters are common, and harbor seals and sea lions haul out in the area. Harbor seals and seal lions, and their by-products, provide the bulk of the Native sea mammal subsistence usage. Grey, minke, killer, and humpback whales; northern fur seals; and harbor and Dall porpoises make appearances during seasonal migrations through the waters off this section of the Alaska Peninsula. Seal oil and/or seal fat are subsistence foods used by many Chignik Natives.

On land, brown bears, caribou, and moose make up the large game. Arctic and snowshoe hares, porcupines, beavers, foxes, ermines, minks, and muskrats are among the small mammals in the area. Wolf are also present in the area. Caribou is the largest source of land mammal protein for Chignik residents (Morris 1987).

Many birds reside in or migrate through the Chignik area. Ducks, both sea and freshwater, of many varieties and Canada geese make regular visits. All told, some 10 varieties of migrating ducks and three varieties of geese are harvested by the Chignik residents. Other sea birds such as cormorants, puffins, murres, gulls, and terns have sea colonies on local shores. Rock ptarmigan and ravens winter in Chignik. Bald eagles, peregrine falcons, hawks, ospreys, and owls make up the resident raptors (Environmental Services Limited 1982).

III. THE PEOPLE

The population of Chignik seems to be divided into four groups: (1) fish-processing personnel, (2) non-Native educators and public-sector employees, (3) Native fishermen who winter "out," and (4) Native fishermen who winter "in."

The fish-processing-personnel group is composed of year-round management or caretaking personnel and temporary or seasonal labor. The interaction between these persons and the villagers occurs over a wide range of situations from personal friendships to village politics. For the most part, the interaction seems to work well for both the

processing plants' employees and the Natives. Seasonal labor must be treated as a separate case. Temporary workers comprise a variety of individuals: some are semiskilled laborers who return annually, and some are college students on leave or precollege youth working to save money for college. Processing-plant management actively intervened when workers violated community sensibilities. They were particularly guarded against alcohol and drug violations. Conversations with village residents regarding relations with processing-plant personnel indicated that the two groups generally get along quite well. Villagers did suggest, however, that summer temporary workers are involved in more serious social problems than are winter workers, including drug use and relationships between male plant workers and young women in the village. No complaints about female plant workers on either the summer or winter crews were expressed.

The presence of the fish-processing plants has resulted in interracial marriages between Native villagers and plant personnel. In the cases for which we have information, Chignik Native women married "out,"[3] and the families have chosen to remain in Chignik. Based on interviews and conversations with 1991 winter residents, most of the Chignik Native men who marry out also are seasonal residents of Chignik and maintain residences in Kodiak or Seattle.

One of the processing plants sponsors a picnic for villagers and plant employees each summer in an effort to enhance good will. Plant workers are welcome to participate in the evening sports recreation at the school gym or other facilities. Rousing games of pickup basketball and volleyball between participants drawn from the plant and the village occur on most winter nights.

In talking with villagers, no one expressed dissatisfaction with the fish-processing plants or their year-round workers. The relationships seem to be very good. In fact, in

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[3] The term marrying "out" has two connotations in the villages of Alaska. The first connotation refers to the practice of marrying someone from outside of one's village, usually from another region. The second connotation refers to the practice of marrying someone from outside one's racial (or ethnic) group. (This second connotation has wide usage among ethnic studies scholars and by minority group members throughout the U.S.) My use of marrying "out" in the text includes both connotations.

the village census, members from the management teams of both plants were included as residents by the village administration. Not all processing-plant employees were so designated. The workers who are considered village residents frequently interact with the villagers. At least one plant employee is actively involved in the village government.

Other non-Natives in Chignik are generally educators or public-sector employees. The educators tend to be in residence only during the school year, when the housing provided by the school district (with partially subsidized rent) is available. Although teachers in some other villages who wanted to remain over the summer have found private-housing rentals, my interviews did not indicate that any school administrators or teachers lived in Chignik year-round. Outside of the educational setting, these non-Natives have little formal association with the village, although a few had established informal social ties.

Non-Natives employed in other public-sector jobs were much more active in village life than the school personnel. In some cases, the nature of the employment (e.g., city administrator) requires this interaction. However, not all community ties were "job related." Some of the non-Native public-sector workers were very active in religious organizations as well as village electoral politics.

III.A. Dual-Residence Families

A group of Chignik Natives resides outside of the village most of the year, returning during the summer to fish commercially. But, because they are Chignik "residents," tribal members, and corporate shareholders, they continue to have political and economic power in the village. The current heads of the village for-profit corporation and the fishermen's association spend winters away from Chignik. Some respondents suggested that this arrangement accounts for some of the political instability of the village government (see Sec. IV.B, The Village Government). Year-round residents, although kinspersons of those who winter out, sometimes take exception to summer returnees seeking to run things. The most common reason expressed for dual summer-winter residence was schooling for the children. Parents felt that larger cities provided better educational opportunities, particularly for high-school-aged children.

Kodiak, Anchorage, and Seattle were named as major seasonal residences. However, Chignik school officials indicate that the disruption of children's education and lives by dual residences may present unanticipated problems.

Dual-residence children begin the school year in Chignik. Educators suggest that, because students know they will be leaving soon, there is a tendency for the students not to give their full effort. Some of these students actually will attend two or three schools during the winter. When the students return to Chignik in the spring, they are primed for the fishing season and again find it difficult to concentrate on their studies. According to the educators, the excitement of the returning dual-residence students affects year-round students as well, generating an overall attitude of impatience in anticipation of the upcoming fishing season. It appears that the most often-reported goal for wintering outside of Chignik is not being accomplished by relocating after the fishing season.

