

SOCIOECONOMIC REVIEW OF ALASKA'S BRISTOL BAY REGION

Prepared for

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EXECUTIVE SUMMARY

This report provides a “desktop” socioeconomic and sociocultural review of the Bristol Bay Region prepared for the North Star Group by the Institute of Social and Economic Research (ISER) at the University of Alaska Anchorage. Using secondary sources, the report characterizes the local population and its history by examining events that have influenced social change and how locals have adapted to that change. It reviews current social and economic issues in the region to provide a context for potential future mining development. Part 1 presents a regional overview with a description of Bristol Bay’s cultural history, demography, economy, institutions, and development context. Part 2 provides a more detailed overview of Bristol Bay’s sub-regions, accompanied by statistics about participation in subsistence activities, commercial fishing and other employment, and local use of public assistance.

PART 1.

1.1 REGIONAL OVERVIEW

The Bristol Bay region is remote, accessible only by air and water. Like much of rural Alaska, life in Bristol Bay is influenced by extreme weather conditions and a cold climate. The bay is known for its pristine environment, and the bay’s watersheds support the world’s largest wild sockeye salmon fisheries. The resident population is an ethnically and culturally complex combination of Alaska Native ethnic groupings and Euro-American settlers.

1.2 CULTURAL HISTORY

Alaska Native populations in Bristol Bay can trace their ancestry to hunting and gathering societies. Today, many residents of the region are descendants of three Alaska Native indigenous groups. We could crudely identify the Lake Clark-Lake Iliamna region with **Dena’ina** Athabascan Indians, the coastal area between Togiak and the Northern Alaska Peninsula as **Yupiiit** Eskimo and the southern Alaska Peninsula region as traditionally Aleut-**Alutiit**. In reality, in- and out- migration of the region’s residents and movement between communities was historically common. Although contact with Europeans began in 1741 in Alaska, Russians did

not begin exploring the Bristol Bay region until 1818. The U.S. purchased the Alaska territory in 1867. Yup'ik Alaska Native elders have identified the following critical drivers of socioeconomic and sociocultural change in their communities since contact with Europeans and Americans: disease epidemics, reorganization of residential patterns and relations between men and women, prohibition of many important sociopolitical and religious ceremonies, management schemes imposed on natural resources, and restrictions by missionaries and educators on the use of Alaska Native languages (Pete in Barker 1993). To this list, we would add that the historical introduction of alcohol use and the ensuing long history with alcoholism plaguing many rural Alaska communities has also had a detrimental effect on Alaska's rural economy and culture.

1.3 DEMOGRAPHY

At statehood in 1959, Alaska established boroughs as regional political units. In the Bristol Bay region there are two incorporated boroughs: the Bristol Bay Borough and the Lake and Peninsula Borough. The Dillingham region has no organized borough and is considered a U.S. census area. In 2004, the region's estimated population was 7,413. The community of Dillingham serves as a regional hub, with 2,466 residents, while the majority of other communities in the region are smaller villages ranging in size from 40 to 800 residents. Although the Bristol Bay region's population increased between the 1990 and 2000 censuses, the Alaska state demographer currently estimates a population decline in all three Bristol Bay regions since the 2000 census.

Population change and attendant social changes in rural Alaska are currently being influenced by a combination of economic and cultural factors, including the low price of salmon, diminishing fishing opportunities, and out-migration of young people. In the early 1990s, more women than young men were leaving rural areas, presumably because young men enjoyed more freedom in rural areas, especially to do subsistence and outdoor activities. This report presents a tentative discussion of possible changing family dynamics in rural Alaska, characterized by young mothers and children living with grandparents and without economic or marital ties to the children's fathers. An increase in births to teenage mothers might or might not be related to an increase in population in some rural areas, although there is no empirical evidence presented on that theory here, except for one study conducted in the Bristol Bay Borough (Donkersloot 2006). At this time, it is difficult to project the future implications of this pattern.

1.4 ECONOMY

More than 30 years ago, Rogers (1972) noted that during the 20th century, subsistence, commercial fishing, and welfare were the mainstays of Alaska's rural economy. In addition to commercial fishing jobs, rural Alaskans today also find employment in Alaska Native corporations, as well as state, federal, and tribal government organizations. State employment data show increasing employment in health, education, and government—although without empirical data collection, we cannot assess how many local residents fill these positions, or how many of them are filled by short-term residents from outside the region.

The word **subsistence** in Alaska formally refers to “the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption.”¹ Prior to the development of the commercial fishing industry in the early 20th century, subsistence fishing, hunting, and gathering activities were the traditional basis of society for Alaska Natives (Langdon 2002). In Bristol Bay, subsistence has historically defined livelihood, exchange, social networks, and social organization. Subsistence activities are still an essential element of life for many residents today, because in addition to the nutritional value of subsistence foods, the hunting and gathering of subsistence foods are favored activities among many rural Alaskans, who also often consider them spiritually and culturally necessary. Wolfe (1979) notes that cash from wage employment increases subsistence production. However, (Lonner 1986) has noted that the timing of wage employment should not interfere with subsistence activities.

Bristol Bay's **commercial salmon fishing and processing** industry was established in the region beginning in 1888. Both commercial fishing and fish processing jobs have attracted local residents. Access to commercial salmon fishing in Alaska was first restricted under state law by the Salmon Limited Entry Act of 1973, which called for issuing a limited number of permits to fish. Petterson (1981) found the number of permits applied for and denied in Bristol Bay was higher than in any other rural region of Alaska in 1979. A key negative social effect of restricted access management in fisheries has been the problem of equitable devolution of property rights to the next generation in families where there is more than one child (Petterson 1981; Koslow 1986.) In addition, some analysts posit that limited entry increased class distinctions within

¹ Alaska National Interest Lands Conservation Act of 1980, Sec 803.

communities (Pettersen 1981). The majority of Bristol Bay salmon permits are owned by people from outside the Bristol Bay region. Bristol Bay has also had a domestic herring sac roe fishery since the 1970s.

Salmon prices bottomed out in 2001 and have remained low compared with historical levels, due to competition from international salmon farming. Likewise, the price of herring has also plummeted because of a decreasing Japanese demand for herring roe as consumer tastes in Japan change. Regardless of these changes, continuing participation in commercial fishing has been vital to local identity in the Bristol Bay area for many of the post-statehood years, as is also true in many of Alaska's other coastal areas.

Without primary data collection in communities, we cannot fully explore here whether this cultural aspect of commercial fishing for Bristol Bay's people holds true today, given current market conditions. We do note, however, that long-term residents of Alaska's coastal communities very often self-identify as fishermen, even though much of their cash income might be derived from other employment sources (Reedy-Maschner 2004; Lowe and Knapp 2007). Commercial fishing as a vocation remains prestigious within these communities.

Many rural Alaskans use a combination of employment strategies to diversify their income, and such diversification can be critical to survival. Besides commercial fishing, Bristol Bay residents also engage in entrepreneurial business activities, fire-fighting, and making handicrafts. There are also jobs in government, health, and educational institutions; census data show increasing employment in these sectors. These data do not reveal if local education levels match qualifications for these positions, nor the numbers of short-term residents occupying them. The tourist/fishing lodge industry in Bristol Bay is generally controlled by outside interests and local participation is marginal. Many rural residents generally do not value this type of work, because sport hunting and fishing are considered contrary to traditional beliefs and respect for animals. In their 2006 report on subsistence harvests and uses of wild resources in the Iliamna Lake sub-region, Fall et al (2006) note that local residents feel they are competing with sport hunters and fishers and that the outsiders are oftentimes wasteful with their take.

1.5 INSTITUTIONS

Institutions that structure both sociocultural and economic life in rural Alaska today range in orientation and mission from local to Alaska Native to state to federal organizations. The full report provides a cursory description of these institutions categorized under the headings: *Incorporated Boroughs; Municipal Affairs; Alaska Native Affairs, Health, Education, and Social Welfare; Economic Development; and Resource Management*. That description is followed by a more detailed discussion of three critical events in Alaska's history since statehood and the role of Alaska institutions within and emergent from these events: the 1971 Alaska Native Claims Settlement Act, the 1976 *Hootch v. Lind* Alaska Superior Court Case, and the 1999 U.S. Supreme Court case of *Katie John vs. the United States*. Examination of these three events provides an overview of the most important contemporary issues rural Alaskans and especially Alaska Natives have encountered in questions about land tenure and indigenous rights, the powerful cultural influence of education, and the management of Alaska's natural resources.

1.6 DEVELOPMENT CONTEXT

Tuck and Huskey (1986) characterize rural Alaska as customarily subject to “episodic periods of natural-resource-based extraction and exploitation” and suffering from “a lack of diversified economic growth.”

Traditionally, cash income in rural Alaska has subsidized the subsistence lifestyle of local residents. In a 1975 report, BBADC and BBNA state: “Since the subsistence economy is the basic historical livelihood in the region, other forms of economic development should be undertaken to supplement subsistence activities, not to replace them” (1975:16).

Fall et al (2006) report residents in the Iliamna Lake sub-region are concerned that mining in their area will have adverse environmental impacts that will affect their subsistence activities. Those impacts could include air and water pollution, helicopter traffic driving away big game herds, barge traffic affecting freshwater seal haul-outs in Iliamna Lake, risks to the salmon populations in the Upper Kooktul River, and the influx of new residents with whom they will have to compete for subsistence resources.

The literature suggests residents do not consider their participation in commercial fishing as adverse to their traditional livelihoods as mine work would be. Commercial fishing activities are quite similar to subsistence pursuits and because of the short duration of the season do not interfere with the local lifestyle or family dynamics. Commercial fishing is also given high status and is a culturally valued form of employment in rural Alaska.

Bristol Bay residents have been traditionally concerned that locals will not be able to fill extractive industry jobs that will target engineers, skilled technicians, and union members (BBADC and BBNA 1975: 21). Arctic mining operations, like the Red Dog Mine in northwest Alaska, have had difficulties retaining local workers. Hamilton and Seyfrit (1993) attribute retention problems to the hardships of mine work and how it conflicts with traditional values and subsistence activities.

Without any empirical data to substantiate our claim, we postulate that many young, rural Alaska men are likely to pursue what means they can to be able to live in their home areas. They will probably pursue cash employment that is analogous to their life experiences, meets their level of education and training, and that is either out-of-doors or hands-on. In the Red Dog case, Hamilton and Seyfrit (1993) note that “even among young people most interested in Red Dog, few see it as a career. Instead they tend to view it as temporary way to earn money.” In this report, we suggest that traditionally, cash employment has been a means to an end for rural Alaskans to maintain their subsistence and place-based based lifestyles. People generally pursue “jobs” rather than “careers,” as a way to diversify income and thus be able to survive and subsist in remote areas. New social dynamics in rural regions, however, such as a potentially growing number of young people, may be the impetus for change, with those young people having to find a balance between their traditional culture and the new demands of a global economy.

PART 2: DETAILED OVERVIEW OF SUB-REGIONS

This overview demonstrates that many of the region’s residents are substantially dependent on local fish and wildlife as food sources and on the commercial fisheries for cash income. In

summary, an examination of Bristol Bay's sub-regions reveals how residents in the Iliamna Lake sub-region have traditionally harvested more subsistence foods than those of the other sub-regions. Approximately one-third of the population over the age of 16 (1,690 residents) in the region fished commercially in 2006. Data from the 2000 U.S. Census indicate that large communities, such as Dillingham and Togiak, account for a greater percentage of people living in poverty than in other communities. Between the years 2002 and 2006, residents of the largest communities, including Dillingham, generally used cash assistance and food stamps the most, but use was also high in some villages in the Iliamna Lake and Nushagak River sub-regions. These data are detailed in Part 2 of the full report.

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INTRODUCTION

In July of 2007, the North Star Group asked the Institute of Social and Economic Research (ISER) at the University of Alaska Anchorage to conduct a “desktop” socioeconomic and sociocultural review of the Bristol Bay Region. The objective of the research is to present existing information about the population of the Bristol Bay region to inform a preliminary understanding of the potential constraints and opportunities future mining development in the region might influence.

This overview is drawn from existing ethnographic and historical records and many of these sources are not current. This report, therefore, presents a traditional and historical description of the region’s people. An accurate portrayal of the lives lived today by Bristol Bay residents and the future impact of development in their area would be better understood by on-the-ground ethnographic fieldwork and/or survey methods in a sample of communities. We therefore recommend the client consider contracting to undertake these more rigorous research methodologies to fully understand the sociocultural and socioeconomic characteristics of the Bristol Bay region’s residents and their needs today.

ISER collected data from secondary source materials such as historical reviews, existing ethnographic studies, as well as statistical and census information. Research questions include:

1. What characterizes the population (resident and non-resident) of the Bristol Bay region?
2. How has the history of this population defined who the residents of this region are today and other populations dependent upon its resources?
3. What events in particular within this historical context have been catalysts for social change?
4. How have residents of the region adapted to change?
5. What are the most important social and economic issues for the region today?
6. What issues should be considered for mining development in the region?

To answer these questions, Part 1 below describes the region’s cultural history, demography, economy, and institutional arrangements. This investigation is contextualized within a

discussion of previous extractive development in Alaska and implications for future local expansion of the industry. As a reference source, a more detailed description of Bristol Bay's sub-regions and community characteristics follows in Part 2.

Figure 1.1 The Bristol Bay Region



Meghan Wilson

PART 1: REGIONAL OVERVIEW, CULTURAL HISTORY, ECONOMY, INSTITUTIONS, DEVELOPMENT CONTEXT

1.1 REGIONAL OVERVIEW

Covering nearly 43,000 square mi. in Southwest Alaska, the Bristol Bay region is bordered by three of Alaska's major mountain ranges: the Kilbuck Mountains to the Northwest, the Taylor Mountains to the north and the Aleutian Range to the east on the Alaska Peninsula. The eight river systems of the region include: the Wood River, Nushagak River, Kvichak River, Naknek River, Egegik River, Ugashik River, Meshik River, and Chignik River.

The Bristol Bay region is remote: there are no roads connecting it to the state's population centers and there are limited roads between communities in the region. Sled dogs were the preferred and most efficient form of travel between communities until bush planes and snow machines replaced them in the early part of the 20th century. Today, small aircraft, ATVs, snowmachines and boats are used extensively for local travel in and between communities.

Much of rural Alaskan life is influenced by extreme weather conditions and a cold climate. The Bristol Bay region has three different climatic zones: the arctic climate of the interior, the maritime climate of the coastal areas, and a transitional climatic zone between. In **inland** areas, average temperatures can range from 42 to 64 degrees F in the summer and 3 to 30 degrees F in winter. Average annual precipitation ranges from 26-32 inches including 64-89 inches of snow. In the **maritime** zone, average summer temperatures range from 42 to 63; average winter temperatures range from 4 to 44, although the wind chill factors are substantial on the coast. Average annual precipitation is 20 inches annually, including 45-93 inches of snowfall. Weather on the Alaskan coast is generally described as cool, windy, and wet year-round with foggy summers. In the **transition** zone, average summer temperatures range from 30 to 66; winter temperatures range from below zero to 30. Annual precipitation ranges from 20 to 35 inches and summers are generally foggy and cloudy. Rivers in the Bristol Bay region are ice-free from June through mid-November (Alaska State Division of Community and Regional Affairs (DCRA) Community Database). Potential impacts from the future warming of the region's climate have

not been fully analyzed. Preliminary data collected from local residents suggest that a warming climate has already had some impact on wildlife behavior (Fall 2006).

Archaeological evidence from the Ugashik River region on the upper Alaska Peninsula suggests Alaska Native indigenous people have inhabited this region for at least 8,000-9,000 years (Kotani and Workman 1980). The present population is an ethnically and culturally complex combination of Alaska Native ethnic groupings and Euro-American settlers. The region is remote and accessible only by air and water, so limited access and a small population have kept its natural environment pristine. The Bristol Bay basin supports the watershed habitat needed for producing the world's largest wild sockeye salmon fisheries. Salmon is a traditional dietary staple for the local population in conjunction with an array of locally available fish and wildlife or "subsistence" foods. The salmon fishing industry is a primary source of income for residents (Kresge, et.al, 1974; Wright, et.al 1985).

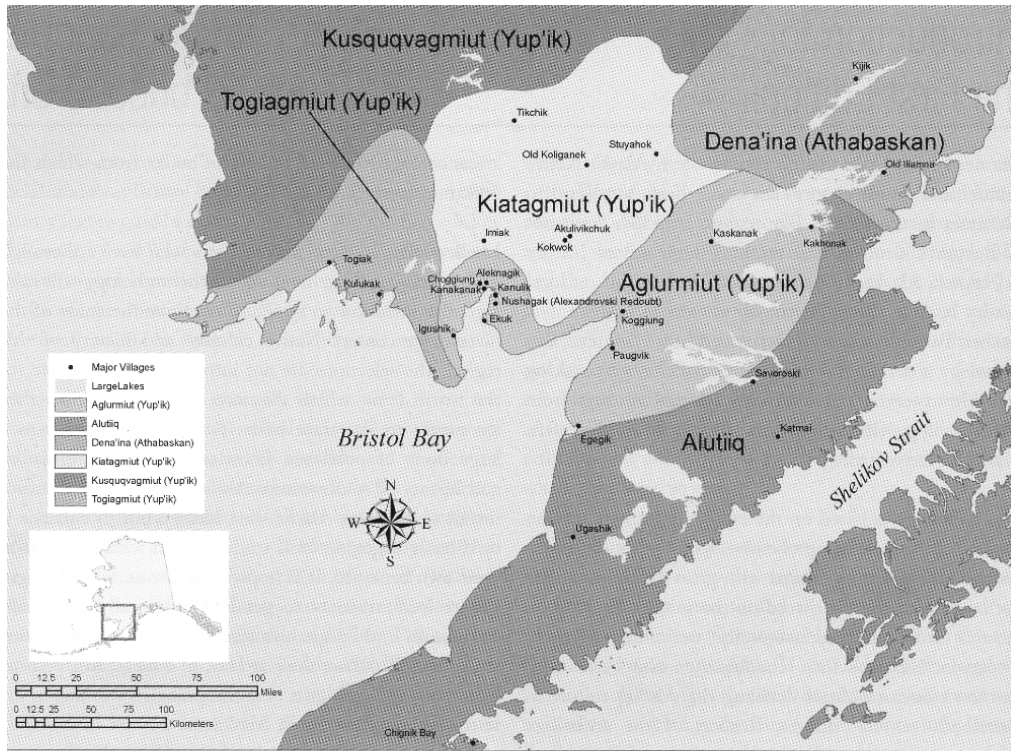
1.2 CULTURAL HISTORY

This section will describe regional patterns of culture and social organization as they have been identified in secondary literature sources. The following first presents a cultural overview of the three Alaska Native ethnic groups represented in the region and then describes the essential components and institutions of social life in rural Alaska. The depiction of local culture here is hampered by the dated nature of the available ethnographic literature. Much of the characterization of Alaska Native groups in the Bristol Bay region that follows is a historical survey that focuses on sociocultural change.

Russian explorers, fur traders, and missionaries first made contact with Bristol Bay's indigenous Alaska Native population beginning in 1818. After a period of indigenous depopulation due to exposure to European diseases such as smallpox, tuberculosis and influenza, the local population increased steadily during the 20th century. This increase also occurred because of in-migration and settlement after the U.S. purchase of Alaska in 1867 and the development of the Bristol Bay salmon fisheries beginning in 1888.

Today, the descendants of three Alaska Native indigenous groups make their home on the eight major river systems, coastline, and abundant lakes of the Bristol Bay area.

Figure 1.2 Bristol Bay Indigenous Geography at Contact (1818)



Map 3 Tribal areas, villages and linguistics around 1818, the time of contact.

Source: Branson and Troll 1998

In attempting to understand the ethnic and cultural heritage of the Bristol Bay region, we could crudely identify the Lake Clark-Lake Iliamna region with Dena'ina Athabaskan Indians, the coastal area between Togiak and the Northern Alaska Peninsula as Yupiit Eskimo and the southern Alaska Peninsula region as traditionally Aleut-Alutiiq. In reality, in- and out- migration of the region's residents and movement between communities was historically common. In addition, Alaska Native communities traditionally moved seasonally because of the yearly harvest cycle of wildlife resources, there was extensive trading between groups, and because eventually people began to marry outside of their clans upon contact with Europeans.

Athabascan Dena'ina

The Athabascan Indians living in Alaska's interior are linguistically related to other Native American populations in a wide geographic range within North America from Canada's western interior, to the U.S. northwest coast, and into the southwestern U.S. The Athabascans who settled from the Lake Clark-Iliamna Lake area to the Cook Inlet shore are known as the Dena'ina (in some of the literature as "Tanaina.") The Dena'ina are the only Athabascans to live near the ocean. Many Alaskan Athabascan groups traditionally had mixed subsistence economies focused on riverine fishing and caribou hunting. The Dena'ina were fishermen and hunters of salmon, freshwater fish, moose, caribou, beaver, porcupine, water and forest fowl. Langdon (2002) reports there are 11 Athabascan language groups in Alaska. Krauss and Golla (1981) note Dena'ina was moribund by 1981 and the Alaska Native Language Center² estimates there are 75 speakers remaining today.

Yup'it

The Yup'it (adj.,sing. Yup'ik), also known as Bering Sea Eskimos, traditionally occupied the territory from St. Lawrence Island in the Bering Sea, down the Bering Sea coast to the Togiak area of Bristol Bay. The Alutiit of the Alaska Peninsula are also related to the Bering Sea Yup'it evident by way of similarities in their languages. Traditionally, the Yup'it were fishermen and hunters of salmon, caribou, moose, bear, and waterfowl.

Yup'ik groups are organized into societies of communities that share a territory (Langdon 2002). Each territorial group's name had a descriptor which located it geographically and a suffix – miut, meaning "residents of" (Langdon 2002). At the time of contact with Europeans, there were three Yup'ik societies in the Bristol Bay region: the Tuyuryarmiut living along the Togiak River, the Aglurmiut, living from Nushagak Bay to the upper Alaska Peninsula, and the Kiatagmiut living along along the Nushagak River, the Mulchatna River, Wood River Lakes, the Kvichak River and lower Iliamna Lake (Fall et al 1986). Fall et al note that during the early years of contact, the latter two groups (the Aglurmiut and the Kiatagmiut) experienced increasing exchange (i.e. goods, marriage partners) between villages and the traditional distinction between

² <http://www.uaf.edu/anlc/>

them diminished. Many Kuskuqvamiut also migrated to region from the Kuskokwim River region to the north of Bristol Bay, especially after the influenza epidemic of 1918-19.

Central Yup'ik, the language of the Yupiit, is still widely spoken along the Bering Sea coast and the Alaska Native Language Center estimates there are 10,000 speakers of the language in Alaska today. However, in the Bristol Bay region, Yup'ik speakers predominantly live in the Togiak Bay sub-region in the communities of Manokotak, Togiak, and Twin Hills.

Alutiit (adj., sing., Alutiiq)

The ancestors of today's Alutiiq population (also somewhat erroneously referred to as Aleut in some of the literature and in census data) were originally coastal people. The residents of the Pacific coast of the Alaska Peninsula who called themselves "Sugpiat," were a seafaring people traditionally dependent upon sea otter, sea lion, porpoise, and whale. Their modern use of the name "Alutiiq" highlights their mixed ancestry traced to the Unangan (Aleut) of the Aleutian Islands and Alaska Peninsula, Yupiit (Eskimo), Athabascan (Indian), Russian, Scandinavian, Italian, Greek, and Japanese settlers and visitors to the region (Partnow 2001).

The people of the Aleutian Islands and Alaska Peninsula were the first Alaska Native groups European explorers contacted beginning with Vitus Bering's 1741 voyage into the region. From that point forward, the Sugpiat experienced waves of outsider influence on their culture and social organization: from the Russian traders and Russian Orthodox missionaries to Scandinavian fishermen developing the region's fisheries, to military personnel stationed in and sailors dropping by Alaska Peninsula villages during World War II. Settlement by these groups and intermarriage with locals accounts for the mixed ancestry of the Alutiiq. The Supiaq/Alutiiq language is structurally close to Yup'ik. It was also traditionally spoken by inhabitants of Kodiak Island and people who lived on the coasts of Prince William Sound. The Alaska Native Language Center estimates there are 400 speakers of Alutiiq remaining. Most of these speakers likely reside on Kodiak Island. Although there have been attempts to revitalize the Alutiiq language—especially on Kodiak Island—it is moribund in the Bristol Bay region today.

Social Organization and Structure

The three Alaska Native ethnic groups in the region, the Dena'ina, Yupiit, and Alutiiq, can trace their ancestry to hunting and gathering societies. Because of this economic strategy (absent of food cultivation), we can make some generalizations about historic social organization and structure of their societies. In pre-contact times, these societies were organized in **exogamous matrilineal clans**—that is, they had strict rules for eligibility of marriage partners who had to be outside of their immediate kin group, they traced their descent through the mother's family line, and were organized in kin groups called clans. Clan members are descendent from an identified historical ancestor which anthropologists term the “apical ancestor.”

The southern Yupiit living the Bristol Bay region, the subarctic Dena'ina, and the Alutiit differed from their more northerly Yup'ik and Iñupiaq neighbors; they had relatively abundant and a more diversified subsistence economy that was dependent upon salmon fishing, marine mammal, and big game hunting rather than the focused large marine mammal hunting of the north. The feature of salmon in the diets of the southern populations specifically distinguishes them from their northern neighbors. The more southerly (or subarctic) groups living in the Bristol Bay area frequently practiced individualized hunting in smaller vessels such as kayaks rather than the whaling in crews and manning the large umiak skin boats used in the north.

Because of these traits, the ancestors of today's Alaska Native Bristol Bay residents lived in economically and politically stratified societies with social classes (Langdon 2002) as opposed to the more egalitarian Iñupiaq societies further to the north that utilized more cooperative economic strategies. Arctic people and their cultural traits are often mis-categorized and stereotyped as all descendent from egalitarian societies. Some of this mis-categorization stems from food sharing as a primary cultural trait common to many arctic and sub-arctic groups and an enduring practice today symbolizing social relations. As mentioned above, the extreme climate and weather conditions arctic and subarctic people historically experienced—long winters with periods of starvation in many areas—undoubtedly contributed to the practice of food sharing in both egalitarian and stratified societies. The ability to share in subarctic communities where resources were more abundant was an element of many groups' definition of prestige. Wealthier individuals in these more subarctic, matrilineal societies (in which high

status was generally a function of hunting ability), practiced polygyny (marrying more than one wife) very occasionally polyandry (marrying more than one husband), the levirate (marrying a husband's brother after being widowed), and the sororate (a wealthy man marrying a group of sisters.) In a matrilineal society, the primary kin group centers upon one's mother and her brothers through which descent is traced and by whom a child is socialized. Ellanna and Balluta (1992) report elements of the matrilineal clan structure were extant among Nondalton Dena'ina in ceremonies, marriages, relationships, and exchange in the 1980s.

As in other regions of Alaska and in other areas of the world, contact with Europeans had a profound impact on the social structure of hunter-gatherer groups. Over time, exchange relationships, intermarriage, and religious conversion influenced more of a European patrilineal family structure to emerge (tracing descent through the father's line) and bilocal (post-marriage residence with either the father's or mother's kin and eventually to neolocal residence (newlyweds establishing their own residence independent of their parents.) The Russian Orthodox Church forbade the first cousin marriage and moiety marriage rules characteristic of matrilineal clans. Later, polygyny was outlawed by American territorial agents who were informed by missionary reports of local practices.

In his 1995 book outlining the components of what he calls the "Yupiaq Worldview", A. Oscar Kawagley identifies family, the natural environment, and spirituality as the foundation for the Yup'ik life. This model resonates through much of Alaska Native writings about the basis of Alaskan indigenous culture. Family ties are crucial for the functioning of the individual in village life. In addition, a respect for the environment and wildlife resources is a common theme which relates to spiritual beliefs. Langdon (1986) notes how in contemporary times, subsistence of fish and wildlife forms the basis for relationships established through sharing, village celebrations, and religious ceremonies.

Spirituality

Traditional religious beliefs among indigenous populations in Alaska focused on a spiritual closeness with and a respect for animals. Traditionally, all three ethnic groups described in this study had a rich ceremonial life which served the function Lantis (1950) describes as "delighting

the spirits of the animals with feasts, dances, and masks.” These ceremonies demonstrated an understanding of a basic equality between humans and animals defined through a ritual life infused with gratitude for the sacrifice animals made for human life. Fienup-Riordan captures this quality of Alaska Native spirituality when she describes the relationship between humans and animals within traditional Yup’ik worldview and the way belief guided both economic exchange and social relations:

Animals, especially seals, give themselves to a hunter and his wife in exchange for proper thought and care. They also allow themselves to be hunted on condition that their bodies be shared." (1994:104).

Again, contact with Europeans had an influence on not only kinship relationships but also the indigenous relationship to their natural environment and their spiritual beliefs and practices. For example, indigenous hunters were impressed to hunt and trap certain fur-bearing animals such as sea otters to near extinction to satisfy Asian markets for furs. Russian Orthodoxy also pervaded and changed the texture of life in Alaskan coastal communities until the purchase of Alaska by the U.S. in 1867 and when Protestant missions were established. Sheldon Jackson, a Presbyterian missionary and a state political leader, divided the territory of Alaska into regions that were each assigned to a different Protestant denomination for the purposes of mission work.

Despite the fact that many Alaska Native residents of southwest Alaska are still members of the Russian Orthodox Church, there is also a strong Protestant missionary presence in some communities. The Russians and American missionaries differed in their methods of acculturation. Although the Russians were brutal in their treatment of Alaska Natives, their missionaries endeavored to learn the local languages and even created and taught transliterations of the bible using the Cyrillic alphabet. They were then able to translate the Christian gospel into the resident languages. Because of the Russian effort, some Alaska Natives look upon Russian missionaries’ acculturation efforts more kindly than those of the first American missionaries and teachers to enter the territory who brought their long, dark history of European and Native American relations with them. There are many reports of historical conflict between the American missionary agenda and local communities in Alaska. Sheldon Jackson’s tenure in Alaska between 1877 and 1905 ignited a period of intense acculturation through American

schools which were generally managed by missionaries until the early to mid-20th century in the Bristol Bay region. In other contexts, ISER researchers have encountered Protestant missionaries currently working as schoolteachers in Alaska bush communities today although it is difficult to estimate their influence without additional systematic and empirical inquiry. Through a series of school reforms Sheldon Jackson instated, Alaska Native children were forbidden to speak their native languages and received corporal punishment in many instances for doing so—actions that Alaska Native elders remember bitterly today.

Social Change

Sheldon Jackson and other early Alaskan missionaries were driven by the goal to assimilate Alaska's indigenous people to American society and mores. In addition to his focus on rural schools, Jackson also attempted various other initiatives to improve the lives of Alaska Natives such as introducing domesticated reindeer from Siberia to the Lake Clark-Iliamna Lake region to engage locals in pastoralism. With assistance from the U.S. Bureau of Indian Affairs, there was an honest local effort to create a subsistence herding economy in the region between 1906 and 1938 (Unrau 1998) but the domesticated reindeer began over-grazing and competing with wild caribou herds. The industry cycle also competed with commercial fishing opportunities in Bristol Bay in which profits were much higher and so the program eventually failed.

Pete (in Barker 1993) states Yup'ik Alaska Native elders outlined the following critical drivers of socioeconomic and sociocultural change in their communities since contact with Europeans and Americans:

1. Disease epidemics
2. Reorganization of residential patterns and relations between men and women
3. Prohibition of many important sociopolitical and religious ceremonies
4. Management schemes imposed on natural resources * *She adds that the Yup'ik elders see this as the most important problem in their relationships with outsiders.*
5. Restrictions by missionaries and educators on the use of Native language

To this list, I would add the introduction of alcohol and the ensuing long history with alcoholism plaguing many if not all rural Alaska communities has had the most detrimental impact on the Alaska's rural economy and culture. Fur traders first introduced Alaska Natives to alcohol in the 18th and 19th centuries. Undoubtedly, these rugged adventurers were of the hard-drinking ilk, much like the sailors and fishermen that passed through the region in the years following. Through these untrustworthy teachers, Alaskans learned binge drinking habits that we will suggest permeated local culture in a profound way—shattering families and communities over time. Many communities in the Bristol Bay region are “dry” villages today, where the sale of or even the presence of alcohol is forbidden.

The reader should be aware that although this region is somewhat isolated because of access, the Alaska Native residents there have experienced nearly 200 years of acculturation to Euro-American lifeways. Most rural Alaskans are educated within the U.S. public school system, have access to the latest media and technology, and have strong familial and economic ties to Alaska's urban centers. In addition, the larger communities that have more wage employment opportunities have substantial non-Alaska Native populations residing in them although it is difficult to discern here how many non-Alaska Natives in Bristol Bay region are long-term residents. Existing ethnographies from the area do not adequately address the impact of intermarriage between outsiders and long-term residents or between Alaska Native groups. Although the census data presented in Table 1.1 in the demography section below demonstrate an overall increase in the rural Alaska Native population between the 1990 and 2000 censuses, there is no obvious meaning in these numbers that do not reveal cultural patterns emergent from inter-ethnic unions and cultural exchange.

To generalize, rural Alaskans (Alaska Native and non-Alaska Native) today are American in many ways, yet many maintain a strong connection to their heritage and culture through their kin relationships, their connection to their natural environment, their belief systems, and to their allegiance to a “sense of place.” Most Bristol Bay communities today are an ethnic and cultural mixture of the three dominant Alaska Native groups and Euro-Americans. This plurality undoubtedly makes the Bristol Bay area the most ethnically diverse region of rural Alaska and therefore difficult to categorize culturally. While there is a slight difference between the sought

after subsistence foods of people living on the coast and those further inland (i.e. a focus on marine mammal hunting versus big game hunting), today’s residents of the area overwhelming share mixed subsistence and cash economies and English as their primary spoken language.

1.3 DEMOGRAPHY

The socioeconomic and sociocultural overview presented here traces the heritage of residents today but also generally links contemporary demographic and cultural patterns to those of rural Alaska as a whole.

Table 1.1 Population Change in Remote Rural Alaska: 1990-2000

POPULATION CHANGE IN REMOTE RURAL ALASKA: 1990-2000						
	CHANGE			PERCENT CHANGE		
	Total	Native*	Non-Native	Total	Native	Non-Native
TOTAL	7,897	8,054	- 157	15.1%	19.5%	- 1.4%
Regional Centers	2,694	2,358	336	16.4%	23.1%	5.4%
Smaller Places	5,203	5,696	- 493	14.5%	18.3%	-10.4%
Source: U.S. Census of Population						
* Alaska Native alone or in combination with another race in 2000. Alaska Native in 1990.						

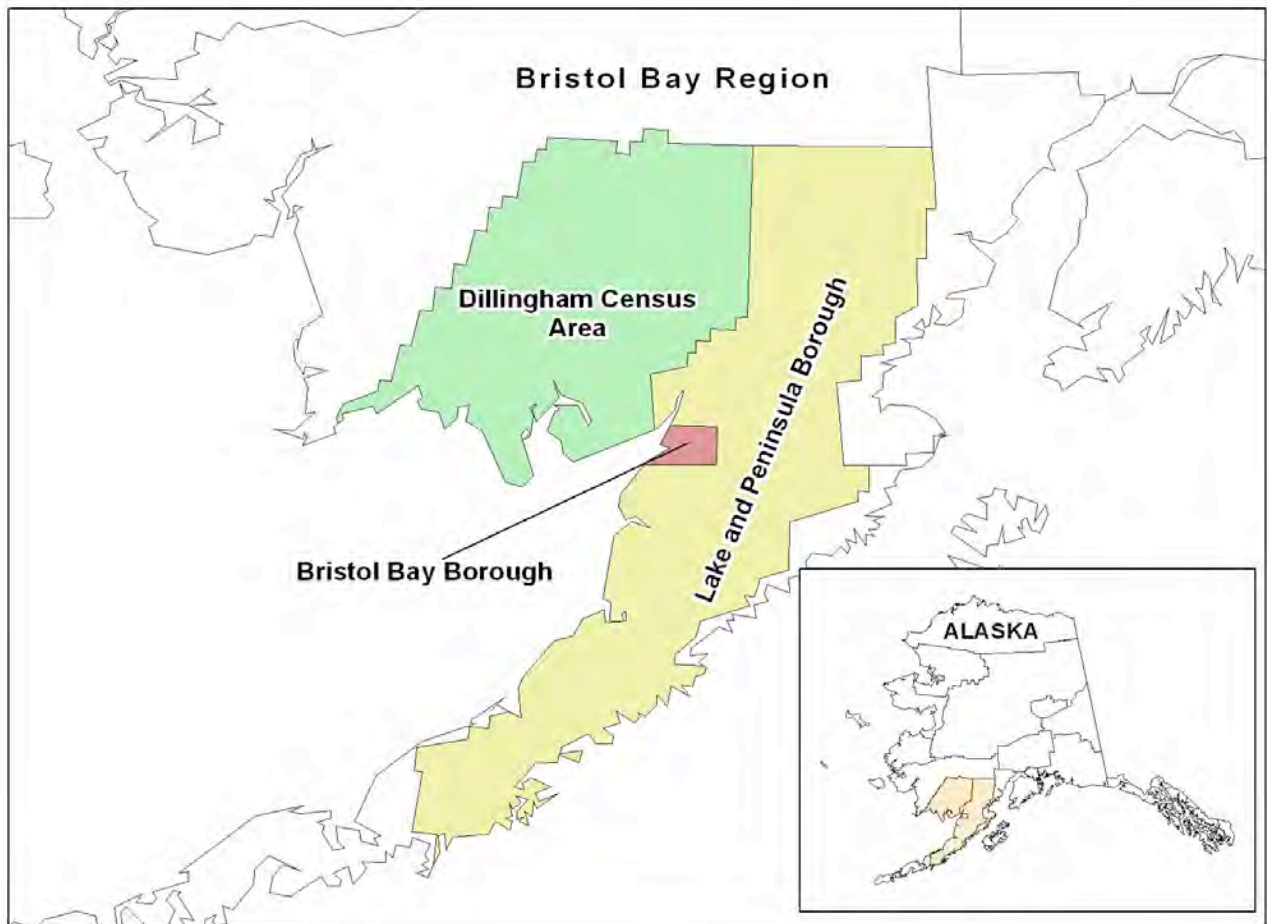
Source: Goldsmith 2007

Goldsmith (2007) reports a steady increase in Alaska’s rural population between the last two census periods and a trend toward a higher percentage of children in the overall rural Alaska Native population compared to a lower percentage of middle-aged adults. Note: the Bristol Bay region was not included in this study of remote rural Alaska. The Bristol Bay region’s population increased after Alaska statehood in 1959 when commercial fisheries were industrially developed and community infrastructure was enhanced through public housing projects, water and sewer systems, and airport runways. Although census data do demonstrate an increase in the Bristol Bay population between 1990 and 2000, the Alaska state demographer currently estimates a drop in population since 2006 in all three census areas of the region (depicted below in Figure 1.7.)

Statehood also organized Alaska into political units as incorporated boroughs. In the Bristol Bay region there are two incorporated boroughs: the Bristol Bay Borough and the Lake and Peninsula Borough as well as an unorganized census area in the Dillingham region (See Figure 3.)

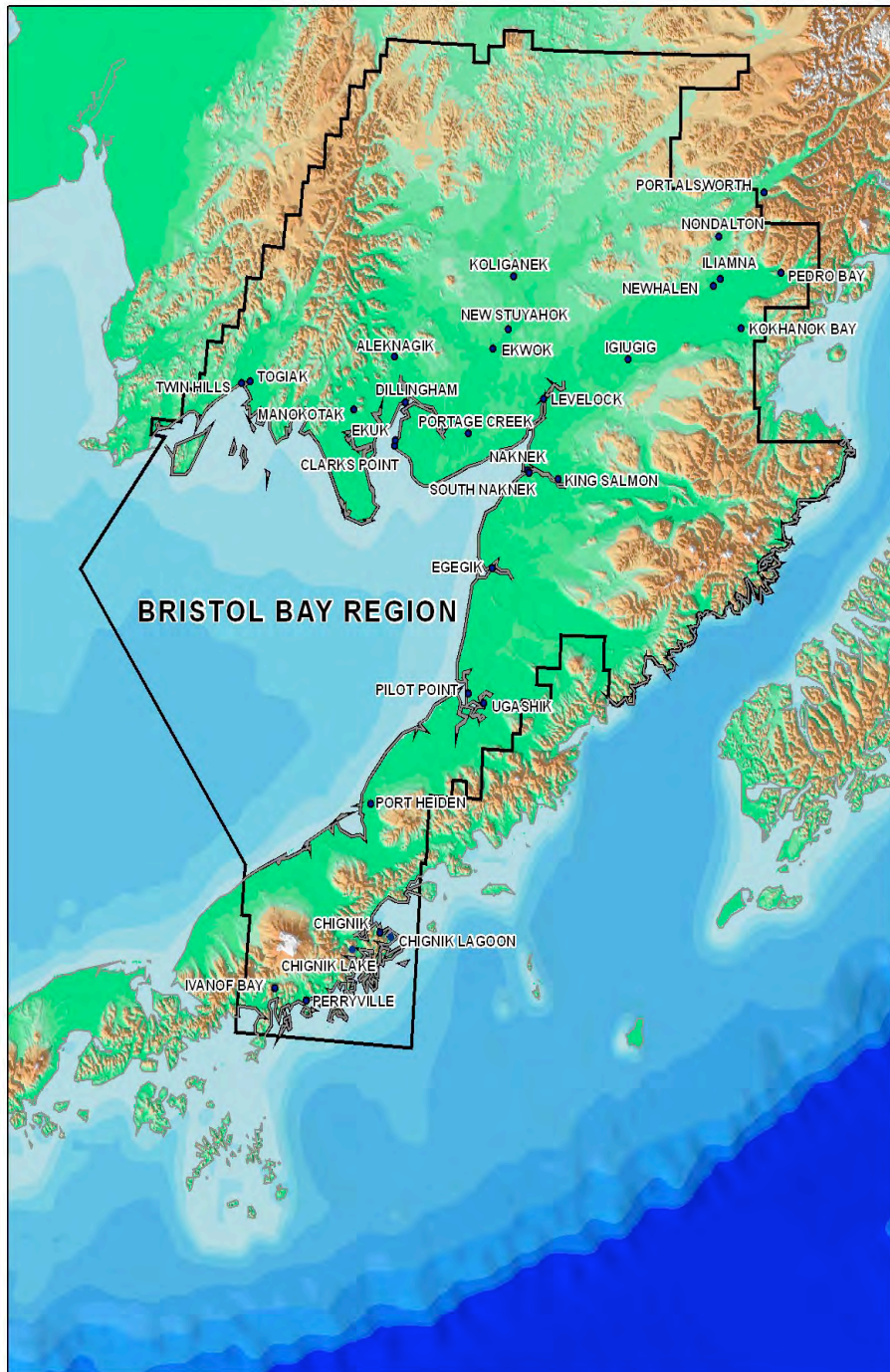
Table 1.2 details borough and census area population in 31 communities and shows an estimated current population of 7,413 residents in the Bristol Bay region in 2004. The community of Dillingham serves as a large sized regional hub at 2,466 residents while the majority of the other communities in the region are smaller villages ranging in size from 40-800 people.