Another issue involving the children of dual-residence families is their relationship to children who reside in the village year-round. Respondents reported that the dual-residence children displayed a sense of superiority because they have more experience living outside the village than do their year-round counterparts. Perhaps another contributor to this attitude is the knowledge on the part of the dual-residence children that their families generally have higher incomes than many of the year-round residents. The relocation of children from the village also introduces identity issues for these children. Semiannual moves may rob children of a strong sense of identification with their village, their traditional culture, or their ties to their Native relatives. Because the village is poorly understood on the outside, dual-resident children learn to evaluate the village from an "outsider's" perspective that accentuates the negative qualities they perceive about traditional and village life.

The current study did not allow us to understand fully the dynamics facing the younger generations of Native villagers. However, if attachment to Chignik as home wanes among the dual-residence youths, and if year-round villagers learn to devalue their traditional life, significant changes are unavoidable. Understanding the youth in Chignik,

and indeed in all the rural Alaskan villages, is a crucial aspect of understanding the impacts of future economic and social development.

III.B. Household Organization and Kinship

Men dominate many decisionmaking positions in Chignik Village affairs, and this pattern also characterizes some aspects of family life, particularly the harvesting of fish and game. Women's power seems vested mainly in the family and through interpersonal relationships, rather than in public positions. Elders, regardless of gender, also are vested with decisionmaking influence.

Commonly, households consist of nuclear families with both parents present. In some cases, single mothers and/or single adult children also reside with their parents. Most young couples have their own homes, usually Housing and Urban Development (HUD), and several older males reside alone. Despite separate homes, family and kinship ties appear to be quite strong. Respondents described four major extended families, two of which are more dominant politically and economically. Each of the four families is related to every other family group, forming a village-kinship network. The family networks tend to organize traditional activities such as sharing, gathering, hunting, fishing, and visiting.

Most socialization occurs along kinship and family lines. However, there are non-kin-based activities, such as the use of school and community facilities for nighttime activities. In winter, volleyball and basketball in the school gym draw many villagers along with processing-plant employees and an occasional transient researcher. People of all ages attend, and the youngsters and nonplayers serve as the appreciative crowd. Early in the evening, activities are organized for the youngsters at the community center.

IV. THE VILLAGE

Chignik, with an estimated February 1991 population of 92,[4] is subject to considerable outside influences. Revenue from the fishing industry contributes to higher personal incomes and supports more infrastructure-improvement projects than in many small Alaskan villages, particularly those with no viable local industry. The distribution of personal income from commercial fishing plays a major role in the political and social dynamics of the village.

IV.A. The Regional Government

In 1991, Chignik joined the newly formed Lake and Peninsula Borough regional government. Previously, Chignik, while belonging to the Bristol Bay Native Association (BBNA) (see below), was unaffiliated to a regional or borough government. The Lake and Peninsula Borough promises to offer protection for the school district to which Chignik belongs and to provide services for future land and resource development. Although borough membership will cost Chignik raw-fish-tax revenues totalling approximately one-half of the current percentage received, the services gained should compensate the village for the losses in at least two ways. First, assistance in land and resource development will bring direct additional revenues to Chignik as doors open to new forms of economic development. Second, it will allow Chignik to share the expense of big-ticket items such as zoning, testing, and surveying for new waste-dump sites.

Besides increased services, borough membership will provide Chignik residents an additional layer of self-governance with which to lobby State and Federal entities for

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[4] The Social Indicators Study population estimate was conducted with the assistance of city officials and is at variance with both the Alaska Department of Fish and Game (ADF&G) and U.S. Census estimates. The ADF&G estimates in 1990 place the population at 120, while the U.S. Census projected a 1990 population of 188. Most likely the ADF&G estimate is the best, while the Census estimate grossly overcounts the number of residents. Discrepancies between the Social Indicators Study estimate and the ADF&G population figure can be accounted for by two primary factors: (1) the seasonal residence of Chignik residents who winter out, and (2) turnover of social service personnel during the winter of 1991. Seasonal migration patterns are erratic, and "hard" population counts are difficult at any given moment. We sought to count the villagers residing in the Chignik that winter. Additionally, a number of non-Native service-provider positions were unfilled or in transition during our visit. Each of the previous position holders had resided in Chignik with their families.

entitlements. This additional political power and inclusion in regional decisions may be the greatest gain for the village.

IV.B. The Village Government

During the winter of 1991, Chignik's village government had been in turmoil for at least the previous 2 years. The village has a mayoral form of government. In the 18 months before my February 1991 visit, the village had three mayors, three city clerks, and three city administrators; and the village public safety officer (VPSO) had come under increased pressure to relocate. Though specific reasons for such a high turnover are unknown, most interviewees blamed intense internal politics for the instability. Attacks occasionally became personal. State of Alaska, Department of Community and Regional Affairs (DCRA), officials suggested that while intense internal politics account for much of the turmoil, pre-existing problems were exacerbated by the Exxon Valdez oil spill, which occurred in 1989. According to the DCRA officials, city government employees and officials were severely stressed and workloads increased during the time of the spill and cleanup activities. Workloads increased from 8 to as high as 18 hours per day at the outset of the spill, levelling off to 11 to 13 hours per day during cleanup operations. The city official who worked as the village spill coordinator has left Chignik.