Figure 1.3 Bristol Bay Region Incorporated Boroughs and Unorganized Census Area



Meghan Wilson

Figure 1.4 Bristol Bay Region Communities



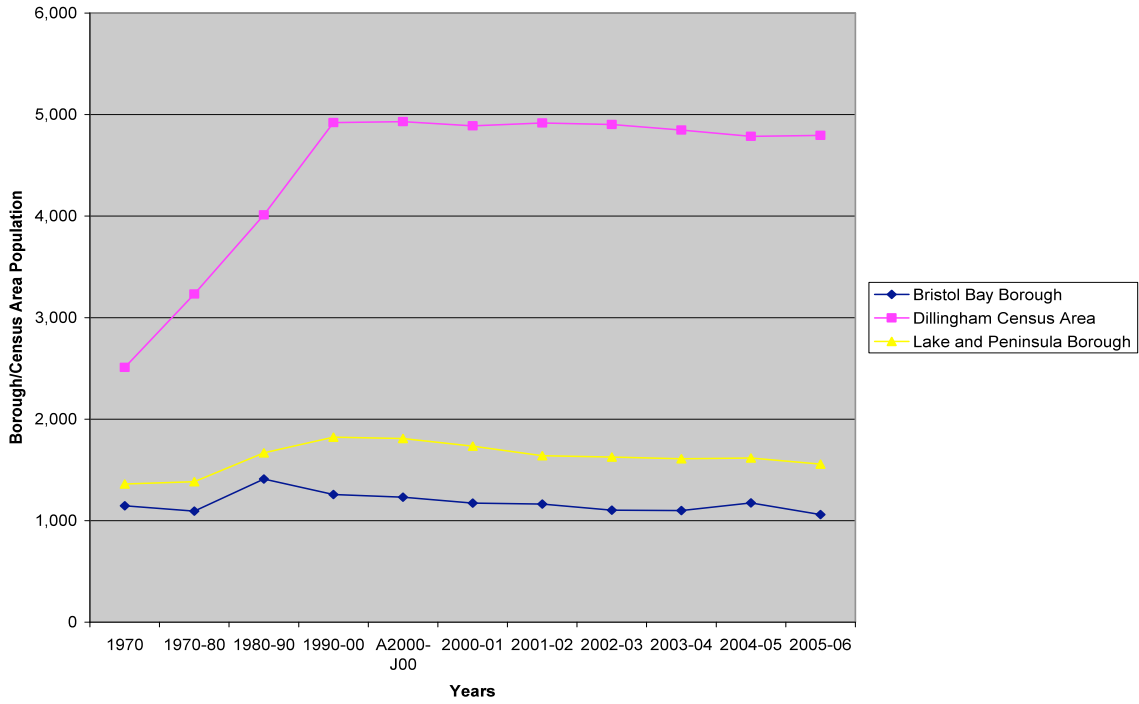
Meghan Wilson

Table 1.2 Bristol Bay Community Demography

Census/Area	Community	2004 Pop Est	2000 Census Pop	Percent Alaska Native	Median Age	Number of HH	Median HH Income 2000
Bristol Bay Borough		1,060	1,103	44%		490	\$52,167
	King Salmon		442	30%	37.8	196	\$54,375
	Naknek		678	47%	34.4	247	\$53,393
	South Naknek		137	84%	35.8	46	\$22,344
Dillingham Census Area		4,796	4,924	70%		2,341	\$43,079
	Aleknagik		221	85%	28.3	70	\$22,750
	Clark's Point		75	92%	30.5	24	\$28,125
	Dillingham		2,466	61%	32.8	884	\$51,458
	Ekuik		2	0%	75	1	\$51,250
	Ekwok		130	94%	31.5	42	\$16,250
	Manokotak		399	95%	21.9	93	\$26,875
	New Koliganek		182	87%	26	53	\$44,583
	New Stuyahok		471	96%	24.4	105	\$26,042
	Portage Creek		36	86%	14	7	\$41,250
	Togiak		809	93%	23.4	202	\$23,977
	Twin Hills		69	94%	38.5	24	\$29,375
Lake & Peninsula		1,557	1,584	74%		588	\$36,442
	Chignik		79	61%	36.3	29	\$34,250
	Chignik Lagoon		103	83%	26.3	33	\$92,297
	Chignik Lake		145	88%	20.8	40	\$41,458
	Egegik		116	77%	35.3	44	\$46,000
	Igiugig		53	83%	36.3	16	\$21,750
	Iliamna		102	58%	31.5	35	\$60,625
	Ivanof Bay		22	96%	40	9	\$91,977
	Kokhanok		174	91%	29.5	52	\$19,583
	Levelock		122	95%	27.5	45	\$18,750
	Newhalen		160	91%	20.5	39	\$36,250
	Nondalton		221	90%	28.5	68	\$19,583
	Pedro Bay		50	64%	35	17	\$36,750
	Perryville		107	98%	26.5	33	\$51,875
	Pilot Point		100	86%	29	29	\$41,250
	Port Alsworth		104	22%	25.5	34	\$58,750
	Port Heiden		119	78%	33.3	41	\$31,875
	Ugashik		11	82%	50.5	7	\$28,750

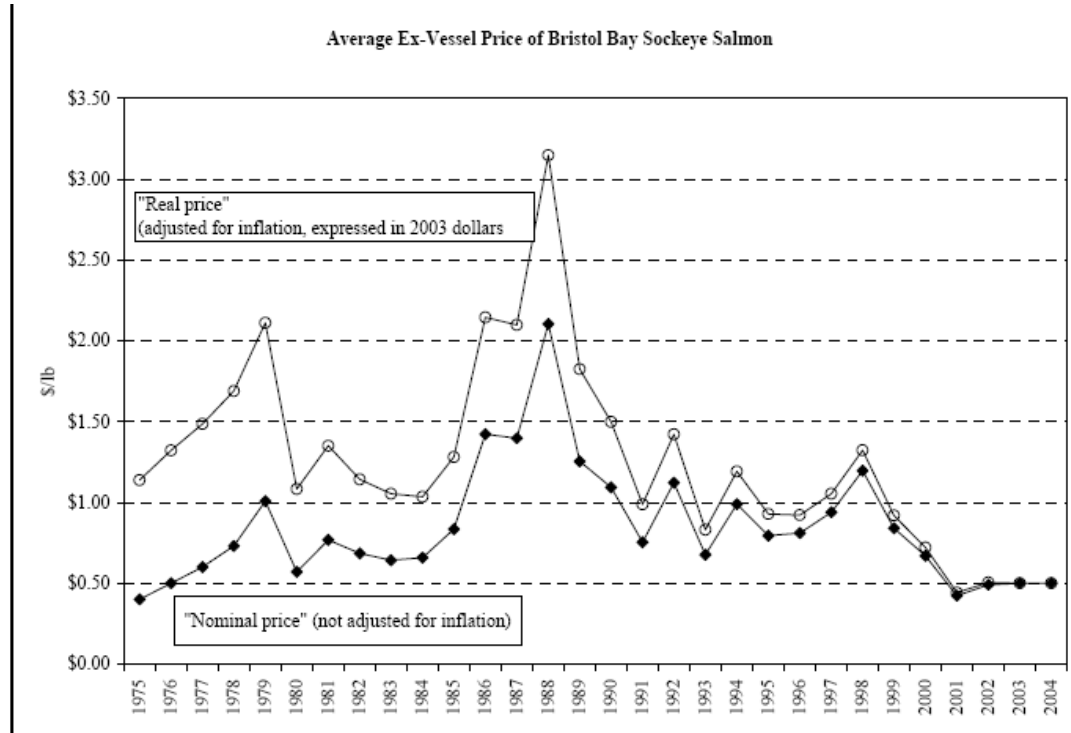
Source: DCRA

Figure 1.5 Bristol Bay Region Borough/Census Area Historical Populations



Source: US Census and DCRA

Figure 1.6 Average Ex-Vessel Prices of Bristol Bay Sockeye Salmon (1975-2004)

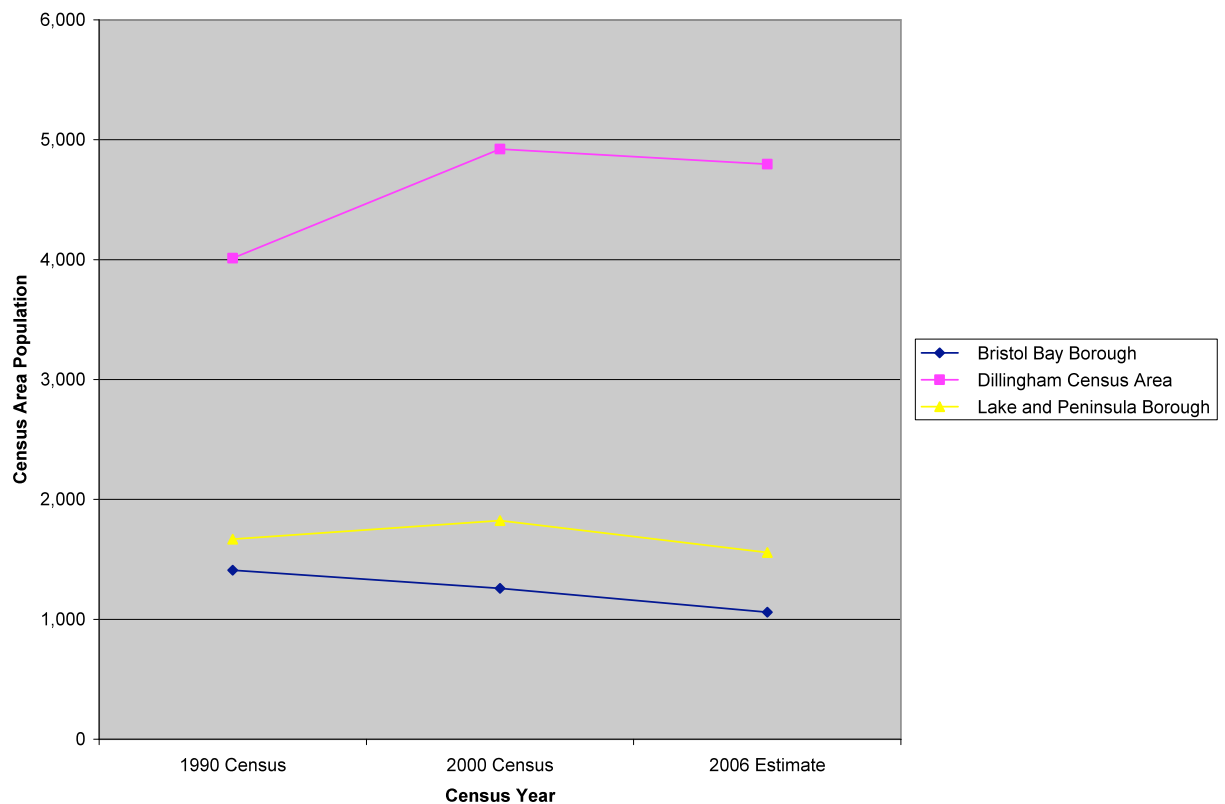


Source: Knapp 2004

Population change in rural Alaska today has many causes, both sociocultural and economic. Figure 1.5 traces historical populations of Bristol Bay borough and census areas while Figure 1.6 tracks historical changes in ex-vessel prices (prices paid at the dock) for Bristol Bay sockeye salmon. Although we do not formally analyze any correlation between these data here, they are suggestive; especially for the Dillingham area where the economy is most directly affected by the state of the salmon fisheries. Note a general increase in population through the late 1980s when prices were high and then a steady decline in both population and salmon prices thereafter.

At a finer resolution for the last two census periods and today’s population estimates, the Dillingham census area shows an increase between the 1990 and 2000 censuses. Current census estimates demonstrate a decline in all three areas.

Figure 1.7 Bristol Bay Population by Borough/Census Area



Source: US Census and DCRA

These demographic changes will be discussed within the sociocultural and socioeconomic context of the region’s people below.

Population change and attendant social changes in rural Alaska are currently influenced by a combination of economic and cultural factors, including the low price of salmon, diminishing fishing opportunities, and out-migration of youth. In 1997-1998, the Bristol Bay salmon fisheries suffered from poor runs—at the time deemed an ecological and economic “disaster.” Donkersloot (2007) studied youth out-migration pre- and post-disaster and found a high percentage of Alaska Native women and non-Alaska Native men and women leaving the Bristol Bay Borough in the pre-disaster years after graduating from high school. Alaska Native men were also leaving their home areas but in fewer numbers than the other groups. Interestingly, Donkersloot discovered a lower percentage of out-migration in the post-disaster years between 1998 and 2003 for all groups and particularly for the Alaska Native women’s group. She also found an increase in the number of non-marital pregnancies in the post-disaster years. Her study tries to link these phenomena to the fishing disaster but perhaps the crisis is the wrong independent variable in this case. The initial migration of young Alaska women and non-Alaska Natives was probably driven by external forces while the change in the post-disaster years could have been an outcome of the pre-disaster out-migration.

An earlier study (Hamilton and Seyfrit 1993) documenting the beginning of the trend of rural youth out-migration in Bristol Bay and the Northwest Arctic juxtaposed to Donkersloot’s data yields some clues. Like Donkersloot, Hamilton and Seyfrit found that more young women than men in the two regions wanted to leave their home areas. They attributed this gender difference to the changing life goals for women—mainly due to outside opportunities available in seeking education, employment, or training. Like women elsewhere in the U.S., many modern rural Alaskan women reject the traditional gender role model in which women are burdened with housework and in helping to care for others’ children. Hamilton and Seyfrit found (as Donkersloot did later), that young Alaska Native men were more likely to stay in their home areas because they had more freedom than women and more local interests such as hunting, fishing, snowmachining, and four-wheeler riding. In Hamilton and Seyfrit’s study, women complained how young men had much more leisure time in the villages while they were expected to spend their time helping out at home.

Figure 1.8 Youth on Out-Migration in the Bristol Bay Region and Northwest Arctic Borough

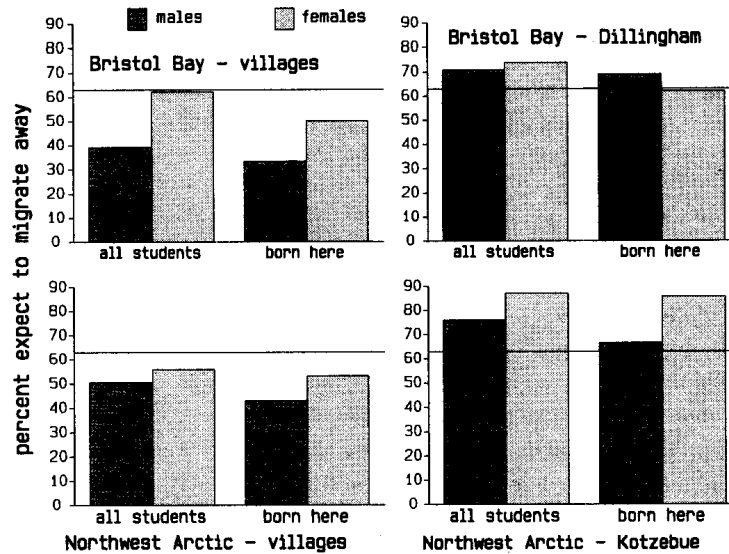


FIG. 7. Percentage of students who expect to live most of their lives out of the region by village/town and region (all students and students born in the region are shown separately).

Source: Hamilton and Seyfrit 1993

Donkersloot’s subsequent 2007 findings about the increase in pregnancies of young women follow the problems uncovered by Hamilton and Seyfrit in the earlier period of “female flight” in the late 1980s and early 1990s. Even at that time Hamilton and Seyfrit’s respondents in the Northwest Arctic Borough mentioned the problem of men outnumbering women in the villages. One local informant described it this way:

Girls who stay in the village get pregnant. Most of the young ladies have left to find work. They got jobs at Red Dog, the Slope, Anchorage. Young men leave, but they come back. Most are unemployed - 24 hours of daylight and nothing to do. They focus on high school girls who are almost their victims. (Hamilton and Seyfrit 1993:262).

There are other regions of rural Alaska where this phenomenon may be on the increase and where the family dynamic consists of a young mother and child living with grandparents and without economic or marital ties to the child’s father. At this time, it is difficult to project the social implications of this pattern or to track it but social problems such as alcohol related deaths and high rates of domestic violence in Southwest Alaska have been highlighted recently in the news. In 2007, Alaska’s new Governor, Sarah Palin, recently called a town meeting in New

Stuyahok to discuss similar community problems there. The chain of events described here is complex but one that could produce some hypotheses for further study. Causes cannot be solely attributed to local economic downturn.

1.4 ECONOMY

This section will provide an overview of economic activities in the Bristol Bay area through a description of both subsistence and cash sources of wealth, transfer payments, and the relationship between these components of the region's economy. Rogers (1972) noted that during the 20th century, subsistence, commercial fishing, and welfare were the mainstays of the local economy. In addition to commercial fishing jobs, locals also find employment in Alaska Native corporations and state, federal, and tribal government organizations.

Subsistence

The colloquial term “subsistence” as it is used in Alaska differs slightly in definition from the conventional connotation of survival strategies performed in the absence of a cash economy. The Alaska National Interest Lands Conservation Act of 1980, Sec 803, defines **subsistence** in the state of Alaska as “the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption.” Lonner (1986) describes subsistence in Alaska as a “not-for profit economic system.” Goldsmith (2007) estimates 90% of all rural Alaskan households (both Alaska Native and non-Alaska Native) participate in subsistence activities.

Prior to the development of the commercial fishing industry in the early 20th century, subsistence fishing, hunting, and gathering activities were the traditional the basis of society for Alaska Natives in Bristol Bay, defining livelihood, exchange and social networks as well as social organization. Subsistence activities remain an essential element of life for many residents today alongside participation in the commercial fishery (Wright, Morris, Schroeder, 1985).

Wright and Morris (1985) report 75 different subsistence resources traditionally used by residents of the Bristol Bay region. Subsistence foods are at once nutritionally and culturally important to rural Alaskans; their relationship with their renewable natural resources an

important marker of identity (Langdon 1986). The State of Alaska Division of Regional and Community Affairs community profile database³ specifically mentions subsistence as critical to the way of life in the following Bristol Bay region communities:

Newhalen
Kokhanak
New Stuyahok
Koliganek
Ekwok
Dillingham
Togiak
Levelock
Egegik
Pilot Point
Port Heiden
Chignik Lake

A more detailed discussion of community subsistence harvests follows below in Part 2 of the report: the overview of sub-regions section. As members of hunting and gathering societies, Alaska Natives traditionally focused their economic strategies in fishing, hunting, trapping, berry picking, and plant gathering. The primary subsistence food in this region and in most of rural Alaska is salmon, followed closely by big game hunting of caribou and moose in the more inland areas, and marine mammal hunting in the coastal areas.

The following is a sampling of the types of fish and wildlife targeted in subsistence practices in the Bristol Bay region:

Fish and Shellfish: salmon (throughout the region), herring, halibut, cod, crab, clams, mussels (in the coastal areas), freshwater fish (see Figure 1.11 below for estimated harvests of non-salmon freshwater fish in the Lake Iliamna area).

Hunting: moose, caribou, black and brown bear, dall sheep, seal, water and forest fowl such as : ducks, geese, spruce hen; egg collecting.

Trapping: beaver, otter, and muskrat, hares, porcupine, fox, weasel, mink, wolverine

Berry picking: blueberries, cranberries, salmonberries, crowberries.

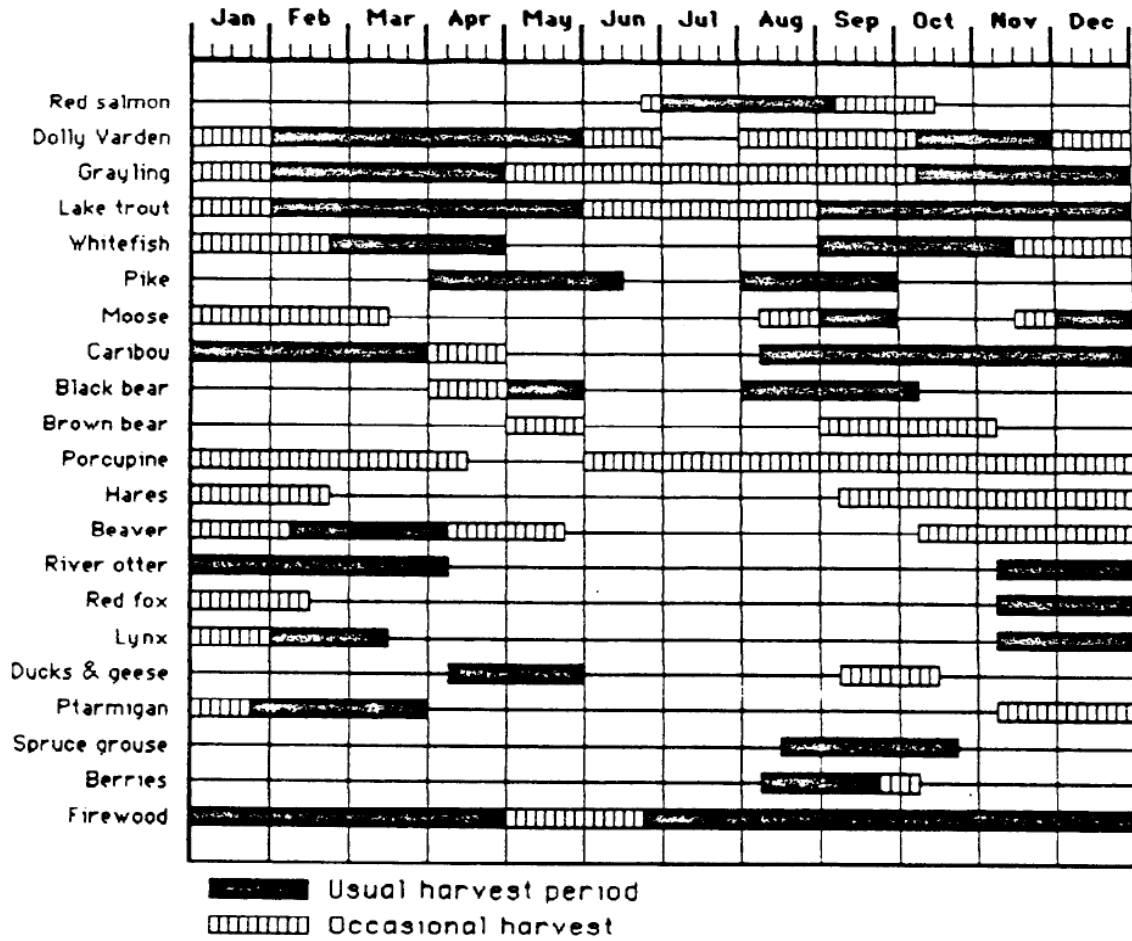
³ http://www.dced.state.ak.us/dca/commdb/CF_COMDB.htm

Plant Life: wild celery, wild spinach, fiddlehead ferns.