Part of the instability problems involve the tension between Native year-round residents and summer residents. As noted above, the summer residents tend to have power by virtue of their commercial success, and they hold the key positions such as village for-profit corporation president and fishermen's association leader. On their return, it is not uncommon for Native summer residents to exert their influence in local matters involving government expenditures and village development. Such action appears to anger year-round residents, who have been working throughout the winter to solve village problems.

Kinship plays an important role in the village government and politics. Native village residents comprise a large kin network whose members are related by birth and through marriage. Most distantly related persons are second cousins. Three families play important roles in village leadership. One family seems to dominate the village

government in both elected and appointed positions. Another family exerts leadership in the tribal and corporate organizations. The third family has been important in village affairs in the past and well may be instrumental in the future, as the younger members of this family are now being drawn into village-leadership organizations. A fourth family appears to have little influence or role in village governance.

When dealing with outsiders, the Natives band together and acknowledge kinship ties. Villagers also have the ability to divorce city business from personal business. They can argue with one another at a city council meeting, complete with name calling; then, later that evening, they may visit each other's family, telling stories and laughing. This is baffling to some outsiders, who sometimes misinterpret this behavior as duplicitous.

Individual personalities seem to play a large role in village government. Presently, there seems to be no charismatic Native leader who can actively mediate between the various factions and complex social factors of the village. Over time, non-Natives have moved to the village and have taken positions of responsibility. Because of their outgoing personalities and seeming expertise, the villagers sometimes have allowed newcomers to gain power and authority. However, this creates tensions when the outsiders go too far. Retrenchment on the part of the villagers results in hurt feelings and sometimes bitter political battles, after which the outsiders leave. In some cases, the outsiders have built coalitions and attempted to further entrench themselves in the community.

The city government consists of the mayor, city council, city clerk, city administrator, and VPSO. The mayor and council members are elected by the village, and the two administrative positions are hired by the council. The mayor is the primary city official and exercises ultimate responsibility for the everyday operations of the government. The city administrator, subordinate to the mayor, is delegated the responsibility for the everyday administration of council policies, compliance with various State and Federal regulations, and overseeing the fiscal management of city funds. The mayor and the council set policy and approve the city budget. According to the State DCRA office, a referendum election was held in 1989 to switch the village governance

from the current mayoral form to a city-manager system. The referendum was initiated to deal with (1) the inability of the city council and mayor to attend to daily activities during the summer due to fishing-season demands and (2) unclear lines of authority and delegation of authority during the summer absences and recesses. The city manager proposal was defeated.

The city-manager form of government invests a great deal of power in a non-elected administrator hired by the city budget. While it provides expertise and stability, this form of government places a layer between villagers and the operations of the village government. The city government provides one of the few avenues the Native villagers have for exercising power in their lives. It appears that to give away that amount of power for the city manager form of government, most likely to an outsider, was considered too great a sacrifice.

IV.C. Social Services and Schools

Chignik employs two full-time emergency personnel, the VPSO and his assistant. The VPSO is a certified Emergency Medical Technician instructor and conducts classes for villagers during the winter. The village has a fire engine and well-stocked medical-emergency supplies. According to the VPSO, the Exxon Valdez oil spill and the fervor it created motivated the villagers to upgrade the community's capacity to deal with such disasters. This included acquiring medical supplies as well as materials to make booms to protect against future spills. Additionally, the spill inspired the VPSO to develop village action plans for potential future disasters.

The village health clinic offers the services of a physician's assistant (PA) in addition to the health aide. The PA receives more training than a village health aide but is not a physician. The health clinic provides basic health services, x-ray technology, and other technical analysis. I was unable to obtain information regarding medical consequences of the spill or on the general medical well-being of the village.

The BBNA, whose social-services budget was $2,672,884 in 1990 (BBNA 1990:7); provides most formal social services in Chignik. Services available in Chignik include a meals program for the elderly, which served 565 meals in 1990 (BBNA 1990:11); the

Indian Child Welfare Program, which recorded two cases (families) involving six children in 1990 (the nature of these cases was not disclosed) (BBNA 1990:19); and the Summer Youth Employment and Training Program (SYEPT). Offsite (in Dillingham and other locations) programs available to Chignik residents include vocational rehabilitation, employment and training, a Family Violence Program, and higher education. The 1990 Family Violence Program reports that it received an unspecified number of clients from Chignik (BBNA 1990:16).

Because of Chignik's distance from Dillingham, the headquarters of BBNA, and the expense to travel to and from Dillingham, Chignik village officials claim their community has received fewer and fewer services as BBNA budgets tighten.

Chignik has its own school that provides instruction for grades K through 12. As mentioned above, school attendance fluctuates during the year in accordance with seasonal family migrations. School officials noted that, overall, the program is solid. A constant concern is the relationship between parents on the one hand and the school administration and teachers on the other hand. The principal cited the transiency of teachers as a major obstacle for developing relations between the school and the village. Teachers seldom stay in Chignik longer than 2 years. The reasons for this were not articulated by school officials.

IV.D. Associations and Organizations

Chignik has few formal associations. The three that predominate are the fishermen's association, a nondenominational (largely Protestant) church, and a Russian Orthodox church.

Most of the local fishermen belong to the Chignik Seiner's Association, which includes fishermen from Chignik, Chignik Lagoon, Chignik Lake, and the closest villages to the southeast, Ivanof Bay, and Perryville. This organization negotiates fish prices with the local processing plants. The Seiner's Association is fairly informal; and the head of the Association, a Chignik Native, is not a winter resident. In response to the Exxon Valdez spill, the Association closed ranks in its negotiations with outside entities and even retained a lawyer to oversee their interests.

Although the Seiner's Association unsuccessfully lobbied to keep the entire Chignik fishery open during the spill-cleanup period, it did successfully negotiate leasing fees for local boats working on cleanup activities commensurate with other spill-affected areas. According to newspaper accounts, VECO and Exxon offered a much lower leasing rate to the Chignik fishermen to use their boats in the cleanup operations. The fishermen stood strong and eventually received a fee equal to that of the Kodiak fishing fleet.

It is unclear if this level of cooperation and collective action among the Seiner's Association members was maintained following the passing of the spill crisis. Indications are that the Association reverted to its informal operations. During my winter 1991 visit, however, the membership was concerned about impending low fish prices. But the group had not yet begun to explore collective strategies. At least one year-round village resident was in the process of outfitting his boat for winter bottom-pot (pollock and cod) fishing to make up for anticipated low salmon prices for the 1991 season.

The nondenominational Protestant church in Chignik provides one of the major nonkinship-based organizations for people. Led by a non-Native, the nondenominational church and its members have been very active in villagewide issues ranging from school library content to the start of a Christian radio station. Because the leadership of this church also is quite involved in village governance, it is difficult to separate church and individual influence. However, religion plays a major part in the views and roles of the church leadership in nonchurch positions. Additionally, the leadership of the Protestant Church, and presumably its members, engage in evangelical activities. This outreach is not restricted to villagers, and plant employees receive equal attention.

The Russian Orthodox church provides another nonkinship-based organization, and it appeared that members from all major Native family groups in the village belonged to this church. Without a local priest or a local building for services, Russian Orthodox services are seasonal; and the church members expend a great deal of energy preparing for the various seasonal activities. Despite the lack of consistent or formal weekly services, the Russian Orthodox respondents expressed enthusiasm for their religious affiliation. Their participation in the church appears to be equal parts cultural and

devotional. Church members observe traditions and celebrations but do not seem to be ruled by church doctrine in their daily lives in the sense that they are not guided by a strict list of proscribed actions. However, the people do live a life marked by New Testament notions of Christian charity.

V. THE ECONOMY

Chignik is dependent on commercial fishing for both village and personal income. The raw-fish-tax receipts provide the village with a steady income; and the increased winter bottomfishing, which has made the land-based processors year-round operations, should provide increased financial stability.

Although I did not get an actual count of the number of permits held by village Natives, it seems that few have sold their commercial-fishing permits. Those without permits serve as crewmembers for Native permit holders.

Other sources of employment are the school system, fish-processing plants, the city, and the local store; and village residents are employed in each of these operations. Many households of winter residents have two wage earners. In the majority of the *households interviewed, both the husband and wife were gainfully employed.*

The homes in Chignik have most of the modern conveniences, although a few homes do not have telephones. Long-distance telephone service is periodically disrupted due to weather conditions. Telephone communications are generally complemented by VHF radio systems. No families seem to suffer extreme poverty, and mutual assistance among village members is prevalent.

During the winter 1991 study period, half of the Chignik respondents reported less than 25 percent of their household diet consisted of protein from the subsistence harvest of wild foods such as fish or game. However, if taken at face value, this percentage would be misleading. A closer analysis of households reporting low percentage of subsistence protein in their total diet reveals that half of the households are non-Native. The other half comprise households of older Native bachelors who can no longer harvest subsistence food resources as they did in their younger days, when--they said--harvested proteins accounted for more than three-quarters of their diets. All households reporting

that over 25 percent of their diets consisted of subsistence-harvested proteins were Native. Seafood resources (predominantly various species of fish) rather than land mammals, make up the majority of the subsistence foods consumed by the people of Chignik. Seabirds and plants augment their diet, as do sea mammal by-products such as seal oil and fat.

Commercial foods are provided by two means: (1) bulk orders from retail outlets in Anchorage; Seattle; and, during the summer, from Kodiak (transported by fishing boats and summer-only airplane service) and (2) the two local markets. Purchase of the larger consumer goods, such as outboard motors and skiffs, is not possible in Chignik. The markets are owned by non-Natives--one is owned and operated by Chignik Pride and the other by an individual in Kodiak. Overall, Chignik's port location and the competition between the two stores keep prices reasonable relative to other more remote communities. The stores are frequented by residents of the neighboring villages of Chignik Lake and Chignik Lagoon.

Employment in Chignik is provided by the fish-processing plants, local markets, school, State transportation, airlines agent, post office, and city government. In winter 1991, approximately 13[5] village residents--8 women and 5 men--were employed in local jobs, not including the VPSO, city administrator, and health clinic specialist. Of these 13 residents, 4 were non-Native (3 are white and 1 is Filipino), and only 1 of the 4 was not a member of a Native household. The VPSO, his assistant, the city administrator, and the health-clinic specialist were white males, one of whom had married into a Native household.

In winter 1991, four Native village women were employed by the fish-processing plants, and a fifth worked as a store clerk. A non-Native woman served as a receptionist, and two women were cooks/bakers. No village residents worked on the fish-cleaning lines at the plants. Line work did not seem to be viewed as desirable by the Chignik Native residents; however, historically this has not been the case. One

[5] This number does not include fish-processing-plant management, school teachers, and school administrators. No discussion is offered for these groups.