Salmon is the primary subsistence resource in Naknek-Kvichak and Nushagak drainages. For the Dena'ina, salmon was traditionally a staple food but big game: caribou, black and brown bear were most highly prized (Ellana and Balluta 1992). Caribou and moose meat is used fresh, is frozen, or dried. When moose or caribou wasn't traditionally available, bear and bear fat were used. Ellana & Balluta note that the Dena'ina traded in goods from the coast and also fished and continue to fish for non-salmon freshwater fish as presented in Figure 1.11. Subsistence salmon fishing was also important for dog food used to feed sled dog teams, the major form of transportation for trade, mail delivery, etc. Snowmachines replaced dog teams in the 1960s and locals didn't have to "put up" as much fish they did in the past.

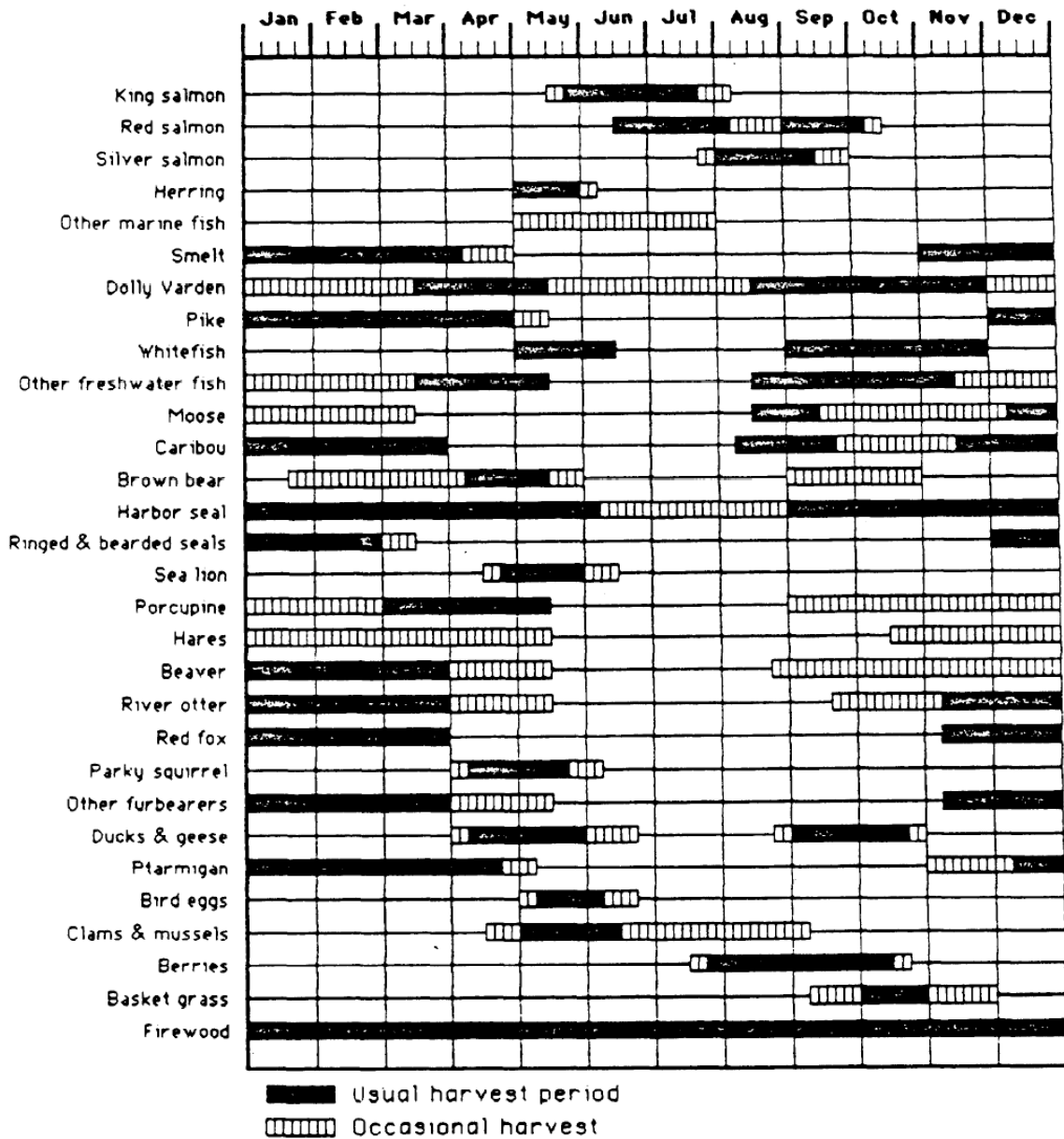
Subsistence activities are generally organized around a seasonal calendar and historically, the indigenous Alaskan population would follow the resources, for example, moving to summer fish camps to fish for salmon. Most groups had permanent winter villages from which they moved to trapping and hunting camps in the spring. Inland people concentrated on trapping fur-bearing animals for clothing and trade while those in coastal areas focused on seal, walrus, and beluga whale hunting. Spring and early summer was the season for gathering shoots and leaves. In the summer, most groups moved to seasonal fish camps near their winter villages to fish for salmon. Salmon was dried on racks and along with salmon roe was consumed with seal oil. In the fall, men primarily hunted big game and birds, fished freshwater fish, and trapped beaver while women and children picked berries and roots. Winter was a time for ice fishing. Figure 1.9 demonstrates the more traditional subsistence cycle for the Iliamna Lake inland sub-region first and then Figure 1.10 shows the traditional subsistence cycle for the coastal Togiak Bay sub-region.

Figure 1.9 Seasonal Subsistence Round in the Iliamna Lake Sub-Region



Source: Wright, Morris and Schroeder 1985

Figure 1.10 Seasonal Subsistence Round in the Togiak Sub-Region



Source: Wright, Morris and Schroeder 1985

Figure 1.11 Historical Non-Freshwater Fish Harvests in the Iliamna Lake Sub-region

Table 74. Estimated Harvests of Nonsalmon Freshwater Fish by Decade in Pounds Usable Weight, Study Communities

	1973/74		Mid 1980s		Mid 1990s ²		2002/2003	
	Total lbs	Per Capita	Total lbs	Per Capita	Total lbs	Per Capita	Total lbs	Per Capita
Igiugig	5,464	141.3	5,440	78.1	4,201	89.8	1,329	30.6
Iliamna	1,279	20.5	4,544	32.4	6,750	69.0	1,663	20.4
Kokhanok	4,414	54.4	13,982	97.4	17,785	102.6	4,288	29.4
Levelock	3,747	47.6	5,965	54.8	6,237	56.4	1,937	26.9
Newhalen	5,198	71.7	3,394	27.1	5,865	37.2	6,786	47.9
Pedro Bay	1,828	45.7	4,246	68.8	878	14.0	415	6.3
Subtotal	21,931	58.8	37,571	57.9	41,716	64.3	16,418	30.0
Nondalton	5,132	34.0	7,174	36.1	7,174	36.1	1,716	11.8
Port Alsworth ¹			880	11.6	880	11.6	20	0.2
Regional Totals	27,063	51.6	45,625	49.4	49,770	53.9	18,154	23.3

¹ Port Alsworth was not surveyed in 1974

² There are no harvest estimates for Nondalton or Port Alsworth for the 1990s; values for the 1980s are used for the

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Source: Krieg et al 2005

Subsistence foods are generally considered by many to be nutritionally superior “superfoods.” Wild salmon, game meat, and berries harvested by Alaska Natives are world class fare compared to processed, canned, high priced items they find at their local mercantiles. Lonner (1986) compares the generally high carbohydrate foods of local grocery stores with “vital proteins and fats” in subsistence foods. In addition, the hunting and gathering of subsistence foods are favored activities among many rural Alaskans if not spiritually and culturally necessary. In their 1992 ethnography of Nondalton, Ellanna and Balluta note:

Between 1985 and 1990, there was overwhelming evidence that locally produced game and fish provided the vast bulk of protein consumed in the community and was without question, the most highly desired and satisfying food. People commonly commented that Gasht’ana⁴ food left them feeling hungry. Harvesting local game, fish, and plant foods was considered the most pleasurable way to spend one’s time and additionally, was the source of significant prestige for men, women, and younger people.

Although food brought from the outside was not as valued as local or “country” foods, cultural diffusion and contact with outsiders did expose Alaska’s indigenous populations to the advantages of using guns, outboards, and snowmachines in subsistence activities. New technologies helped circumvent boom and bust fluctuations of ecological cycles, poor weather conditions, and periods of starvation.

As in most areas of rural Alaska, subsistence offsets the high cost of living residents of the Bristol Bay region experience. Goldsmith (2007) attributes these high costs to “high transportation costs, severe climate, small local markets, absence of economies of scale and other structural problems.” Cash is essential to modern subsistence practices in the way Lonner (1986) describes it as an “input” to the subsistence economy. He notes:

Cash derives from wage employment, transfer payments, and corporate proceeds. To the degree that wage employment is intended to underwrite subsistence equipment, the time, energy, and opportunity cost in wage employment may be seen as an investment in subsistence. Similarly, transfer payments from the government in some cases directly and explicitly subsidize subsistence activities through an income security program. Social welfare in these cases, does not replace subsistence but underwrites it.

⁴ “White” people or Euro-Americans.

Wolfe (1979) notes that cash from wage employment increases subsistence production. An equally critical observation, however, is that the timing of wage employment should not interfere with subsistence activities (Lonner 1986). Cash is essential to modern-day living in rural Alaska and this need increased after statehood when communities had to maintain government sponsored infrastructure projects in water and sewer systems as well as public housing.⁵

Cash Economy

Residents earn cash in the Bristol Bay commercial fishing and processing industries, industry services, and government employment. Commercial fisheries are the primary private source of cash employment for Bristol Bay residents today. Bristol Bay's commercial salmon industry began in the region in 1888, pioneered by Scandinavian and Italian immigrant fishermen and canning companies from California and the Pacific Northwest expanding their operations along Alaska's coastline.

The canneries (referred to as "processors" today) hired locals in addition to bringing in their own labor to process fish. Locals worked alongside American, Chinese, Japanese, and Filipino workers. At first, only local men were employed (Ellanna and Balluta 1992) while women and children stayed behind in fish camps to put up fish. By the 1930s, local men were captaining cannery-owned fishing boats. At the time, the fishery was restricted to sailing vessels to minimize impact on stocks. Local women started working in canneries while other women, seniors, and children manned whole family operations at set net sites from shore. Ellanna and Balluta (1992) note local participation intensified during World War II because foreigners were restricted from working in the industry at that time. Generally, processing work is a less desirable employment option for locals today due to the long hours and low pay, and because it is incongruous with family life. Icicle, Peter Pan, Trident and Unisea operate fish processing plants in Dillingham. There are also plants in Togiak, Naknek, Ekuk, Egegik, Ugashik, and Chignik. Many Alaskans prefer commercial fishing to processing because fishing is a much more prestigious form of wage employment. Since the 1980s, processors have attracted college

⁵ Although most communities have modern water and sewer systems, DCRA notes that in several Bristol Bay communities including Clark's Point, Egegik, Koliganek, Pedro Bay, Portage Creek, some homes are still using "honeybuckets" or plastic buckets that are used for disposal of human waste.

students on their summer vacations and more significantly, recruited workers from the U.S. migrant labor pool.

The Bristol Bay salmon fisheries have historically been the near sole source of private industry income for the region. The season lasts for a brief six weeks, enabling local residents to earn cash and pursue subsistence activities during the remainder of the year. Because of the short duration of the season, it has not interfered with the traditional subsistence cycle. For example, many local residents trapped for fur in winter and worked for canneries in summer. Commercial fishing is also a favored form of employment in the region because of its similarity to subsistence activities (Wright and Morris 1985).

Much of the fishing industry activity has been centered in or near the community of Dillingham—traditionally, residents of outlying villages would gather in summer fish camps outside of the community every year, causing its population to double. Today, the region’s population swells during the fishing season as many outside fishermen and processors participate in the fishery. See Figure 1.12 for a 2002 breakdown of permit holders by residence. Note how though close in number, outside permit holders outnumber the Alaska-based permit holders. In addition, the number of urban and non-local but Alaska resident permit holders exceeds the number of local permit holders. These data demonstrate that the majority of Bristol Bay salmon permits are owned outside of the Bristol Bay region.

Access to commercial salmon fisheries permits in Alaska was first restricted in state law by the Salmon Limited Entry Act of 1973. This legislation emerged from the concerns of local Alaskan fishermen wishing to limit the entry of outside fishermen in Alaska’s fisheries, although Petterson (1981) notes that in Bristol Bay, local Alaska Natives did not play a major role in limiting entry as they did in other parts of the state. Permits were awarded to fishermen with sufficient history in the fishery and level of “dependence” (Rogers 1972; Petterson 1981) on it.

Figure 1.12 Bristol Bay Salmon Permit Ownership by Residency

Table 1. Population, survey sample, and survey response by resident type for the 2002 survey of Bristol Bay salmon drift gillnet permit holders

Resident type	Population ¹	% of Population	Survey Sample	% of Sample	Survey Respondents	% of Respondents	Response Rate by Resident Type
Alaska residents by type:							
Alaska local rural	427	24.3%	103	23.4%	60	19.4%	58.3%
Alaska nonlocal rural	123	7.0%	30	6.8%	23	7.4%	76.7%
Alaska nonlocal urban	325	18.5%	78	17.7%	47	15.2%	60.3%
All Alaska resident types	875	49.8%	211	48.0%	130	41.9%	61.6%
Nonresidents	882	50.2%	229	52.0%	180	58.1%	78.6%
Total	1,757	100%	440	100%	310	100%	70.5%

Note: Residency may have changed for some permit holders after the population and sample were first selected. The information provided here is a summary of the population and sample using the residency determined prior to the survey mailing.

Source: Alaska Commercial Fisheries Entry Commission

In Koslow’s 1979 study of the impact of Limited Entry on Bristol Bay fishermen and their perceptions of the program, he discovered local permit holders and those from outside the state, had been raised as fishermen while Bristol Bay permit holders residing in other areas of Alaska (especially from its urban centers) had generally started fishing as adults and had less experience than the other groups (Koslow 1986). Koslow also found that there was a significant difference between locals and non-locals in the gear they used and vessels they operated: on average, the non-locals had better gear and vessels.

Langdon (1979) identifies three outcomes of Limited Entry for Bristol Bay residents:

1. It closed entry into drift gillnet for those born between 1960 and 1970.
2. It closed entry to those who didn’t fish during the qualifying years. Reasons for this range from poor fishing in qualifying years or because locals did not document

themselves during that time by registering their vessels with the state or buying permits (Pettersen 1981).

3. It caused escalation in costs of permits

Impacts of these outcomes included salmon permits moving out of rural areas (Langdon 1979a). Pettersen notes:

Interview data indicate that permits seem to leave the hands of less well to do native fishermen for the well-financed hands of urban-Alaskans and non-residents” (Pettersen 1981:10)

Pettersen also found that the number of Bristol Bay permits applied for and denied was higher than in any other rural region of AK in 1979. He reports early permit transfers at the local level were caused by: 1) poor runs in qualifying years that forced locals to seek other employment during 1971 and 1972 (Koslow 1986); 2) understanding and paying taxes; and 3) the high capital investment needed for vessels and gear to compete with outside interests (Ellana and Balluta 1992).

Figure 1.13 Residence of Bristol Bay Drift Gillnet Permit Holders, 1979

		Residence of Recipients Receiving Bristol Bay Drift Gillnet Permits		
		Bristol Bay	Greater Alaska	Non-Alaska
Original permits issued	No. (%)	662 (38.6)	327 (19.0)	728 (42.4)
Changes due to transfers	No. (%)	-43 (-6.5)	+ 14 (+ 4.3)	+ 29 (+ 4.0)
(Jan. 1, 1975-Aug. 20, 1979)				
Residence following transfers	No. (%)	619 (36.1)	341 (19.9)	757 (44.1)

Source: Langdon 1980.
Note: Residence as of August 29, 1979

A key negative social impact of restricted access management in fisheries has been the problem of equitable devolution of property rights to the next generation in families where there is more than one child (Pettersen 1981; Koslow 1986). In addition, Pettersen (1981) makes the point that

Limited Entry increased class distinctions within communities. Koslow (1986) characterizes this problem with his description of how the Limited Entry scheme failed to take into account how local Bristol Bay fishermen pooled resources with friends and family prior to Limited Entry. Although Alaska Native fishermen tended to fish with family in partnerships rather than the in the captain-crew structure of outside fishermen, only one individual per vessel received a permit.

Some locals who did not qualify for permits began migrating to Alaska's urban areas while others started working as crew. Ellanna and Balluta note:

Most men scheduled other sources of wage employment to accommodate summer participation in the commercial fishery...Commercial fishing remained the most highly valued, enjoyable, and prestigious means of obtaining cash for men, and to a large degree, women as well”(1992:245).

The value of Bristol Bay permits has fallen in recent years due to the dramatic drop in ex-vessel price evidenced in Figure 1.6 above on page 28. Knapp (2004) reports that in 1980, Bristol Bay salmon accounted for 13% of the world's salmon supply but by 2001 only accounted for 2% of the world's supply. Because of increasing competition from Chilean farmed salmon, the price of Bristol Bay salmon has fallen dramatically in the 2000s. Consequently, the value of Bristol Bay salmon permits has fallen as well.

Bristol Bay has also had a domestic herring sac roe fishery since the 1970s. Foreign fleets, including those fishing for herring, were limited from accessing U.S. waters within 200 nautical miles of the coast through the Magnuson-Stevens Fishery Management and Conservation Act of 1976. Domestic fishermen then had the opportunity to meet demand for herring roe in Japanese markets.

Herring can be fished with gillnet gear that is used in Bristol Bay salmon fisheries but it is a laborious method as herring are much smaller than salmon and the fish must be shaken out of the nets. Using seine gear is a faster, more efficient method: a school of fish is encircled by a net, drawn up by a crane into a purse-like bag, and unloaded into the hold of a fishing vessel or nearby tender ship. The efficiency of purse seine gear and vessels in herring fisheries has produced extremely short fishing openings—some lasting only 20 minutes at a time. Langdon (1981) makes the point that locals generally only had gillnet gear and vessels rather than seiners,

making it difficult to effectively compete with outside fisherman with more capital. He reports a high local participation in the roe on kelp fishery (also a traditional subsistence fishery in Alaska), but this fishery was not as profitable as the sac roe fishery has been.

The world demand for Alaska salmon and herring is subject to the vagaries of global markets and consumer preferences. Alaska salmon fishermen have suffered while prices bottomed out in 2001 and have remained low due to competition from international salmon farming. Likewise, the price for herring has also plummeted due to a decreasing Japanese demand for herring roe as consumer tastes in Japan change. Regardless of these changes, continuing participation in commercial fishing has been vital to local identity—true of many of Alaska’s coastal areas. In a 1975 document published by the Bristol Bay Area Development Corporation, the Bristol Bay Area Native Association, and the Bristol Bay Regional Development Council, locals state that fishing is their life and that they are not interested in “alternative means of securing a livelihood” (BBNC 1975:3).

Without primary data collection in communities, we cannot fully explore here whether or not this cultural aspect of Bristol Bay’s people holds true today given current market conditions. We do note, however, that long term residents of Alaska’s coastal communities very often self-identify as fishermen, even though much of their cash income might be derived from other employment sources (Lowe and Knapp 2007). Commercial fishing is a high status vocation within these communities.

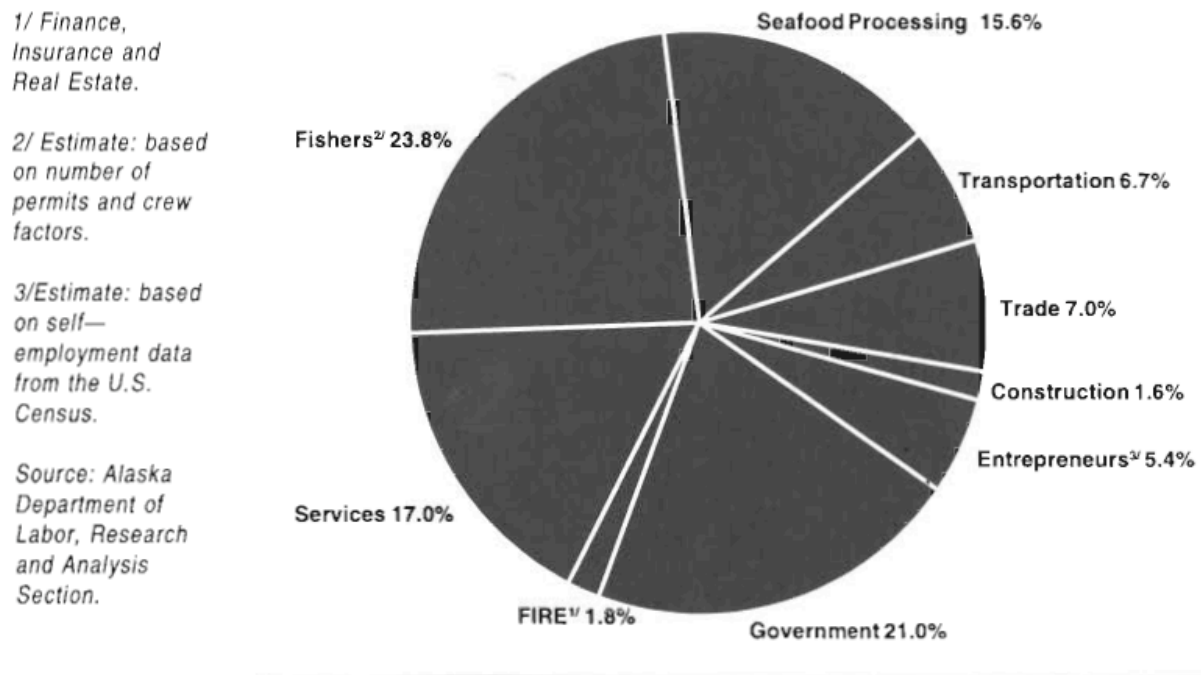
Other Employment

Fried et al (1997) estimated that in 1996, 23.8% of Bristol Bay residents were fishermen and 15.6% worked in seafood processing for a total of 39.4% employed in the commercial fishing industry. Today’s figures, (See Part 2 below) show approximately one third of the region’s adult population over the age of sixteen participating in commercial fisheries.