Native female resident recalled working "on the line" as a high-school student about 10 years ago without receiving any negative feedback from her peers. Management at the plants did not express any reservations about local hires but stressed that they rarely get a request for line work.

Historically, the fish-processing plants (previously canneries) provided employment for Native males. One of the elders explained that his father worked in the canneries about 50 years ago. Every summer, the family would row across the bay to Chignik from their winter home in Ocean Beach. Adults began seasonal work in the canneries, and the children would attend school. Each fall the family would catch a tow back to Ocean Beach with an outgoing fishing boat. It seems that a number of Native males worked in the cannery during that time.[6] Today, this elder is a permit holder and fishes with his son, to whom he has turned over the captaincy of their boat.

Apart from commercial fishing, there is limited private-sector employment in the village. The local markets employ two village residents, and one market employs an additional worker during the busy summer fishing season who is brought into Chignik from the Lower 48. Most Natives tend to work for public agencies as school aides, maintenance workers, city administrative employees, etc. These jobs provide steady work; and, with the exception of the city clerk and postmaster, employees still can participate in the fishing season.

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[6] James VanStone, in Eskimos of the Nushagak River (Chapter 4), documents the historical participation of Eskimos in the canneries of Bristol Bay. In particular, he notes the development of the Bering Sea Fishermen's Union as a local of the Alaska Fishermen's Union in 1937, which included the Native cannery workers. One of the agendas of the union was "to achieve precedence for residents" (p. 79) in the canneries. Following World War II, the canneries in Dillingham hired increasing numbers of Natives and a cannery at Ekuk pioneered all Native crews in the late 1940's. VanStone also states that the issue of Native hire was a territorywide issue that was addressed by the territorial governor's office as early as 1912. It is reasonable to assume then that Chignik's canneries were affected by the territorial influences, as well as cannery practices elsewhere, including Bristol Bay, and that Native employees were, therefore, not uncommon.

VI. IDEOLOGY

Chignik Natives expressed remorse that there are few Aleut[7] speakers left in their village. On the heels of the loss of the Aleut language, they witnessed the introduction of modern technology. Yet, the elders are able to see this new technology as both helpful and detrimental. Technology definitely has improved both subsistence and commercial fishing. In homes, electricity, running water, and oil heating, among other conveniences, have improved the quality of life, but at a cost. The elders noted that as children their lives were full of chores--chopping wood, carting water, etc.--and they observed that by contrast, some children now have no chores to give them discipline. Rather, the children have a surfeit of free time, and this free time is not used constructively--they simply watch television. Moreover, the children also attempt to emulate what they see on television and videos, as evidenced by the fashions they wear and the idioms they use. One elder commented that children were not the only ones affected. Adults turn to television for escape as well. Rather than going out and visiting, it is easier to sit and watch television.

While the concerns of these elders sound similar to those voiced elsewhere about the younger generations, the examples of behavior given by the elders in Chignik seem to illustrate what they perceive as a fundamental threat to Native values and ideology. A valued aspect of the Native culture has been the sharing of resources as well as the sense of collective responsibility and obligation that has been essential to family and community survival in the demanding Arctic and Subarctic environment. In essence, Native culture was very "other" oriented. While sharing still is highly valued and widely practiced today among the year-round residents of Chignik, the elders were fearful that the youth of the village are becoming more individualistic in their outlooks because they have been raised on television and also because they have been influenced by a highly

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[7] The Native language in Chignik is variously referred to as Aleut, Alutiiq, and Pacific Eskimo (Woodbury 1984:53). Natives residing in the Aleutians, on the Alaska Peninsula, and Kodiak Island were all termed Aleuts by the Russians in the late 18th century; and it is common for Natives of these areas to refer to themselves and their language as Aleut.

capitalized commercial-fishing industry that is regulated through access to individually owned permits. Most of the elders felt that technology per se was not bad, but that the people have failed to adjust the benefits of technology to serve the value system that has sustained Native life in the past.

Another major change in the lives of Chignik villagers was the Alaska Native Claims Settlement Act (ANCSA). Many respondents perceived ANCSA as an overnight development that fundamentally changed the relationship between the land and the people. According to one Chignik elder, "Used to be you could build or walk anywhere you wanted, and there was no such thing as someone else's property." This elder's views reflect the concerns of other respondents who felt that villagers were becoming increasingly individualistic and selfish with the growing emphasis on private-property ownership. The elders indicated that prior to ANCSA, people certainly used their cabins and set-net sites, etc., but this did not include the notion of individually "owning the spot." Almost every Native respondent felt that what made Chignik special was the place itself; the natural environment--including salmon--has value that cannot be approached in commodity terms.

VII. EFFECTS OF THE 1989 EXXON VALDEZ OIL SPILL

VII.A. Closure of the Fishery

Chignik experienced direct and indirect effects from the 1989 Exxon Valdez oil spill. The direct effect with the greatest impact was the closing of a major portion of the Chignik fishery as a result of the patchy oil sheens, mousse, and tarballs that drifted into the area. The closing of the fisheries increased tension and bad feelings on a number of levels. Fishermen who expressed the greatest criticism of the fishery closure reported they often had seen more oil sheen from barges blowing their bilges in the straits. They felt the closure was not in their best interest and may have been motivated by concerns other than the quality of the salmon.

The degree to which the closure affected individual fishermen varied by the size of the fishing operation. Small fishing operations--run by fishermen employing 125-fathom purse seines from 38- to 40-foot boats powered by 150- to 200-horsepower single

engines--seemed to have suffered the most deleterious effects. Intermediate and large fishing operations were reported to have had fewer negative impacts. Fishermen in intermediate to large operations own boats at least 48 feet long with either twin engines (350 horsepower per engine) or with an 800- to 900-horsepower single engine. These boats have large holds in comparison with 38-foot craft and also have hydraulic winches to operate 250-fathom purse-seine nets.

The largest fishing operations (highliners), even though restricted from fishing, had opportunities not available to the smaller operators. The large operators reported that they received adequate compensation from Exxon for fishing losses, and a number also were able to hire out on spill-cleanup activities in areas where small boats could not travel. These factors combined to allow the largest operators to escape financial harm.

The degree and nature of the effects to the fishermen, however, are questioned by many in the village. According to the local fish-processing personnel, the "good" fishermen maintained their normal catch, while the "poor" fishermen also performed normally. By poor fishermen, I assume the processors were referring to small fishermen because, based on responses from the Social Indicators sample, they were the only ones claiming economic harm from the spill. My interviews indicate that the claims of the small operators are substantiated, at least in part.

Of the waters normally fished by the Chignik fleet, only Chignik Lagoon was open for salmon fishing during the spill. This created difficulties for the small Chignik operators because fleets from other villages also were directed to the Lagoon, increasing the number of boats fishing there. Also, a number of the operators of "smaller" large- and intermediate-sized boats were forced to fish the Lagoon. Thus, local small fishermen were faced with overcrowding along with two new sources of competition. Some of the complaints voiced about the crowded conditions in the lagoon included (1) interference by other fishermen while setting nets, (2) running over other fishermen's lines, (3) long queues[8] for short set periods, (4) pressure to perform at peak

[8] A queue is a waiting line. Although this word is not commonly used in America, I use queue here so the reader will not confuse a waiting line (queue) with a fishing line (fishing equipment).

proficiency,[9] and (5) the luck of the draw left some fishermen with fishing opportunities when the salmon were not running.

The crowded situation and the unfamiliarity of outside fishermen with the lagoon increased accidents as well as reports of interference. None of the fishermen with whom I spoke felt the interference they experienced was intentional; but the effects were real and harmful, particularly for small fishermen with limited equipment.

The longer queues hurt everyone fishing on the Lagoon. Fishermen not only had fewer opportunities to set their nets, but the length of time (for each set) they had to fish also was shortened from "normal" conditions. Additionally, the long queues created pressure on small fishermen, particularly those with older equipment, because any equipment failures had much greater repercussions than in a normal year. For example, one resident told me that his engine broke down just prior to one of his turns to set his nets. Because he could not get out to set, he had to return to the end of the queue. In normal conditions, he may have been able to get his boat running before missing his turn and, at the very least, would have had a shorter wait to set his nets following engine trouble.

These impacts of the longer queues resulted in claims of smaller catches by some of the operators, particularly the smallest operators. Some evidence for such claims were substantiated by a tender,[10] who reported that she was unable to make as much money during the spill and, as a result, was able to secure a financial award from Exxon.

VII.B. Economic Consequences for Fishermen

All respondents in the Social Indicators sample who were commercial fishermen, either as permit holders or crewmembers, reported a financial loss to household income

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[9] A missed opportunity in the longer queue meant significantly shorter fishing time; thus, fears of engine problems or other factors slowing down the boat were increased.

[10] A tender is an intermediary in the fishing process. The tender buys fish from the small fishing boats and then transports and sells the fish to the processors. By selling to tender, though for a lower price than is paid by the processor, the small fishing boat with limited storage capacity can return to the queue quickly and avoid the long haul to offload fish, which costs time, fuel, and wear and tear on the boat and engine(s). Sales to the tender are cost beneficial because the loss on the selling price is made up in quantity. Simply put, for the small fishermen, less time on the water to fish means less fish caught and less return on investment.

as a result of the oil spill. These individuals also indicated that they received little or no compensation from Exxon. All of the permit holders in the study sample were small operators, and in each of these households either the respondent or the respondent's spouse was Native.

The information regarding the financial losses of local fishermen suggests that small Native fishermen in Chignik incurred greater losses than large fishermen. The small fishermen had few options and opportunities to compensate for the volume of fish they could not harvest, yet the debate about harm to these fishermen persists. The small fishermen feel wronged by the situation.

My impression is that many small operators did not keep sufficient records to satisfy Exxon Corporation's requirements for processing legitimate claims to revenue loss as a result of the spill, whereas the larger operators did. It is possible that because the smaller operators sell to intermediaries while on the water, other things became more important than what seemed unnecessarily detailed bookkeeping. Because their records were insufficient, small operators were left to rely solely on income-tax returns, something on which most people and businesses attempt to reflect the lowest taxable income (and most corporations, such as Exxon, also seek to report the lowest possible income).

The reliance by small operators on income-tax returns for making their Exxon claims more than likely underrepresented their gross incomes and, subsequently, their Exxon claims. Moreover, these small operators are less likely to see the need to keep detailed operating-cost records. On the other hand, large operators sell direct to the fish-processing plants and may have relied on the fish processors' books, which are kept by trained managers and accountants. Perhaps documentation for the larger operators was more easily obtained, although I do not know the source of their information. Also, larger operators, who mainly winter in Kodiak or Seattle, seem to have more experience dealing with institutional and corporate bureaucracies; a few have expanded their business ventures beyond fishing. These experiences made the entire claims process somewhat more familiar to them and may have given them an additional advantage over

the small operators. Perhaps this is why the large operators expressed little sympathy for the small operators' plight.