Figure 1.14 Bristol Bay Employment, 1996

Figure • 1

Where the Jobs were in 1996 in the Bristol Bay Region



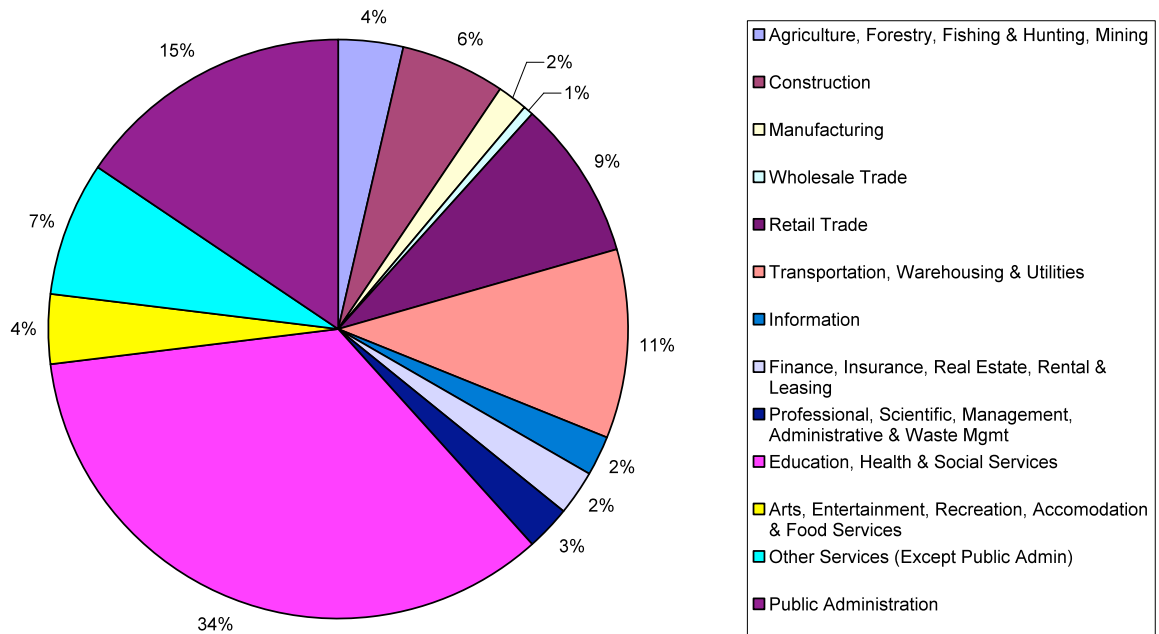
Source: Fried et al 1997

Figure 1.14 shows fire-fighting as a source of income for some residents in inland areas in communities like Nondalton. It shows some level of entrepreneurial activity, such as small businesses or handicraft work. These data are indicative of the combination employment strategies many rural Alaskans use to be able to survive in their home areas. In many cases, a diversified income is the key to survival in rural Alaska (Lowe 2008).

Figure 1.14 also shows a substantial amount of employment in the government sector. In his 2007 study of the remote rural Alaska economy, Goldsmith states that job growth between the 1990 and 2000 census periods has been strong and most notably in services and public administration. He notes:

Growth has been largely driven by the increase in federal dollars flowing into Alaska, some of which has gone into remote rural Alaska. In the regional centers job growth has been dominated by health care with education, transport and utilities, and finance also contributing (Figure 13). In the smaller communities, growth has been dominated by jobs in public administration with health care adding about the same number of jobs as in the regional centers. Other services, accommodations, and transportation were also strong contributors to job growth.

Figure 1.15 Bristol Bay Employment By Sector



Source: Alaska State Division of Community and Regional Affairs, 2000 Census

Table 1.3 Employment By Community By Sector, 2000 Census

Community	Agriculture, Forestry, Fishing & Hunting, Mining	Construction	Manufacturing	Wholesale Trade	Retail Trade	Transportation, Warehousing & Utilities	Information	Finance, Insurance, Real Estate, Rental & Leasing	Professional, Scientific, Management, Administrative & Waste Mgmt	Education, Health & Social Services	Arts, Entertainment, Recreation, Accomodation & Food Services	Other Services (Except Public Admin)	Public Administration	
King Salmon	0	27	0	0	16	54	11	4	19	43	23	3	47	247
Naknek	3	35	5	2	29	45	26	7	5	80	17	8	28	290
South Naknek	2	4	4	0	0	2	0	3	0	14	2	2	11	44
Aleknagik	5	4	0	0	2	10	0	0	6	21	0	16	5	69
Clark's Point	0	0	5	0	0	2	0	0	0	7	0	3	8	25
Dillingham	59	53	22	10	115	115	19	38	23	422	37	122	115	1150
Ekuk	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Ekwok	0	0	0	0	0	5	0	0	0	11	2	2	8	28
Manokotak	0	5	0	0	7	6	0	0	0	42	0	2	26	88
New Koliganek	1	8	1	0	0	9	0	6	0	23	0	2	16	66
New Stuyahok	0	0	0	0	35	11	0	1	0	55	0	4	24	130
Portage Creek	9	0	5	0	3	0	0	0	0	13	2	2	0	34
Togiak	4	5	0	0	18	14	0	3	2	63	12	10	38	169
Twin Hills	0	0	3	0	0	0	0	0	0	10	0	0	2	15
Chignik	0	2	2	0	4	2	0	0	0	14	0	2	9	35
Chignik Lagoon	2	11	0	0	0	8	2	0	0	11	0	2	4	40
Chignik Lake	0	0	0	0	2	0	0	0	0	11	0	3	16	32
Egegik	1	0	0	3	0	5	0	0	0	6	0	0	6	21
Igiugig	0	0	0	0	0	4	0	0	0	3	0	0	2	9
Iliamna	0	5	0	0	6	4	3	4	3	21	10	2	5	63
Ivanof Bay	0	0	0	0	0	0	0	0	0	3	0	3	10	16
Kokhanok	0	0	0	0	2	3	0	0	3	26	0	3	2	39
Levelock	2	0	0	0	0	7	0	0	0	8	0	2	15	34
Newhalen	3	0	0	0	3	0	0	2	2	8	5	2	8	33
Nondalton	0	0	0	0	7	6	0	0	2	22	1	1	8	47
Pedro Bay	0	6	0	0	0	3	0	0	0	8	2	0	8	27
Perryville	0	0	0	0	0	0	0	0	4	17	4	3	4	32
Pilot Point	0	0	3	0	3	0	0	0	0	17	0	5	20	48
Port Alsworth	5	4	2	0	0	0	2	0	2	4	0	5	5	29
Port Heiden	8	1	0	0	3	0	0	0	5	30	0	6	6	59
Ugashik	0	1	0	0	0	0	0	0	0	0	0	0	3	4
Totals	104	171	54	15	255	315	63	68	76	1013	117	215	459	2925

Source: Alaska State Division of Community and Regional Affairs

These figures do not, however, detail the historical problem of a local lack of education to fill the growing number of administrative or professional positions (Langdon 1979), nor the numbers of non-Alaska Natives occupying them and/or any turnover associated with white-collar employment in rural Alaska often filled by short-term residents. Primary data collection would be instrumental in accounting for the percentage of local non-Alaska Natives whom are long-term residents. Data compiled from DRCA community database for this report in Figure 1.15 and Table 1.3 indicate a large number of residents employed in education, health, and social services but the data also do not reveal how many of these positions are filled by long-term locals or residents native to the area.

Tourism also accounts for a substantial part of economic activity in the Bristol Bay region's sport fishing and hunting lodges and associated industries. Fur traders, salmon fishermen, prospectors, and military personnel who have worked in the region have left it with stories about its plentiful wildlife (Unrau 1998). Lodges and guiding businesses started in the Lake Clark-Iliamna Lake area after the 1930s. With the exception of some village corporations like Ekwok's, which owns a lodge, the industry is generally controlled by outside interests and local Alaska Native participation is marginal. Alaska Natives generally do not value this type of work because sport hunting and fishing are considered activities contrary to traditional beliefs and respect for animals. The well-used aphorism in rural Alaska: "Don't play with your food," exposes Alaska Native attitudes about sport fishing and hunting. Equally important, there is always a concern about recreational resource users competing with subsistence users for resources. Bristol Bay residents (Bristol Bay Study Group 1982) made the following statements regarding recreational fishing and hunting in their region:

Sport hunting should not be allowed. There is concern about head-hunters controlling the hunting and lodge owners in the area trespassing on Ekwok villagers' land.- (Ekwok)

Land and water of Togiak Refuge should be used for these activities, in this order of importance: 1) Subsistence (consensus), 2) Commercial, 3) Recreation. The people want to outlaw recreational hunting and fishing because it's wasteful.- (Togiak)

In their recent study on subsistence practices in the Iliamna Lake sub-region, Fall et al (2006) recorded the following local comments about sport hunters and fishers:

- *“Non local hunters are overharvesting caribou from the Mulchatna Herd.” –Iliamna and Newhalen.*
- *“Caribou numbers are down significantly over the past 5-8 years, affecting subsistence harvests greatly. Local residents cannot compete with fly-in hunters.” -Nondalton*
- *“Nonlocal hunters overharvest caribou and moose, waste parts of the carcass, and displace local people.” –Nondalton*
- *“The Dolly Varden in the Iliamna River are being overharvested in the sport fishery.” –Pedro Bay.*

Public Assistance and Social Insurance

Petterson (1981) states that the amount of welfare distributed to the Bristol Bay region increased after salmon Limited Entry was passed. Hamilton and Seyfrit (1993) note that rural Alaska Natives receive government assistance for housing, education, water supplies, public sector jobs, medical and social services, and in mail subsidies. The state of Alaska also operates a home heating assistance program. See Part 2, Detailed Overview of Sub-regions for public assistance figures by community.

1.5 INSTITUTIONS

There is a diverse array of institutions structuring both sociocultural and economic life in rural Alaska today. They range in orientation and mission from local to Alaska Native to state to federal organizations. In this section, we provide a cursory description of these institutions that are categorized under the headings: *Incorporated Boroughs; Municipal Affairs; Alaska Native Affairs, Health, Education, and Social Welfare; Economic Development; and Resource Management*. This description is followed by a more in-depth discussion of three critical events in Alaska’s history since statehood and the role of Alaskan institutions within and emergent from these events: the Alaska Native Claims Settlement Act of 1971, Hootch v. Lind Alaska Superior Court Case of 1976 and U.S. Supreme Court case of Katie John vs. the United States of 1999.

Examination of these three events provides an overview of the most important contemporary issues rural Alaskans, and namely Alaska Natives, have encountered over questions about land tenure and indigenous rights, the powerful cultural influence of education, and the management of Alaska's natural resources.

An institutional analysis of rural Alaska could be a self-standing study in its own right—the complexity of which is merely touched upon here. As discussed above, the societies examined in this paper were traditionally economically, politically, and socially stratified—for both Alaska Native groups as well as non-Native settlers. A key consideration in examining local political power in rural Alaska is how this stratification is articulated today; but in the case of the Bristol Bay region, a thorough treatment of this topic is beyond the limitations of this desktop review. The following presents a description of the some of the institutions through which capital: natural, economic, human, social, is distributed in Alaska's rural areas, but the question of how equitable or effective this distribution is would require further empirical investigation.

Incorporated Boroughs

At statehood in 1959, Alaska's constitutional framers enabled a borough structure for local government and there are 16 boroughs today which encompass the more populated areas of the state. Some of the more remote areas were designated as unorganized boroughs. The federal census bureau has its own 11 census areas in Alaska, of which the Dillingham area is one. As mentioned above, there are two organized boroughs in the Bristol Bay region: the Bristol Bay Borough which has its seat in Naknek and the Lake and Peninsula Borough which has its seat in King Salmon. These boroughs are the chief governing bodies for their respective areas and engage in activities such as planning and zoning, community development, coastal management, and overseeing school districts. They have a manager government, each with a mayor whom is elected at large and an assembly that is elected by district: a five-member assembly in the Bristol Bay Borough and a seven-member assembly in the Lake and Peninsula Borough.

Municipal Affairs

Each community has either a “city” or a “village” council which governs municipal affairs. A larger community like Dillingham will have a city council with a mayor, a city manager, and an elected city council. City councils will oversee city finances and tax collection, public works, fire and police departments, schools, libraries, and senior services. Smaller communities will have village councils which also generally have elected seats and a mayor. At the village level, politics tend to be dominated by leading families which could in many cases, represent “super-households”: data collected by ADFG indicate approximately 30% of which take approximately 70% of subsistence harvests and possibly earnings distribution as well (Wolfe 1987; Magdanz et al 2002).

Alaska Native Affairs

Tribes

In the Bristol Bay region there are 30 Alaska Native federally recognized tribal governments:

:

- | | | |
|--|---------------------------------|-----------------------------------|
| 1. Native Village of Aleknagik | 10. Igiugik Village Council | 22. Pedro Bay Village |
| 2. Native Village of Chignik | 11. Iliamna Village | 23. Native Village of Perryville |
| 3. Native Village of Chignik Lagoon | 12. Native Village of Kanatak | 24. Native Village of Pilot Point |
| 4. Chignik Lake Village | 13. King Salmon Tribe | 25. Portage Creek Village |
| 5. Village of Clark’s Point | 14. Kokhanok Village | 26. Native Village of Port Heiden |
| 6. Curyung Tribal Council (Dillingham) | 15. Native Village of Koliganek | 27. South Naknek Village |
| 7. Egegik Village | 16. Levelock Village | 28. Traditional Village of Togiak |
| 8. Ekuk Village Council | 17. Manokotak Village | 29. Twin Hills Village |
| 9. Native Village of Ekwok | 18. Naknek Village | 30. Ugashik Village |
| | 19. Newhalen Village | |
| | 20. New Stuyahok Village | |
| | 21. Nondalton Village | |

Each tribe has a president, executive officers, and members as well as support staff. Alaska Native tribes have government-to-government relationships with the U.S. federal government and are eligible to receive federal grants. Alaska Native tribes work on community improvement

projects, promote and encourage cultural activities, write economic development grants, and provide medical services through the Alaska Native Tribal Health Consortium. They are represented collectively and regionally by the Bristol Bay Native Association.

Bristol Bay Native Corporation

All of the communities in this study are part of the Bristol Bay Native Corporation (BBNC) which currently has 7,800 shareholders. BBNC was one of the 13 corporations created by federal law, the Alaska Native Claims Settlement Act of 1971, which defined indigenous land claim rights in the state and which was an alternative model to the reservations of the Lower 48 contiguous states. This legislation was a landmark in Alaska's history with substantial socioeconomic impacts which are discussed further below. BBNC's diversified holdings include: a stock portfolio, architectural design, cardlock fueling, corporate services, corrosion inspection, environmental engineering and remediation, oilfield and environmental cleanup labor, and surveying and government services.⁶

Health, Education, and Social Welfare

Health

Most communities have some form of a medical clinic with health aides that rely on physician assistants in hub communities like Dillingham or King Salmon. Doctors, dentists, ophthalmologists, and psychologists make seasonal rounds of rural villages (Partnow 2001). A tribal organization based in Dillingham, the Bristol Bay Area Health Corporation, manages 29 village clinics that employ 75 resident health aides.⁷ Alaska Native residents also have the option of traveling to Anchorage to use the Alaska Native Medical Center which is jointly owned by the Alaska Native Tribal Health Consortium mentioned above and the Southcentral Foundation (Alaska Native owned healthcare organization.)

Education

The Bristol Bay Borough School District, the Lake and Peninsula School District, and the Dillingham City School District provide K-12 public education in Bristol Bay communities.

⁶ <http://www.bbnc.net/>

⁷ Bristol Bay Area Health Corporation, <http://www.bbahc.org/clinics.htm>.

After Alaska was acquired by the U.S. and settled by Americans in the late 19th century, Euro-American settlers in many of the larger communities influenced a segregated school system. Eventually, many urban and rural communities had Euro-American and Alaska Native schools but for Alaska Natives, the schools only educated their students through the eighth grade, while the Euro-American public schooling was offered through grade 12 (Cotton 1984). In the 1950s and 1960s, the federal government instituted the policy of sending Alaska Native students to regional boarding schools. This policy was overturned by the 1976 “Molly Hootch” (Tobeluk v. Lind) Alaska Superior Court case which is discussed in more detail below. After resolution of this case, the State of Alaska was required to provide secondary level education in all communities.

The University of Alaska Fairbanks maintains a rural campus, the Bristol Bay Campus, in Dillingham which offers adult education classes and degree programs and certificates in computers, business, and vocational trades.

Bristol Bay Housing Authority

The Bristol Bay Housing Authority is one of sixteen regional housing authorities in the state which provides affordable housing for Bristol Bay community residents through grants from the U.S. Department of Housing and Urban Development's Office of Native American Programs and the Alaska Housing Finance Corporation.⁸

Figure 1.16 3-Bedroom House in Koliganek



Source: Bristol Bay Housing Authority

⁸ The Bristol Bay Housing Authority, <http://www.alaska.net/~bristol/>

Economic Development

The Western Alaska Community Development Quota (CDQ) Program: Bristol Bay Economic Development Corporation

The Bristol Bay Economic Development Corporation spans several of the institutional categories presented here. It is at once an institution that addresses Alaska Native affairs, one that provides educational opportunities, economic development opportunities, and is a form of resource management for communities that are within 50 miles of the Bering Sea coast. The Bristol Bay Economic Development Corporation is one of six regional Bering Sea non-profit economic development corporations that were created in 1992 through an initiative of the North Pacific Fisheries Management Council: a federal organization that oversees Alaska's fisheries.

The CDQ program allocates 10% of the Bering Sea commercial fisheries' total allowable harvest to these six organizations for community economic development projects in addition to rural educational scholarships and training opportunities. Due to the substantial value of the Bering Sea's commercial fisheries, the program has been highly successful; it has generated \$500 million in revenues; \$260 million in assets, \$110 million in earnings, over 25,000 jobs, and over 300 educational scholarships between 1992 and 2003.⁹ Each CDQ Corporation has a CEO, a board of directors, and an administrative staff. The Bristol Bay Economic Development Corporation based in Dillingham, includes the communities of Aleknagik, Clark's Point, Dillingham, Egegik, Ekuk, Ekwok, King Salmon, Levelock, Manokotak, Naknek, Pilot Point, Port Heiden, Portage Creek, South Naknek, Togiak, Twin Hills, and Ugashik. Its programs include: Bering Sea groundfishing jobs, Harvey Samuelsen Scholarship Program, Basic and Advanced Vocational funding, Internship programs in Bristol Bay and in Seattle, Technical Assistance - business plans/feasibility studies, Infrastructure and Seed Funds.¹⁰

⁹ Alaska Department of Commerce, Community, and Economic Development.
<http://www.commerce.state.ak.us/bsc/CDQ/cdq.htm>

¹⁰ Bristol Bay Economic Development Corporation, <http://www.bbedc.com/about/index.html>.

AIFMA: Alaska Independent Fishermen's Marketing Association

The AIFMA is a 40-year-old institution that serves to protect the interests of Bristol Bay Fishermen. It lobbies to protect the fishery from extractive industry development and intercept fishing, works to improve quality of Bristol Bay salmon and diversify markets, and supports funding of fisheries research. The organization itself is funded by fishermen memberships.¹¹

Resource Management

Nushagak-Mulchatna Watershed Council

The Nushagak-Mulchatna Watershed Council is a consortium of landowners, tribes, and local governments acting together as an advisory board for state and federal regulatory agencies on conservation and resource management in the watershed. The Council partners “with various organizations to provide important resource data for villages, communities, village corporations, local governments, and others developing land management plans, community planning projects and for other uses and activities in the Bristol Bay area.”¹² These projects include: Native Place Names Project, water monitoring, river instream flow reservation, soils survey, and Traditional Use Conservation Planning Project. Partners include: Bristol Bay Native Corporation, Alaska Department of Environmental Conservation, environmental planning organizations, the Bristol Bay Native Association, the USDA Natural Resource Conservation Service, and the Nature Conservancy.

Alaska Department of Fish and Game (ADFG)

The Alaska Department of Fish and Game is the State of Alaska’s regulatory agency for the management of fish and wildlife resources. Its divisions consist of: Wildlife Viewing/Hunting, Sport Fishing, Commercial Fisheries (for state fisheries: salmon, herring, shellfish, groundfish), and Subsistence Fishing and Hunting. ADFG issues licenses and permits, keeps the public informed of season openings and closures, scientifically regulates salmon escapement and health of fisheries stocks on a “sustained yield principle,” and prepares management reports that detail use and health of fish and game resources.

¹¹Alaska Independent Fishermen's Marketing Association, http://www.aifma.org/about_aifma.html

¹² Nushagak-Watershed Council, Pure Bristol Bay, <http://www.purebristolbay.com/nmwc/default.asp>.

Alaska Department of Natural Resources (DNR)

The mission of the Alaska Department of Natural Resources is to “develop, conserve, and enhance natural resources for present and future Alaskans.”¹³ Its divisions consist of Agriculture, Forestry, Geological & Geophysical Surveys, Mining, Land & Water, Oil & Gas, Parks and Outdoor Recreation, and Support Services. Its other offices include: the “*State Pipeline Coordinator's Office*, part of a joint federal-state program to oversee the 800-mile Trans-Alaska and other common-carrier pipelines; the *Mental Health Trust Land Unit*, that manages the Mental Health Trust's land and resources assets; the *Office of Project Management and Permitting*: coordinating the Alaska Coastal Management Project and the state participation in ANILCA; the *Office of Habitat Management & Permitting* that protects freshwater anadromous fish habitat; and the *Public Information Center*, that offers "one-stop shopping" for the department's programs.”¹⁴ DNR is responsible for all development project permitting. By an executive order in 2003, the then State of Alaska Governor Frank Murkowski moved the Office of Habitat Management and Permitting from the Alaska Department of Fish and Game to DNR and eliminated jobs held by state employees responsible for issuing permits for development projects. Murkowski accused the stringent habitat office at ADFG of “delaying resource development in Alaska” (Bluemink, 2006). The movement of this office was highly controversial and the current State of Alaska Governor, Sarah Palin, was pressured into moving it back to ADFG in the early days of her term beginning in 2007. She has not done so but put the matter under review.