Another source of contention for small operators was the bumper harvest experienced in 1988, which may have produced optimistic views of the profit potential for 1989. Thus, the difference between what the small operator earned and what that person thought they could have been earned was increased. This most certainly added to the frustration levels, according to several respondents who were not commercial fishermen.

Small operators were not the only affected members of the Chignik fishing community. Fishing in the lagoon proved detrimental to some of the larger operators as well. Some boats were too large to be used to fish in the small lagoon. The consequences to the largest and smallest operators were not the same, however. The largest boat operators often were able to secure reasonable financial compensation from Exxon and/or rent out their boats for cleanup activities. Compensation procedures appear to have been better suited to business practices characteristic of the largest operators. The smallest operators not only benefited the least from the compensation process, but they also had the narrowest financial margin with which to absorb the losses of even one disrupted fishing season.

Among the respondents who reported that they did not lose income as a consequence of the oil spill were two managers of the local fish-processing plants and a commercial fisherman whose major source of income was from employment in the district's school system. It is not surprising that the processing-plant managers did not report losses because they were salaried employees. The commercial fisherman has a small operation and participates in fishing as a secondary income source to augment his public-sector job. He was able to catch enough fish to meet his 1989 economic needs.

Other respondents who did not report losses as a consequence of the spill were not engaged in commercial-fishing-related occupations. Two were teachers or administrators at the school; another worked at the school, and her spouse worked for the city. Two of the households that reported no losses were Native.

VII.C. Social Consequences

Emotional strain from the spill was evident throughout the village. Arguments persisted regarding the extent or existence of financial loss caused by the oil spill. The most common argument among the people of Chignik revolved around the conflicting perception of individual losses resulting from the spill. For example, one person might claim harm from the spill while talking with others, yet another villager would immediately refute the claim. The school principal noted that most of the disturbances between children, in town and at school, stemmed from quarrels about a parent's or relative's "truthful" claim of financial damage. One parent commented that she noticed that her children showed signs of anxiety and that intersibling squabbling had increased.

On another level, the conflicts can be seen in socioeconomic terms as well. In Chignik, there is a tendency to equate large fishing operations with skill. This results in large operators being seen as good fishermen, while small operators are seen as less skilled or poor fishermen. This labeling affects both the attitudes and actions of non-Native operations within the village and permeates the traditional relationships among village residents. During the spill period, the "good"/large operators were able to hold their positions as successful fishermen relative to their home village residents. The "poor"/small operators found themselves in a position of powerlessness because their claims were not legitimized by either the corporations (Exxon and the fish-processing plants) or sometimes even their own kinsfolk who are large operators.

The dynamic between the small operator and large operator is a fragile one. Large operators, because of their productivity, reportedly receive priority over the small operators from the fish-processing plants, which in turn provide numerous services ranging from fuel sales, to boat and engine repair, to loans for capital improvements, to fishing equipment. The small operators feel this favoritism shown by the processors keeps them from getting ahead. For example, they reported that if both a large and small operator need to have an engine repaired, the large operator's boat generally will be repaired first even if the small operator comes in first. This places the small operator at a disadvantage by further limiting time on the water to fish. Complaints by the small

operator often are met by plant personnel and large operators with either cost-benefit reasoning or cynicism regarding the abilities and motivation of the small operator.

The large operators and small operators, though both Natives, appear to have differing outlooks about fishing. Large operators winter outside of the village and view fishing as a business venture. From their earnings they sustain dual residences and reportedly have made additional business investments. These large operators seem well schooled in the workings of the cash economy.

Small operators tend to live in the village year-round and view fishing as a means of acquiring cash to "make it through the winter." A bumper year not only provides for winter needs but allows the small operator to purchase more luxury goods or take trips outside the village. Small operators did not report a desire to secure large bank accounts and acquire numerous business investments. Instead, their emphasis was on sharing and helping other year-round residents in the village. The Chignik small operator's view of making money as a subsistence good is consistent with information regarding Native involvement in cash economies reported by respondents from other Alaska Native villages in the Social Indicators study (Jorgensen 1990:311).

As with any society, there are some differences of attitude and economic circumstances among the Natives in Chignik. One example is the level of participation in the cash economy by Chignik's large and small fishermen operators and the attendant differential access to resources. These differences in and of themselves are not necessarily a negative factor in village life. However, serious misinterpretations about motivation and work ethic occur when Western market-oriented economic values are presumed to apply to any observed differences in behavior. For example, one interviewee explained that large operators are seen as hardworking and focused. Small operators, on the other hand, are seen as not "busting their butts" during the fishing season in the same way as the larger fishermen. This negative view of the small operators, who are primarily Native, is compounded by the fact that many of the large operators also are Natives. The small operators are supposedly content to make "enough"; as a result of this attitude, they are labelled unfocused at best and, at worst, as

lazy.[11] This seemingly clear comparison between two Native groups, one motivated and one not, causes the attitudes of small operators to be misinterpreted as ambivalence. But such a comparison is not warranted as individuals within the two groups may not share the same world view about cash, nor do they have the same financial needs.

The crisis resulting from the Exxon Valdez did, however, offer at least one area of social comity within the village. When threatened by outside forces and abnormal conditions, the fishermen banded together to present a united front to "outsiders," especially Exxon. Newspaper accounts reported that Chignik-area boat operators had been offered substantially less rental rates by Exxon, via VECO, than similar boat operators in Kodiak. Responding to this discrepancy, the fishermen's association, normally informal, acted formally in securing fair prices for boat rents from Exxon. Additionally, the association--through the cooperation of its members--organized lotteries for boat hires and queuing in the Lagoon. These actions reaffirmed the commonality between fishermen, small and large.

VII.D. Institutional Impacts

On an institutional level, the City of Chignik experienced financial losses through greatly reduced raw-fish-tax revenues. The two Chignik land-based fish-processing plants pay a State raw-fish tax on each pound of fish processed. The State then remits one-half of the amount paid by the two processors to the Chignik city government. In a letter to Governor Hickel, the Chignik city government estimated a portion of its losses in revenue at over $390,000. The lost tax revenues were to be used for a variety of purposes. The most prominent use was to be for costly capital-improvement projects prior to Chignik's making the full fiscal transition to the newly formed Lake and Peninsula Borough in 1992. Upon Borough membership, Chignik and all its sister cities will share in Chignik's raw-fish-tax revenues. While Borough membership will bring various benefits to Chignik, it will reduce city revenues in the short run. This makes the

[11] During my fieldwork in other Native villages, primarily in the Bristol Bay and Kodiak regions, non-Native residents often characterized Native workers as being satisfied with doing a "good enough" job, rather than striving for "excellence."

reimbursement of lost fish-tax revenues due to the spill-induced shortened fishing season even more important. The institutional losses also included administrative costs of city officials whose time and energies were syphoned off to deal with the Exxon Valdez oil-spill crisis. As of winter 1991, the city government had not fully estimated the totals of these costs. The Department of Community and Regional Affairs confirmed that Chignik village officials did experience increased workloads and longer working days during the crisis and an increase in related administrative duties during the post-spill period.

Local businesses also suffered adverse effects from the oil spill and the resulting truncated fishing season. The fish-processing plants did less business, as indicated by the loss in raw-fish-tax revenues. Additionally, the plants appear to have suffered secondary long-term effects as a result of reactions to the spill in the international salmon market. For example, in February 1991, one of the plants had over $1 million in product in storage due to market oversupply in Asian markets, particularly in Japan. This caused the plant to absorb the storage costs as it waited for more opportune market prices. At least two factors related to the Exxon Valdez oil spill may have encouraged the Japanese stockpiling: (1) the fear of future major spills that would make them vulnerable and (2) the ability to buy and store salmon cheaply in 1989 (the spill season) and 1990 due to fears of "tainting," which served as leverage for lower salmon prices. Partially as a result of the Japanese stockpiling, salmon prices for the 1991 season were expected to remain low, which means lower revenues in the short term for the processors.

Chignik's two land-based fish processors expect it will take some time to recover losses related to the oil spill, but neither indicated that they were in danger of closing. However, a floating processor, which previously operated on Chignik Lagoon, has withdrawn; and a number of small Chignik operators who formerly contracted with the floating processor recently have contracted with the Chignik land-based operations.

The local markets also faced several potential impacts related to the oil spill; however, the absentee owners were not available for interviews regarding the specifics of

profits or losses. First, many of Chignik's year-round residents had less disposable income to spend at the markets. Second, the truncated fishing season resulted in fewer numbers of seasonal laborers being needed by the fish-processing plants, and this reduced the potential clientele at both markets. These potential revenue losses may have been buffered somewhat by the arrival of Exxon and other spill-related personnel who lived in Chignik temporarily during the cleanup period.

VIII. CONCLUSION

Chignik has long been impacted by "outside" influences. The presence of the canneries, which now are fish-processing plants, has been and continues to be a source of constant influence. Technology and the media also serve to introduce change at a rapid pace. In the midst of these constant sources of change, the Exxon Valdez oil spill sent a shock wave of major proportions throughout every facet of this small village.

The spill's closing of the Chignik fisheries resulted in revenue losses to the village government, local businesses, and individuals. To be sure, these financial losses have negatively impacted Chignik and will continue to be a factor in the fiscal well-being of the village. However, what comes to the fore has been the spotlight on the differences in Chignik, particularly within the Native population: small versus large fishing operations and year-round versus summer residents, along with Native versus non-Native. This spotlight extended also to the play and interaction of the village Native children, jeopardizing long-term relations among them.

In any study such as this, it is easiest to focus on the tangible and thus measurable effects of a disaster. Tallying the dollars lost, hours worked, and the like does indeed give us an indication of the damages suffered by a community. Yet, the crisis resulting from the Exxon Valdez spill damaged at levels that do not lend themselves to easy measurements or understanding. In Chignik, the magnification and perhaps acceleration of the differing world views among Natives in the village represents the dilemma. How do we, as a society, measure and compensate for lost friendships, increased teasing and animosity among children, and tension within families brought about by the Exxon Valdez oil spill?

The situation in Chignik gives evidence to the enormity of the Exxon Valdez disaster. Beyond the dollars lost in petroleum products, commercial-fishing harvest, and environmental devastation, the Exxon Valdez spill deeply affected the lives of Chignik's residents at their core--the interpersonal and kinship relations that are the essence of Native communities.

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