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service’s mission is similar to that of the Alaska Department of Fish and Game in its goals to “protect, conserve, and enhance” fish and wildlife resources—however, for the good of the nation at large. Its divisions include Endangered Species, Fish and Habitat, Law Enforcement, Marine Mammals, Migratory Birds, Migratory Bird Co-Management Council, Permits, Subsistence, and Wildlife Refuges. Because of conflicting mandates of the federal law, the Alaska National Interest Lands Conservation Act (ANILCA) of 1980 and the Alaska State Constitution on matters of subsistence, USFWS took control of subsistence

¹³ <http://www.dnr.state.ak.us/>

¹⁴ Ibid.

management on federal lands in Alaska in 1999—about 230 million acres or 60 percent of the land within the state.¹⁵ This decision will be discussed in more detail below in the context of the *Katie John v. United States*, U.S. Supreme Court case of 1999.

National Park Service

Within the Bristol Bay region, there are four national parks: The Lake Clark National Park and Preserve, the Alegnak Wild River, the Katmai National Park and Preserve, and the Aniakchak National Monument and Preserve.

Figure 1.17 National Parks in Alaska and the Bristol Bay Region

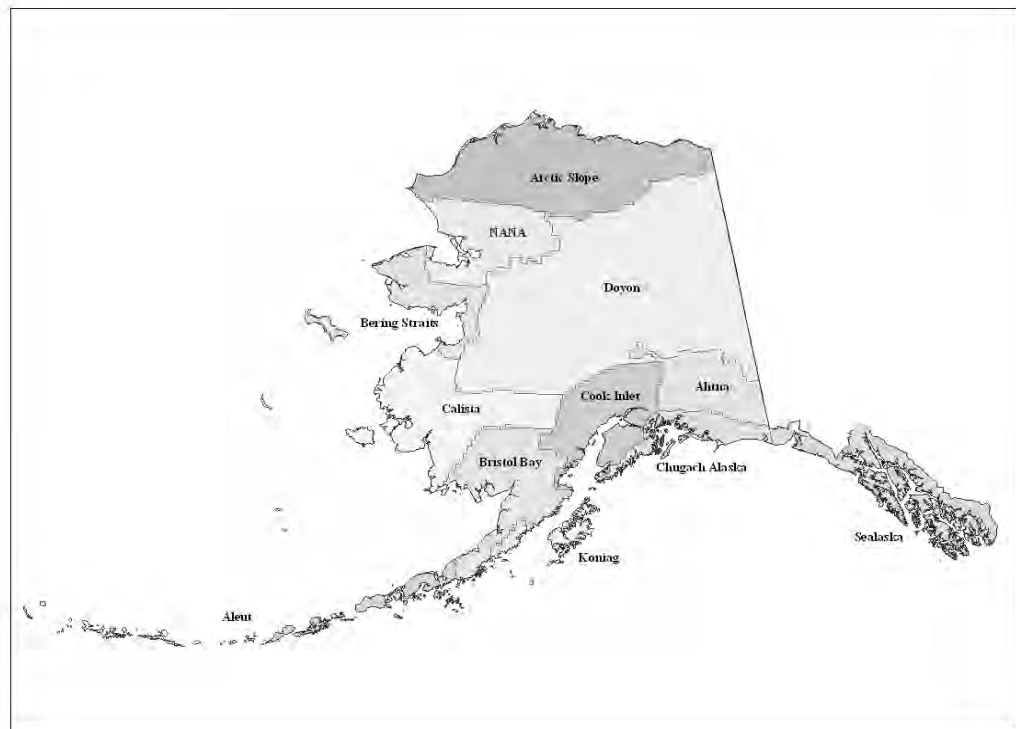


Alaska Native Land Claims (ANCSA) and ANCSA Corporations

The Alaska Native Land Claims Act of 1971 is central to both Alaska’s history and current Alaska Native economies and political structures. After statehood in 1959, oil and gas exploration in Alaska and ensuing development on Alaska’s North Slope accelerated Alaska Native desire to pursue their rights to land claims. In exchange for relinquishing all future land claims, Alaska Natives accepted one-ninth of the state’s land and \$962.5 million from the state and federal government in 1971. The state of Alaska was then divided into 12 regions, each represented by a distinct Alaska Native association.

¹⁵ <http://alaska.fws.gov/asm/who.cfm>

Figure 1.18 ANCSA Regions



Meghan Wilson

The Alaska Native associations established by Congress were responsible for enrolling Alaskan residents who could prove “prove one-quarter blood Native ancestry” to be eligible as shareholders in regional for-profit corporations. A 13th corporation was added to account for Alaska Natives living outside the state of Alaska. The 13th Regional Corporation did not receive land claims but did receive a cash settlement. ANCSA also created 220 village corporations under the aegis of the regional entities. Both the regional and village corporations were allowed to select land in and around Alaska Native villages in proportion to their total number of enrolled shareholders. Through ANCSA, the smaller village corporations own the surface rights for their selected lands and the regional corporations own the subsurface rights for all land in their regions.

Alaska Native corporations were initially exempt from taxation for 20 years after conveyance of benefits but most of the corporations had difficulty turning a profit since inception with the unsurprising exception of Arctic Slope Regional Corporation that earns considerable income in

oil land leases. Alaska Native corporations have retained their tax-exempt status to the present day although many own taxable subsidiaries.

For many years, Alaska Native corporations struggled with an obvious contradiction inherent in their corporate model: traditional cultural values and conservation of natural resources conflict with the for-profit motives of corporations and the responsibility to create returns for shareholders through development of assets (Anders and Anders 1986; Langdon 1986; Flanders 1987; Lowe and Wilson 2007). The problem many Alaska Native corporations have faced in the past is that land is their only asset and to make their corporations profitable, they must sell or develop the land which they also consider a cultural asset to be conserved for use by future generations. Langdon (1986) also raises the issue of the sub-surface mineral rights and that the agenda of regional corporations oftentimes conflict with the goals of the village corporations. Villages face similar problems with village shareholders living in urban centers who might like higher dividends and vote for development that negatively impacts the village locality. Langdon (1986) also brings the increasing class distinctions ANCSA has engendered into relief when he notes:

The development of ventures in timber, fish processing, construction, mineral extraction and processing, all of which require technical training, could result in a significantly stratified population. To the extent that business ventures endanger local subsistence resources, an important conflict could emerge between the technically trained villagers, primarily dependent upon the development activities, and the remaining villagers who continue to be primarily dependent on fish and animal resources. In the same vein, internal differentiation can and does appear to be emerging from the organizational requirements of making a corporate structure functional. In many villages, a small group of leaders (an elite) has emerged that controls the bulk of the organizational expertise and information. They thus exercise an inordinate amount of influence on the direction the local corporation takes. Although the formation of leadership was not totally the result of ANCSA, it is different from the leadership of previous generations in that rather than being based on hereditary kinship, hunting ability, or knowledge of supernatural forces, the new leadership draws its legitimacy from education and the ability to interact with external institutions (Langdon 1986:39).

Langdon suggests here that ANCSA therefore has had a powerful effect on Alaska Native social structure and political power today. Although having lived a troubled history, many corporations' profits are recently reported on the upswing due to government contracts and subsidiary ventures in hotels, restaurants, oil field services, and timber (Bluemink 2006). Bristol

Bay Native Corporation was reported as the 6th highest in revenue for 2005 out of the 13 regional corporations and over 220 village corporations.

The Molly Hootch (Tobeluk v. Lind) Case

Educational systems are among the primary mechanisms for socialization of the next generation. Rural Alaska has struggled with first accepting the acculturating influences of American education since 1867 and more recently in adequately preparing its youth for inclusion in today's global economy. As noted above, Sheldon Jackson's school initiatives subjected Alaska Natives to harsh acculturation policies. In addition, Alaska Native and Euro-American settler schools were segregated in many larger communities and until 1976, rural Alaska Natives wishing secondary level education had to do so in federally sponsored boarding schools in Alaska, in "Indian" schools in the Lower 48, or by boarding with families in urban areas (Cotton 1984). Alaska Native youth were not successful in schools that moved them from their small home communities, away from their families and social networks to an oftentimes terrifying new situation in which drinking, vandalism, violence, suicide attempts, and the dropout rate was high (Cotton 1984).

In 1972, a group of Alaska Native plaintiffs—a list headed by the name of a student named Molly Hootch—sued the state for failing to provide secondary level education in Alaska's villages. A statewide policy change was the result of a 1976 decision in the *Tobeluk v. Lind* case in which Alaska Native students brought a lawsuit against the state to force its hand in providing rural secondary schooling. The case was settled by consent decree providing a high school program for 126 villages.

In the years following up to 1984, many rural high schools were built with state-of-the-art facilities. Consequently, rural high schools have become the central buildings and institutions in these communities where a range of activities take place from community meetings and events, to well-attended basketball games (the preferred sport in rural Alaska), to the sharing of subsistence foods such as whale muktuk after a hunt. Despite the advantages village high schools provide their communities and the obvious importance of keeping families together by educating students in their home areas, many Alaska schools are unable to prepare students for a

world in which economic opportunities are diminishing at home, and in which job specialization and the need for technical skills are increasing. Alaska’s rural schools are plagued with high teacher turnover, a lack of higher-level math and science courses for high school students, and low student reading skills. As Table 1.4 demonstrates, these problems manifest themselves in the Dillingham and Lake and Peninsula Borough school districts. The students in the Bristol Bay Borough perform substantially better which might be attributed to more outside settlers in that district and a higher per capita income.

Table 1.4 2006-2007 Adequate Yearly Progress, Bristol Bay School Districts

Borough/Census Area	Language Arts Proficiency	Mathematics Proficiency	Graduation Rate
Bristol Bay Borough	80%	71%	82%
Dillingham Census Area	59%	57%	51%
Lake and Peninsula Borough	56%	46%	34%

Source: Alaska Department of Education and Early Development

The Alaska National Interest Lands Conservation Act (ANILCA) and Katie John

Alaska Native subsistence practices have been subject to state and federal regulation since the U.S. acquired the Alaska territory:

Gradual involvement in the world economy over the past 200 years and gradual incorporation into the political structure of the United States over the past 100 years has led to a number of modifications in the way Alaskan Natives exploit and use fish and animal resources. The state of Alaska now regulates the times of the year when certain fish and animals can be taken and the locations where they can be taken, and the methods which can be used to harvest them (Langdon 1986).

Put frankly, many rural Alaskans see this regulation as interference in their lives, oftentimes suspiciously delivered by agents who are residents of urban areas. The rural/urban divide is central to many intra-state conflicts over fish and wildlife resources. Under the Alaska State Constitution, all residents are allowed equal access to the state’s fish and wildlife. However, the Alaska National Interest Lands Conservation Act (ANILCA) of 1980 as passed under U.S. President Jimmy Carter, awarded rural residents of Alaska preference in subsistence rights.

At this time in the early 1980s, the state was struggling with managing an increase in subsistence fishing by urban residents and its Board of Fisheries had implemented a rural residency preference for managing dip net and fishwheel fisheries. The 1989 Alaska Supreme court ruling in *McDowell v. State of Alaska*, found the state's use of rural preference rules to be unconstitutional. Also at this time, Alaska Native elder Katie John's had appealed to Alaska's Board of Fisheries in 1984 to be able to fish at a traditional fishcamp area her family used when she was a child but which was closed to public use in the 1960s. Trying to solve the problem after a long battle in the court system, Alaska Governor Tony Knowles proposed a state constitutional amendment requiring the Alaska's legislature to provide subsistence preference to communities and areas "substantially dependent" on subsistence fish and game resources in 1998 (AFN, 1998). The amendment failed to pass in the state legislature and by 1999, the federal government took control of subsistence fishing in Alaska on public lands.

These events epitomize the clash between Alaska Native claims to land and resources and the State of Alaska's assertion of its sovereignty. They call attention to the increasing population in Alaska's urban centers and its subsequent increasing demand for Alaska's fish and wildlife resources. This is an on-going and developing problem for Alaska's rural residents seeking to protect their way of life—which is traditionally and substantially dependent upon renewable resources.

1.6 DEVELOPMENT CONTEXT

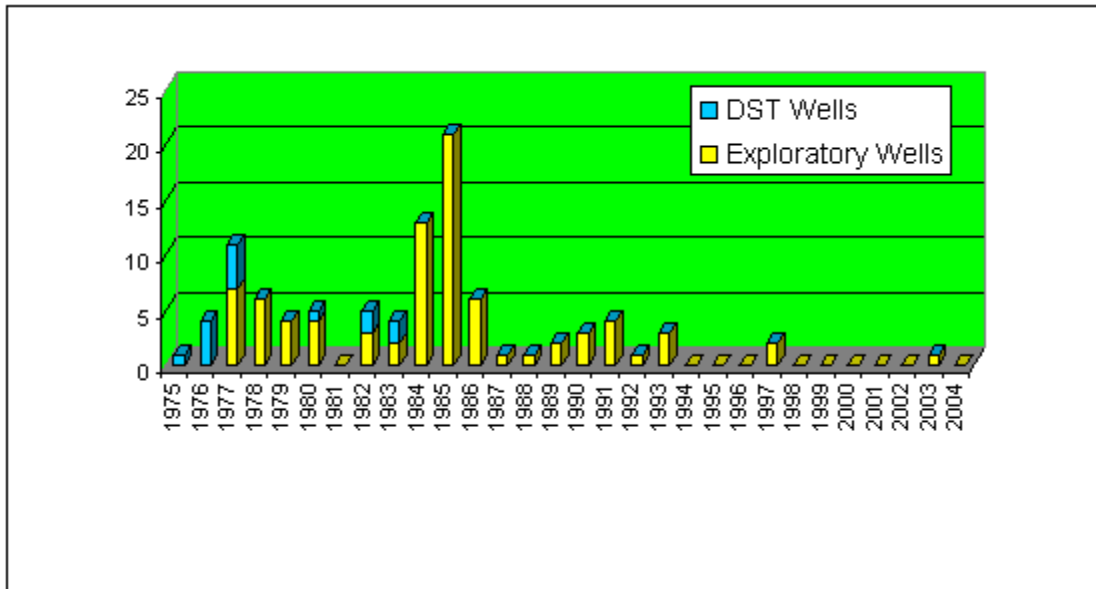
In evaluating the past, present, and future of Alaska's rural economy, Tuck and Huskey (1986) note that the physical size of Alaska, the low population and the traditional culture "define options for economic development strategies" in the region. They characterize rural Alaska as subject to "episodic periods of natural resource based extraction and exploitation" and suffering from a lack of diversified economic growth (6).

Mineral deposit exploration and extraction in the Bristol Bay area has a scanty history prior to the discovery of the Pebble Mine site. Following the U.S. purchase of Alaska, prospectors began

to move into Dena'ina country by 1876 (Ellanna and Balluta 1992) after the global gold rush beginning in the early part of the 19th century. Gold, coal and copper prospectors were in Iliamna Lake region by 1896. (Ellanna and Balluta 1992). In 1908, there was some mining activity near Mulchatna River at Bonanza Creek and eventually six 6 copper prospects and one silver prospect were established around eastern end of Iliamna Lake (Martin and Katz 1912:121-124). An O.B. Millett attempted to develop the prospects at Bonanza Creek during the 1930s, but could not interest mining companies to raise the needed capital (Unrau 1998). Mining activity diminished by 1928 (Ellana and Balluta), but it ushered in the first wave of American settlers who intermarried in the region.

Extractive development in the Bristol Bay region was not a local concern again until the 1980s when there was considerable oil and gas exploration in the Outer Continental Shelf area. At that time, a local study group was created as a forum for airing concerns about development in the region. The following organizations were represented in the study group: the Bristol Bay Coastal Resource Service Area, the Bristol Bay Borough Coastal Management Planning District, the Aleutians East Coastal Resource Service Area, the Alaska Department of Natural Resources, the Alaska Department of Fish and Game, the Bureau of Land Management (OCS Office) and the U.S. Fish and Wildlife Service. In 1981 and 1982, the study group held informal workshops in 15 villages, in Anchorage, and in Fairbanks. They also collected comments via letters, phone calls, and telegrams. These comments are available in a publication called, "Bristol Bay Compendium of Issues" published by the Bristol Bay Cooperative Management Plan under the U.S. Department of the Interior.

Figure 1.19 Oil and Gas Exploration in Alaska’s Outer Continental Shelf Region, Wells Drilled Per Year



Source: Minerals Management Service, Alaska OCS Region

It is a valuable document for understanding local historical concerns about development in the Bristol Bay region. Regarding extractive industry development, the following comments are reflective of local sentiments at the time:

- *“The people of Togiak feel that their way of life will be taken away if OCS development takes place”-Togiak (BBCMP 34).*
- *“With hydroelectric and oil and gas development, there will be an increased need for deep draft water transportation on the Kvichak. How do we provide for it without disturbing salmon spawning areas?”-Newhalen (BBCMP 20).*
- *“Drilling activity in the North Aleutian Shelf could affect migratory birds and fish transversing the area. People of Togiak are concerned that the bay will be harmed if oil and gas operations take place in the OCS”-Togiak (BBCMP 21)*
- *“People in Koliganek do not want to see oil and gas development. With offshore development, oil spills are a risk to the commercial fishery. Onshore development would create conflicts over supplies. There should not be support facilities nearby. Oil development would create a boom economy, and once all the oil is gone, there would be a problem”-Koliganek (BBCMP 22).*

- *“Fish is a renewable resource. The long lasting benefits of fisheries outweigh the short-term benefits of oil and gas- Ekwok (BBCMP 27).*
- *“People in Egegik want progress, growth, jobs, and money for the community, e.g. onshore oil and gas support facility”-Egegik (BBCMP 34).*
- *“People in Port Heiden want to retain current lifestyle and quality of living and do not want additional people in the area”-Port Heiden (BBCMP 35).*

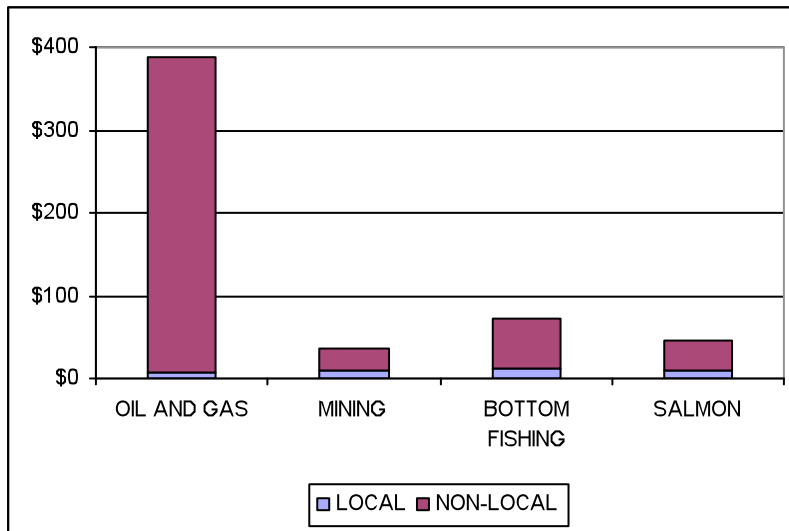
Lonner (1986) echoes these general sentiments in noting:

A healthy renewable resource base allows local communities to persist longer than those communities with on that is finite, exhaustible, and non-renewable; thus hunting, fishing, farming, and herding communities tend to persist longer than mining communities.

Fall et al (2006) report local residents of the Iliamna Lake sub-region are currently very concerned about the environmental impacts of mining in their region. They fear adverse impacts on their subsistence activities such as those resulting from: air and water pollution, helicopter traffic driving away big game herds, barge traffic impacting freshwater seal haul-outs in Iliamna Lake, and risks to salmon populations in the Upper Koktuli River. In addition to the potential environmental impacts of the mine, locals in the Iliamna Lake sub-region seem most concerned with the influx of new residents with whom they will have to compete for local resources.

In a 1975 report prepared by the Bristol Bay Area Development Corporation and the Bristol Bay Native Association called, “Bristol Bay: The Fishery and the People” the authors are concerned that locals will not be able to fill extractive industry jobs that will target engineers, skilled technicians, and union members (BBADC and BBNA 1975: 21). These concerns most likely underlie today’s issues considering education levels in the region. Goldsmith depicts the local/non-local disparity in Alaska’s extractive industry employment today:

**Figure 1.20 Disposition of Payroll In Large-Scale Natural Resource Extraction
(Million \$): 2003**



Source: Goldsmith 2007

In their 1993 study of contrasts between town and village youth aspirations, Hamilton and Seyfrit found that youth in the Northwest Arctic Borough want work in extractive industries, especially those youth from smaller villages (see Figure 1.21.) At the time, there was much less interest among youth in Bristol Bay who were most likely commercial fishing. However, despite this interest, retention of local workers at Red Dog Mine in the Northwest Arctic Borough was and remains a problem:

Efforts by NANA and Cominco to accommodate this labor pool include extensive training and support, as well as work rotation schedules (typically four weeks on, two weeks off) designed not to interfere with subsistence. So far good intentions have not been enough, however, as progress on Native employment is stalled by high turnover. In October 1992, for example, NANA reported that about two-thirds of the recently hired shareholders quit Red Dog within their first six months. The operators are presently experimenting with ways to improve retention (Hamilton and Seyfrit 1993: 260).

Hamilton and Seyfrit (1993) attribute retention problems to the hardships of mine work and how it conflicts with traditional values and subsistence activities. They note the same problems exist

in other arctic mining areas such as Qullissat in Greenland, North Rankin Nickel Mine in Hudson Bay, and Nanisivik on Baffin Island.

Figure 1.21 Students Expectations for Mining Work in 1993, Bristol Bay Borough and Northwest Arctic Borough

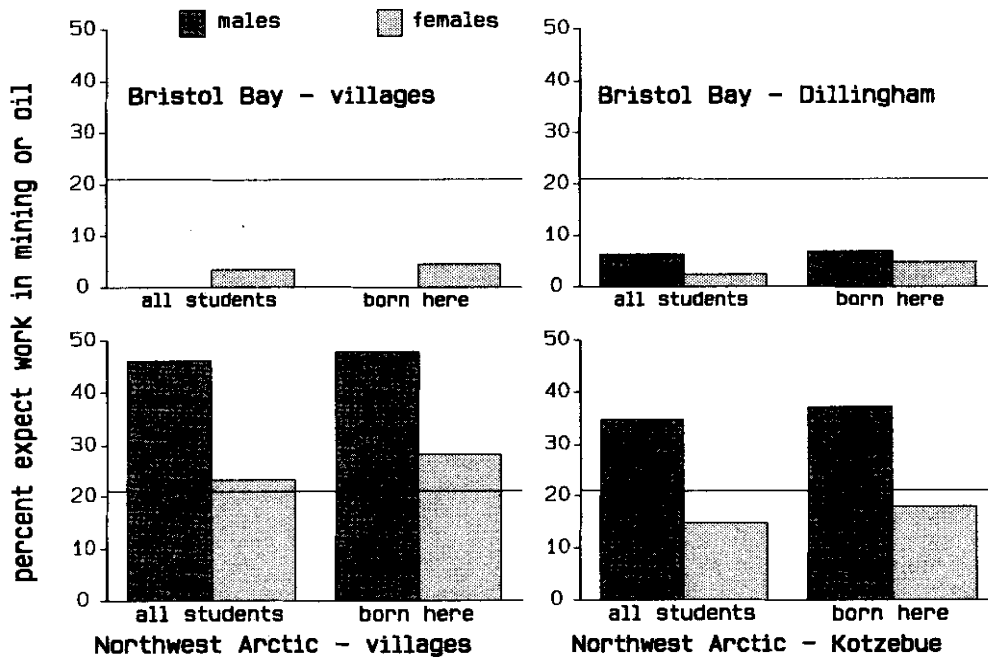


FIG. 6. Percentage of students who expect to work in mining or oil by village/town and region (all students and students born in the region are shown separately).

Source: Hamilton and Seyfrit 1993

They also note that young women were generally not drawn to mining work while young men tended to see opportunities at Red Dog as jobs rather than as careers. This is an important point which we can cross-reference back to many of the findings of this report. Traditionally, cash income in rural Alaska has subsidized the lifestyle of local residents, namely their subsistence practices. In their report, BBADC and BBNA state: “Since the subsistence economy is the basic historical livelihood in the region, other forms of economic development should be undertaken to supplement subsistence activities, not to replace them” (1975:16).

Commercial fishing activities are quite similar to those enjoyed while pursuing subsistence resources and also do not interfere with the local lifestyle or family dynamics because of the short duration of the season. Commercial fishing is also a culturally valued form of employment

in rural Alaska. In the early 1990s, there were more women leaving rural areas than young men, presumably because young men had more freedom—especially in their subsistence and outdoor activities. Without any empirical data to substantiate our claim, we postulate that young, rural Alaskan men are likely to pursue what means they can to be able live in their home areas. In many cases, they probably enjoy cash employment that is analogous to their life experiences, meets their level of education and training, and that is either out-of-doors or hands-on, for example, heavy equipment operating or mechanics. I am not prepared to make any statements here regarding how to foster local interest in extractive industry careers because again, there is probably a critical qualitative difference in peoples' minds between a "job" and a "career." Given the limits of educational opportunities in rural Alaska, this remains a difficult issue. New social dynamics in rural areas, however, such as a growing youth population, make these difficult issues extremely important for a future in which Alaskan youth will have to find balance between their traditional culture and the demands of a global economy.

PART 2: DETAILED OVERVIEW OF SUB-REGIONS

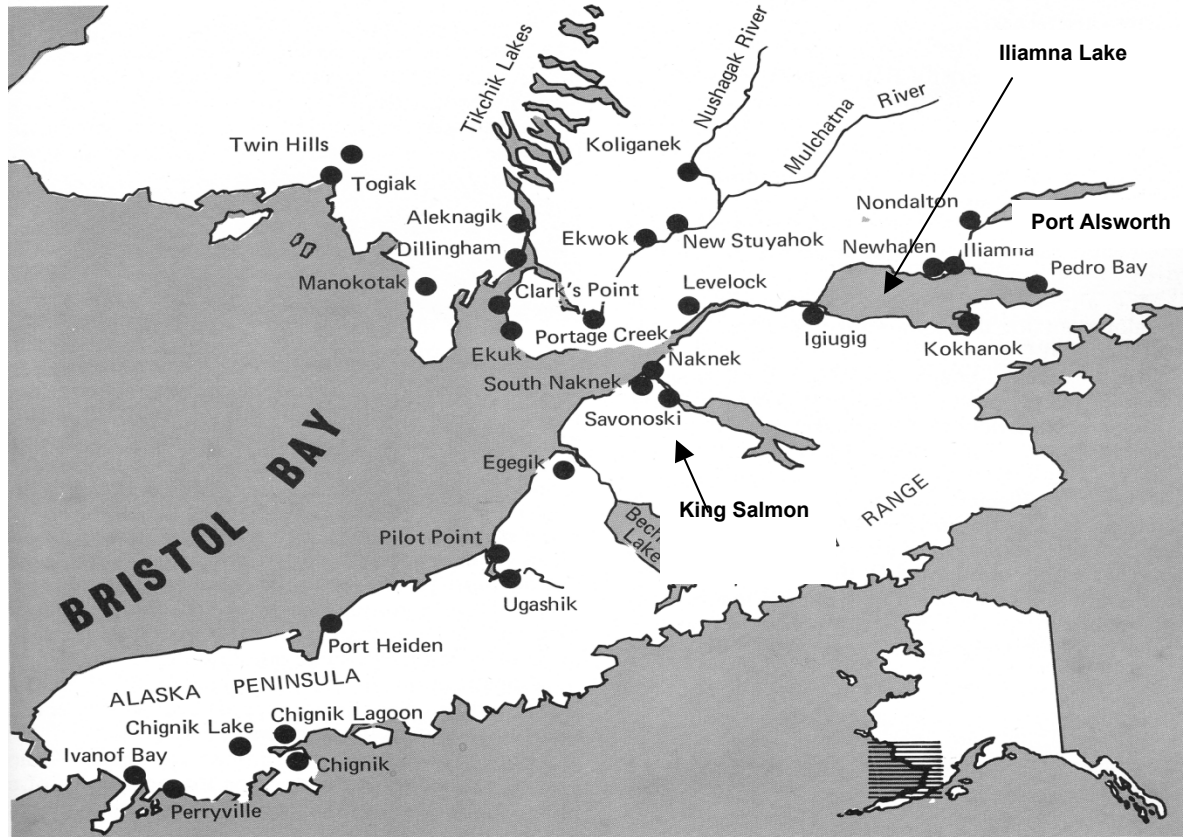
Figure 2.1. provides a map detailing the region's communities classifying them into sub-regions. The following describes the residents of these sub-regions, their community characteristics, and environment. It provides information on subsistence resource use by community, statistics on participation in commercial fishing, and general employment statistics. Note that the subsistence data figures were derived from the State of Alaska's Department of Fish and Game (ADFG) community profile database. This database provides community level harvest data for the most representative year since 1983. Subsistence management has been a contentious issue as described in the section above about institutional arrangements. Currently, ADFG's subsistence division has little funding to update these harvest surveys and therefore the data presented are the best available although obviously questionable as to how they reflect the current reality. One recent and important study conducted by the Alaska Department of Fish and Game, the National Park Service, and Stephen Braund and Associates (2006) on the subsistence practices of residents of a sample communities in the Iliamna Lake sub-region highlights local concerns about mining development in relation to subsistence practices discussed below.

Commercial fishing data tables were produced from information retrieved from Alaska's Commercial Fisheries Entry Commission database.¹⁶ Employment data tables were produced from information retrieved from the State of Alaska Division of Regional and Community Affairs community database.¹⁷ Public assistance data figures were produced from information the Alaska Department of Health and Social Services provided to ISER on request.

¹⁶ <http://www.cfec.state.ak.us/>

¹⁷ http://www.dced.state.ak.us/dca/commdb/CF_COMDB.htm

Figure 2.1 Bristol Bay Communities and Sub-regions



ILIAMNA LAKE

- Igiugig
- Newhalen
- Iliamna
- Pedro Bay
- Nondalton
- Kokhanok

Port Alsworth

NUSHAGAK RIVER

- Portage Creek
- Ekwok
- New Stuyahok
- Koliganek

CENTRAL REGION

- Dillingham
- Aleknagik

TOGIAK BAY REGION

- Manokotak
- Togiak
- Twin Hills

NUSHAGAK BAY

- Clark's Point
- Ekuok

KVICHAK BAY

- Naknek
- South Naknek
- Levelock

King Salmon

NORTH SIDE ALASKA PENINSULA

- Egegik
- Pilot Point
- Port Heiden

Ugashik

SOUTH SIDE ALASKA PENINSULA

- Chignik
- Chignik Lagoon
- Chignik Lake
- Ivanof Bay
- Perryville

Source: BBADC 1975 "Bristol Bay: The Fishery and the People."

ILIAMNA LAKE SUB-REGION

Prior to contact with Europeans, the communities of the Iliamna region were inhabited by Dena'ina Athabascan Indians. Several communities in this region today are ethnically diverse with Alutiiq and Yupiit residents. In Newhalen, for instance, there is a mixed Dena'ina, Alutiiq, and Yupiit history and where the Yup'ik language used to be dominant. The western side of Iliamna Lake was traditionally settled by Aglegmiut Yupiit from the Kuskokwim River region to the north (Townsend 1965). Newhalen, Kakonak, and Igiugig residents are generally of Yupiit descent. Residents of this region live in communities (i.e. Nondalton and Kohkanok) that border the sockeye salmon spawning grounds of the Bristol Bay fishery.

Iliamna village has the most non-Alaska Native residents in this sub-region. It has served as a hub community since its founding and resettlement by residents of "Old Iliamna" in the 1930s. Many villages in this study have been relocated due to river or lake conditions such as silting in the Iliamna River in 1930 and mud flat incursion in Nondalton in 1940 (DRCA.) The abandonment of Old Iliamna resulted in villagers moving to the new Iliamna village, Pedro Bay, Pile Bay, Nondalton, Dillingham, and Anchorage (Townsend 1965). In the 1960s, Iliamna became a Federal Aviation Administration station and has provided transportation and services for the fishing lodges in the region and as a transfer point for communities like Nondalton. Prior to the road being built between Iliamna and Nondalton, groceries were barged to Nondalton via Iliamna. Nondalton is the largest community in this sub-region and 90% of its residents are Alaska Native. It might be characterized as a more traditional community in this region as its residents have engaged in a substantial Dena'ina cultural revitalization since the 1970s (Ellana and Balluta 1992). Ellana and Balluta's study indicates matrilineal elements of Nondalton's social structure still extant in contemporary times. From the available ADFG data, Nondalton residents also harvest more subsistence foods than any other community in the region.

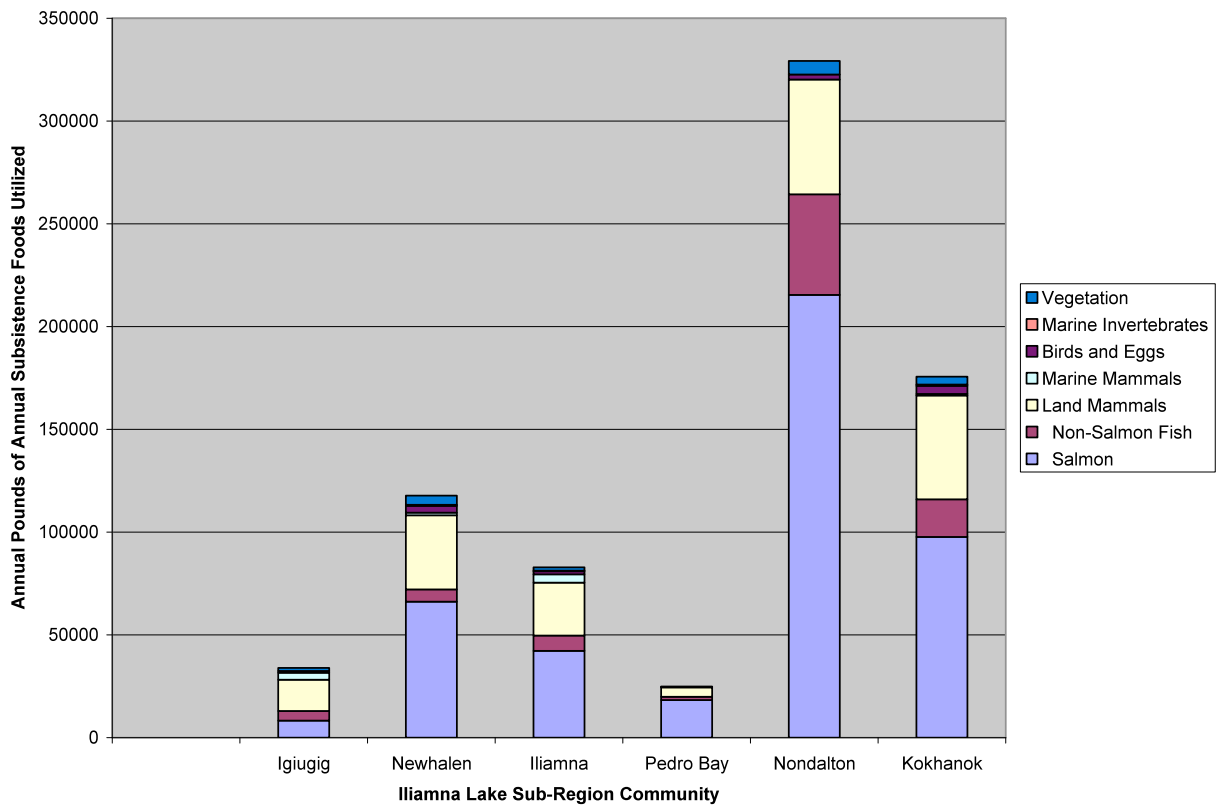
Some villages without easy access, such as Newhalen and Kakonak are also substantially dependent upon subsistence. DRCA reports salmon, trout, grayling, moose, caribou, bear, seal, porcupine and rabbits are utilized. See Table 2.1 and Figure 2.2 for this sub-region's subsistence summary.

Table 2.1 Iliamna Region Subsistence Resource Use, Estimated Pounds Utilized By Most Representative Year (1983-Present)

Community	All Resources	Fish	Salmon	Non-Salmon Fish	Land Mammals	Large Land Mammals	Small Land Mammals	Marine Mammals	Birds and Eggs	Marine Invertebrates	Vegetation
Igiugig	33,915.00	13,029.00	8,325.00	4,704.00	15,173.00	13,896.00	1,277.00	3,395.00	820.00	0.00	1,498.00
Newhalen	117,716.00	72,116.00	66,192.00	5,925.00	36,092.00	32,229.00	3,863.00	1,310.00	3,276.00	513.00	4,409.00
Iliamna	82,915.00	49,696.00	42,204.00	7,492.00	25,682.00	24,702.00	980.00	4,063.00	1,516.00	321.00	1,637.00
Pedro Bay	24,931.00	19,895.00	18,269.00	1,626.00	4,560.00	4,560.00	0.00	0.00	135.00	132.00	210.00
Nondalton	329,274.00	264,393.00	215,447.00	48,946.00	55,820.00	50,323.00	5,498.00	0.00	2,442.00	0.00	6,619.00
Kokhanok	175,639.00	115,951.00	97,626.00	18,325.00	50,589.00	45,658.00	4,931.00	728.00	3,942.00	573.00	3,855.00

Source: Alaska Department of Fish and Game, Subsistence Division Community Database

Figure 2.2 Estimated Annual Pounds of Subsistence Foods Utilized by Community, Iliamna Lake Region



Residents of this region participate in Bristol Bay’s commercial salmon fisheries as fishermen and some find employment in canneries. See Table 2.2 for 2006 resident participation in commercial fisheries. See Table 2.3 for resident employment statistics.

Table 2.2 Iliamna Lake Region Resident Participation in Commercial Fisheries

	# Fishing Permits 2006	Estimated Gross Value*	#Fishermen Who Fished	Est 2006 Population**
Igiugig	6	X	3	53
Newhalen	42	X	36	167
Iliamna	47	\$666,264	43	82
Pedro Bay	9	X	9	55
Nondalton	24	\$124,683	14	196
Kokhanok	21	\$267,682	24	168

Source: Alaska Commercial Fisheries Entry Commission Database

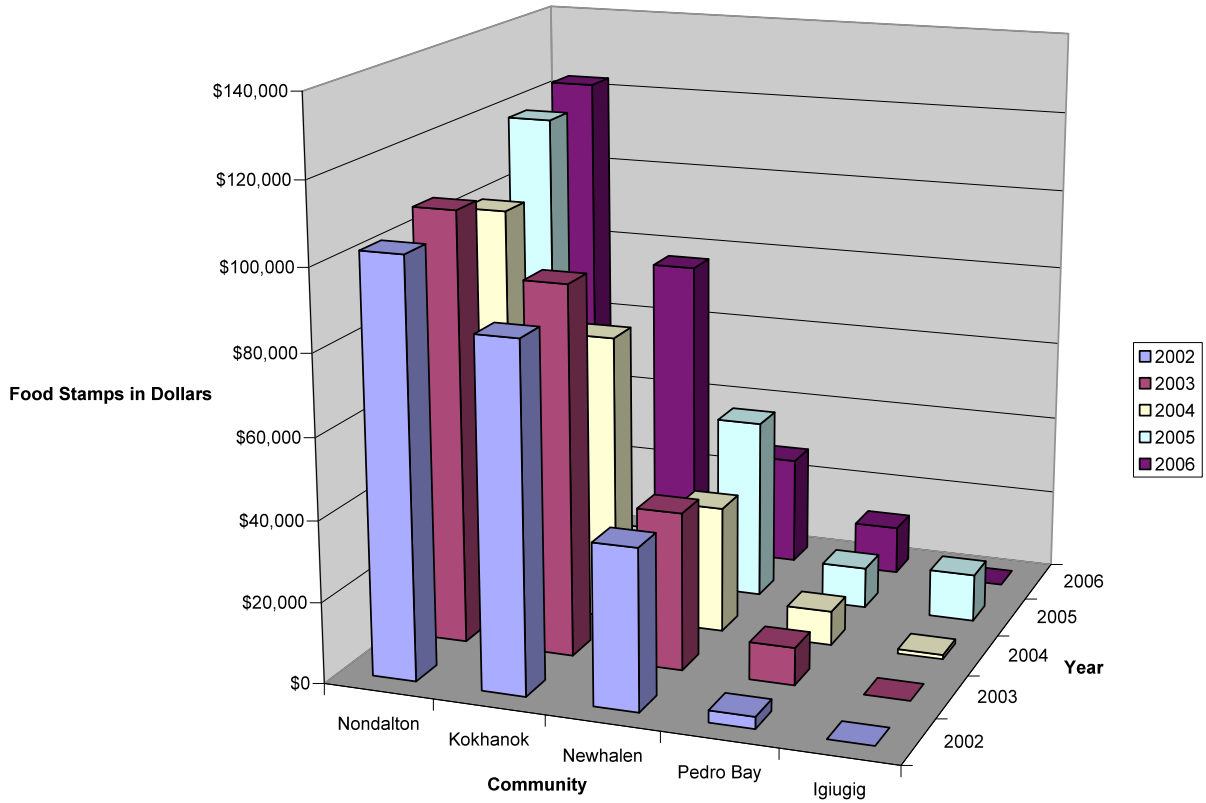
Table 2.3 Iliamna Lake Region Census 2000 Reported Employment

Community	Population	Pop_16_Over	Unemployed	Pct_Adults_Not_Working	Pop in Poverty
Igiugig	53	20	0	55.00%	2
Iliamna	82	88	0	28.40%	4
Kokhanok	168	121	5	67.80%	75
Newhalen	167	84	15	60.70%	24
Nondalton	196	150	28	68.70%	104
Pedro Bay	55	34	0	20.60%	3

Source: DRCA

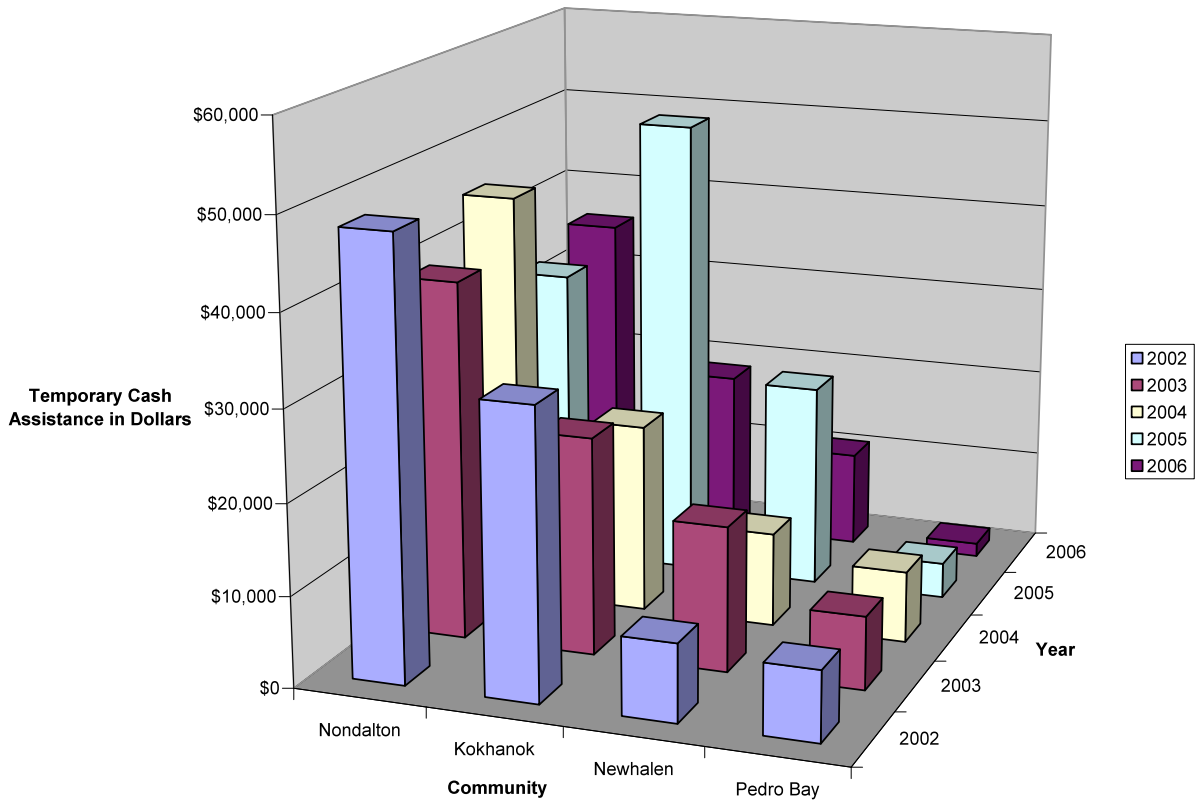
Figures 2.3 and 2.4 provide public assistance data on food stamps used and temporary cash assistance utilized between 2002 and 2006.

Figure 2.3 Federal Non-Cash Public Assistance: Food Stamps, Iliamna Lake Region 2002-2006



Source: ADHSS

Figure 2.4 Alaska State Block Grant Temporary Cash Assistance for Needy Families, Iliamna Lake Region



Source: ADHSS

NUSHAGAK RIVER SUB-REGION

The communities of this region were traditionally Yupiit, such as Portage Creek, New Stuyahok, and Koliganek. In some villages like Ekwok, there are also a smaller number of residents with Alutiiq ancestry. These communities depend on services provided through the community of Dillingham. Most families have fish camps at Ekuk or Lewis Point. Salmon, moose, caribou, rabbit, ptarmigan, duck and geese are the primary subsistence food sources of meat. See Table 2.4 and Figure 2.5 for subsistence resource use in this sub-region.

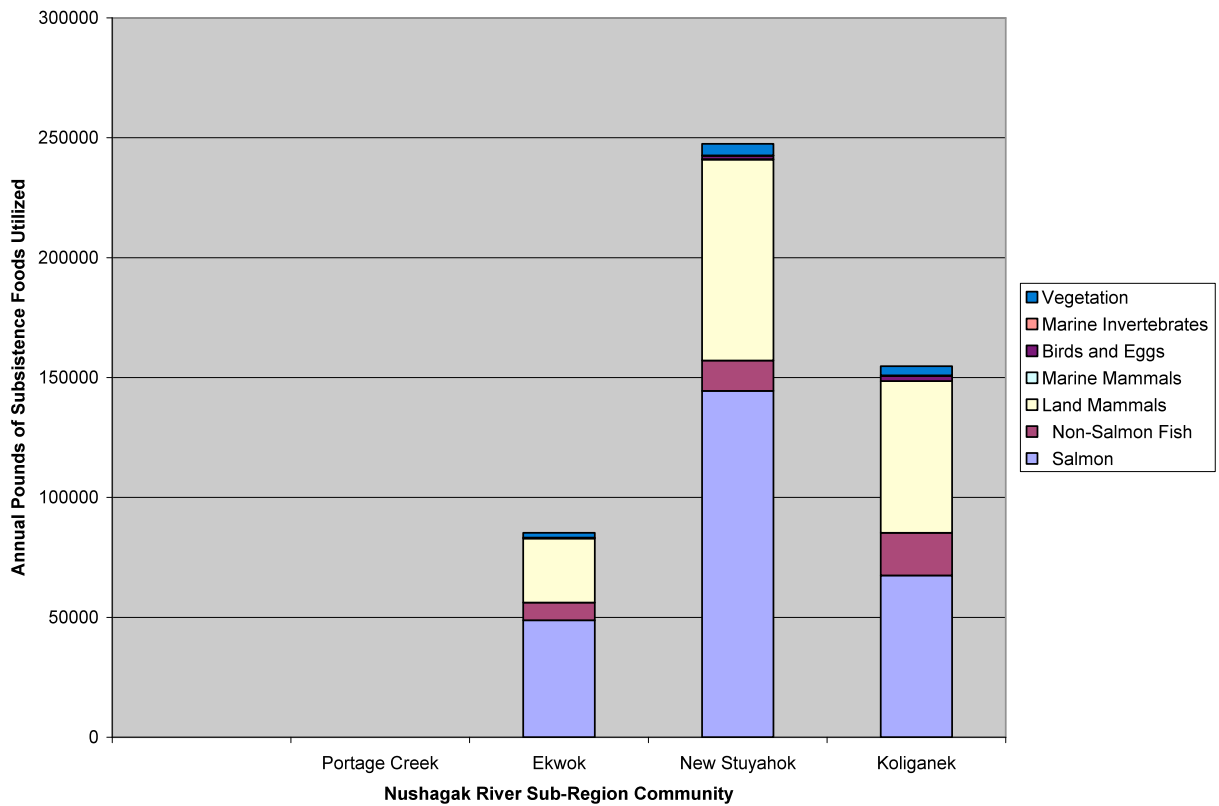
Table 2.4 Subsistence Resource Use in the Nushagak River Region, Estimated Pounds Utilized By Most Representative Year (1983-Present)

Community	All Resources	Fish	Salmon	Non-Salmon Fish	Land Mammals	Large Land Mammals	Small Land Mammals	Marine Mammals	Birds and Eggs	Marine Invertebrates	Vegetation
Portage Creek	*										
Ekwok	85,260.00	56,167.00	48,827.00	7,340.00	26,679.00	20,524.00	6,155.00	0.00	390.00	0.00	2,025.00
New Stuyahok	247,494.00	157,112.00	144,394.00	12,718.00	83,812.00	67,096.00	16,717.00	207.00	1,382.00	139.00	4,840.00
Koliganek	154,705.00	85,262.00	67,520.00	17,743.00	63,249.00	54,699.00	8,550.00	0.00	2,148.00	240.00	3,878.00

Source: Alaska Department of Fish and Game, Subsistence Division Community Database

*No data for Portage Creek

Figure 2.5 Estimated Annual Pounds of Subsistence Foods Utilized by Community



See Table 2.5 for resident participation in commercial fishing and Table 2.6 for employment statistics.

Table 2.5 Nushagak River Sub-region Resident Participation in Commercial Fisheries

	# Fishing Permits 2006	Estimated Gross Value*	#Fishermen Who Fished	Est 2006 Population**
Portage Creek	3	X	3	20
Ekwok	9	X	3	111
New Stuyahok	80	\$349,098	42	472
Koliganek	54	\$302,500	39	165

Source: Alaska Commercial Fisheries Entry Database

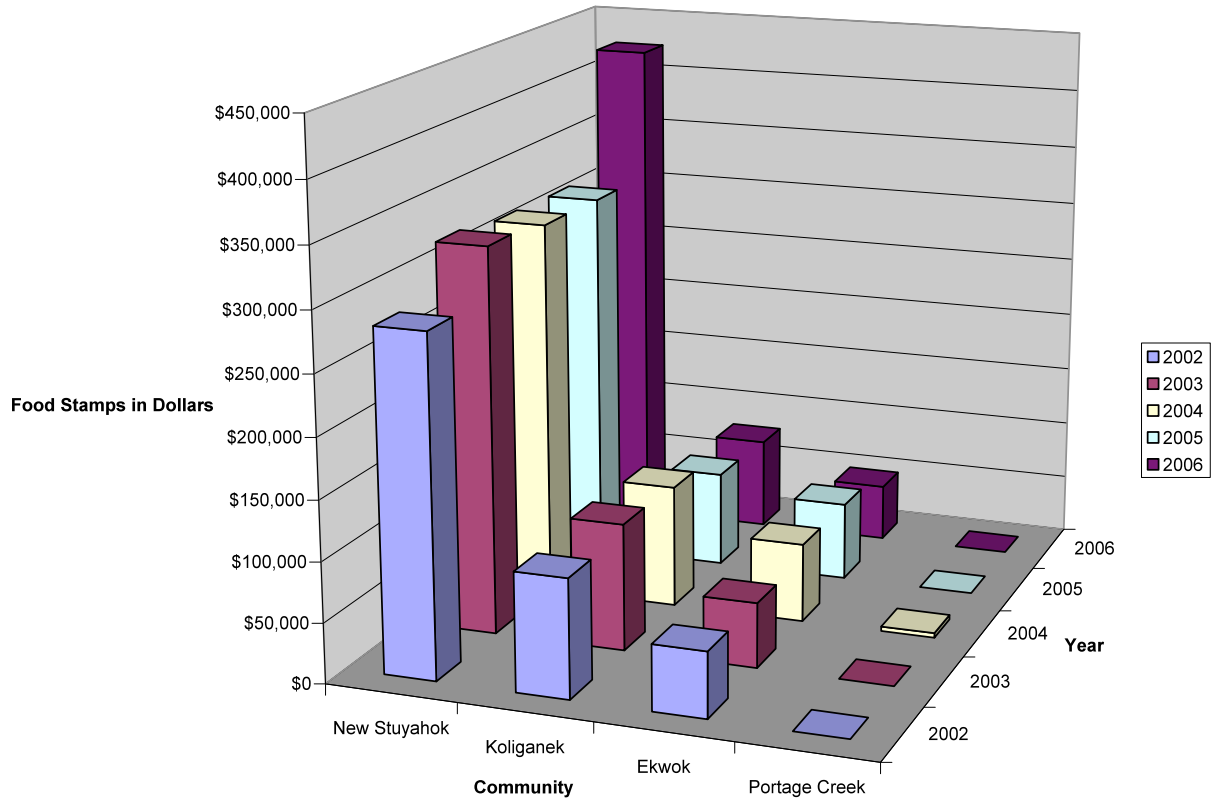
Table 2.6 Nushagak River Sub-region Census 2000 Reported Employment

Community	Population	Pop_16_Over	Unemployed	Pct_Adults_Not_Working	Pop_In_Poverty
Ekwok	111	63	7	55.60%	34
Koliganek	165	109	10	39.50%	39
New Stuyahok	472	295	27	55.30%	152
Portage Creek	20	4	0	50.00%	0

Source: DRCA

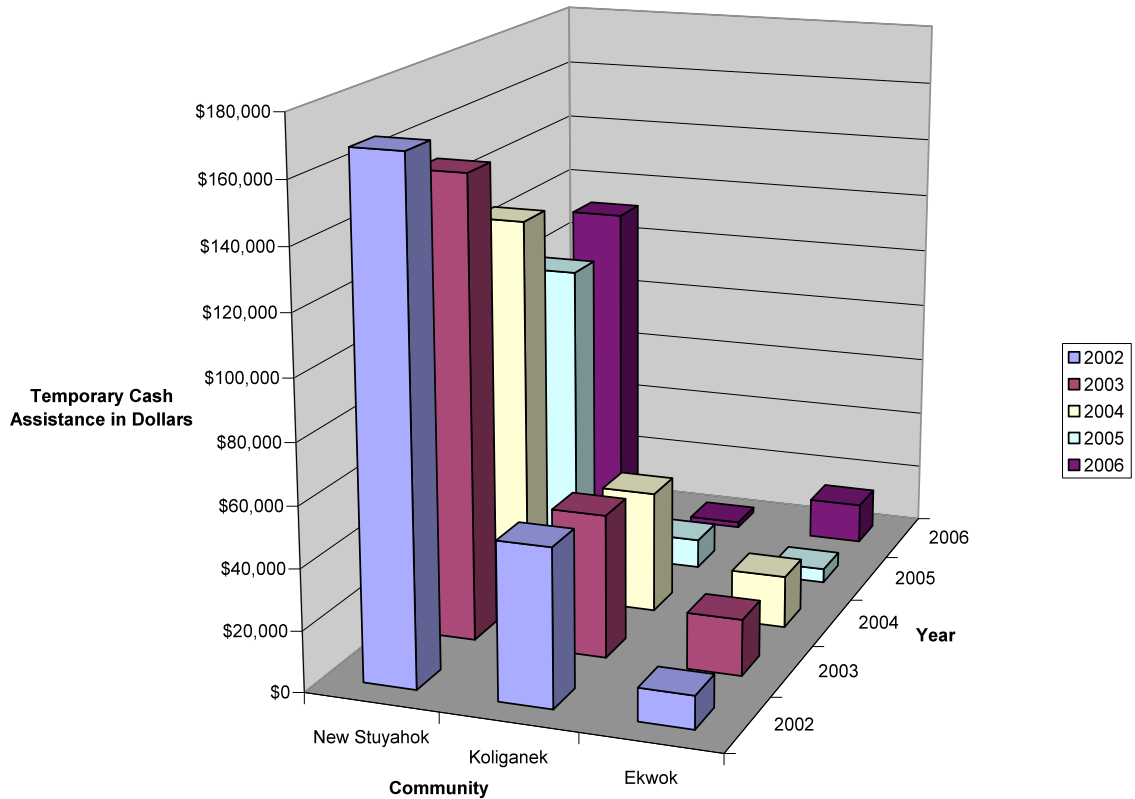
Figures 2.6 and 2.7 provide public assistance data on food stamps used and temporary cash assistance utilized between 2002 and 2006.

Figure 2.6 Federal Non-Cash Public Assistance: Food Stamps, Nushagak River Sub- Region 2002-2006



Source: ADHSS

Figure 2.7 Alaska State Block Grant Temporary Cash Assistance for Needy Families, Nushagak River Sub- Region



Source: AKDHSS

CENTRAL SUB- REGION

Dillingham is the hub community for the entire Bristol Bay region which was traditionally Yupiit and is ethnically mixed today. Kresge (1974) noted that the Alutiiq are the predominant Alaska Native group in Dillingham. As a hub community, Dillingham has traditionally served the communities of Aleknagik, Manokotak, Clark’s Point, Ekuk, Koliganek, New Stuyahok, and Ekwok. The Dillingham area commercial history began with the founding of a Russian fur trading post, Alexandrovski Redoubt, in 1818 (DRCA) and then as a center for salmon canning in the 1880s. By 1910, there were ten canneries in Nushagak Bay (Kresge et al. 1974). The salmon industry in the Dillingham area expanded through the 1960s and by 1970 the

community’s population increased to 900 people. This industry has traditionally attracted a seasonal flux of fishery participants to the region to work as fishermen, cannery workers, and support industry personnel. In addition, many residents of outlying villages have historically used summer fishing camps on the outside of Dillingham during the salmon season.

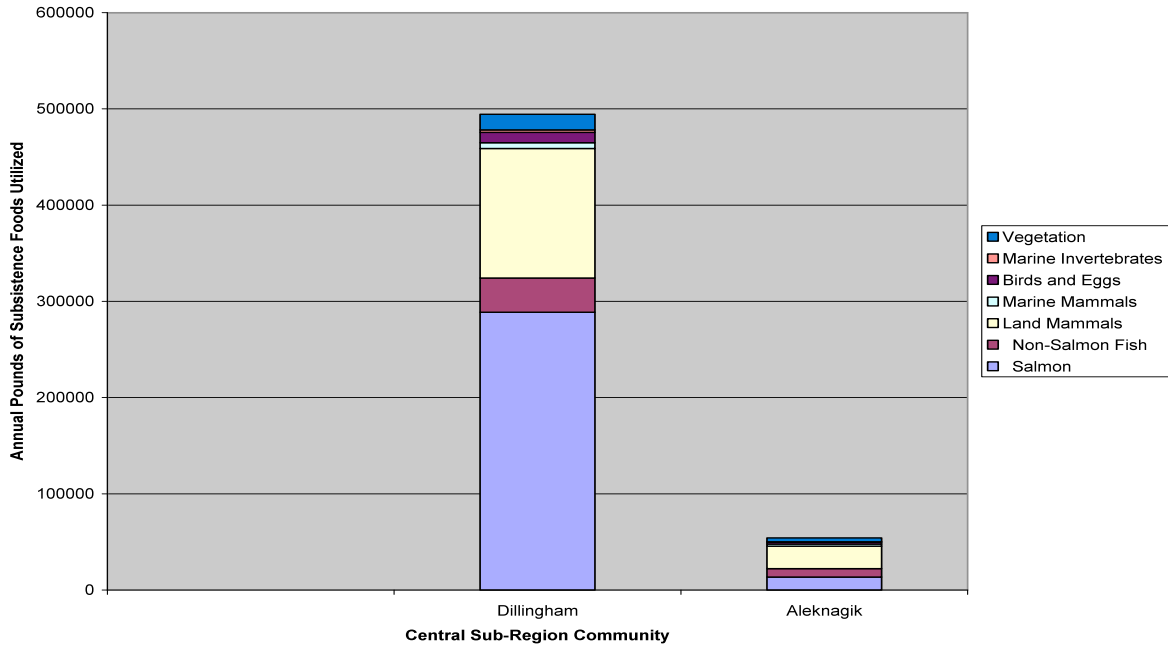
Many residents depend on subsistence activities and trapping of beaver, otter, mink, lynx and fox have provided cash income. Salmon, grayling, pike, moose, bear, caribou, and berries are harvested. Dillingham has airport jet service to Anchorage and a 23 mile road to Aleknagik.

Aleknagik is close to the Wood River and Tikchik Lakes, renowned sport fishing destinations. Wood River and Aleknagik Lake have been used historically as summer fish camps. The community was traditionally Yupiit but in the late 1940s, a Seventh-Day Adventist Mission and School was established on the north shore which opened the community to settlers. During the 1950s, a Moravian Church and a Russian Orthodox Church were built in Aleknagik and over 35 families lived along the lake. See Table 2.7 and Figure 2.8 for subsistence resource use in this sub-region.

Table 2.7 Subsistence Resource Use in the Central Sub-region, Estimated Pounds Utilized By Most Representative Year (1983-Present)

	Salmon	Non-Salmon Fish	Land Mammals	Marine Mammals	Birds and Eggs	Marine Invertebrates	Vegetation
Dillingham	288,651.00	35,649.00	134,489.00	6,067.00	10,807.00	2,488.00	16,328.00
Aleknagik	13,556.00	8,749.00	23,288.00	2,171.00	2,007.00	450.00	3,859.00

Figure 2.8 Estimated Annual Pounds of Subsistence Foods Utilized by Community



Source: ADFG Community Profile Database

See Table 2.8 for resident participation in commercial fishing in 2006 and Table 2.9 for current employment statistics.

Table 2.8 Central Sub- Region Resident Participation in Commercial Fisheries

	# Fishing Permits 2006	Estimated Gross Value*	#Fishermen Who Fished	Est 2006 Population**
Dillingham	844	\$18,357,549	586	2397
Aleknagik	81	\$602,363	54	241

Source: Alaska Commercial Fisheries Entry Commission Database

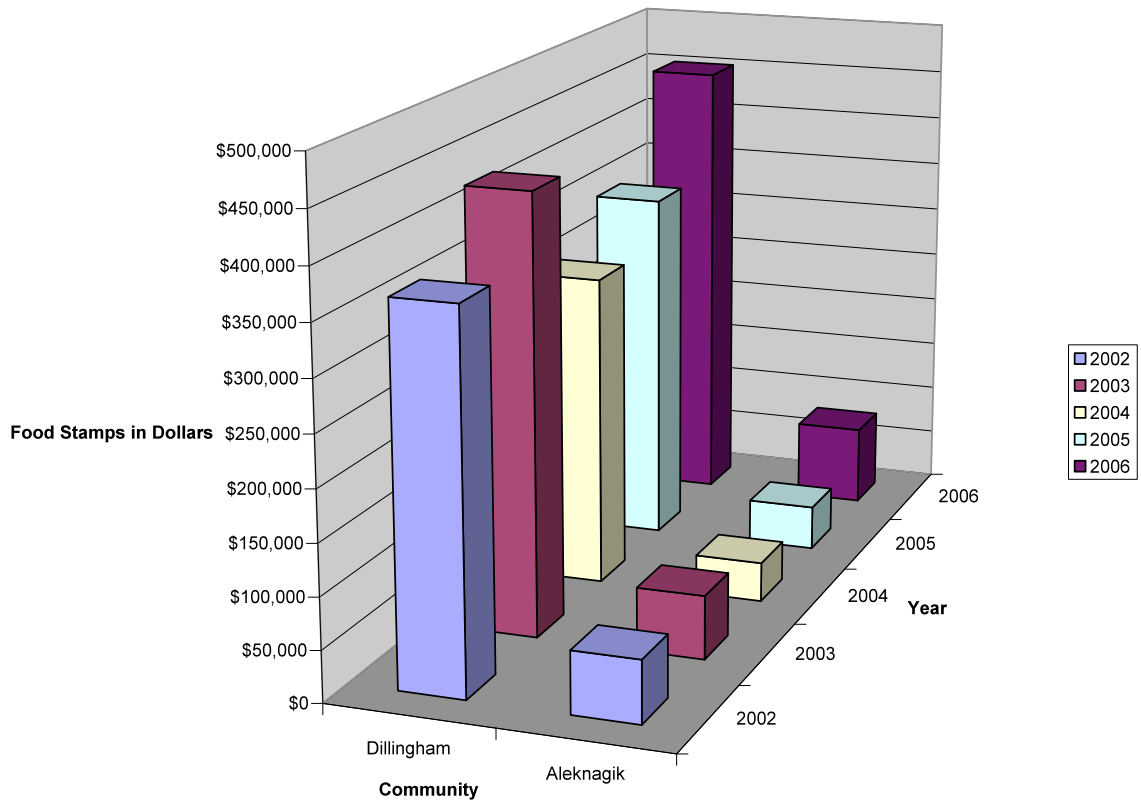
Table 2.9 Central Sub-region Census 2000 Reported Employment

Community	Population	Pop_16_Over	Unemployed	Pct_Adults_Not_Working	POP_IN_POVERTY
Aleknagik	241	143	19	51.70%	95
Dillingham	2397	1702	88	32.20%	287

Source: DRCA

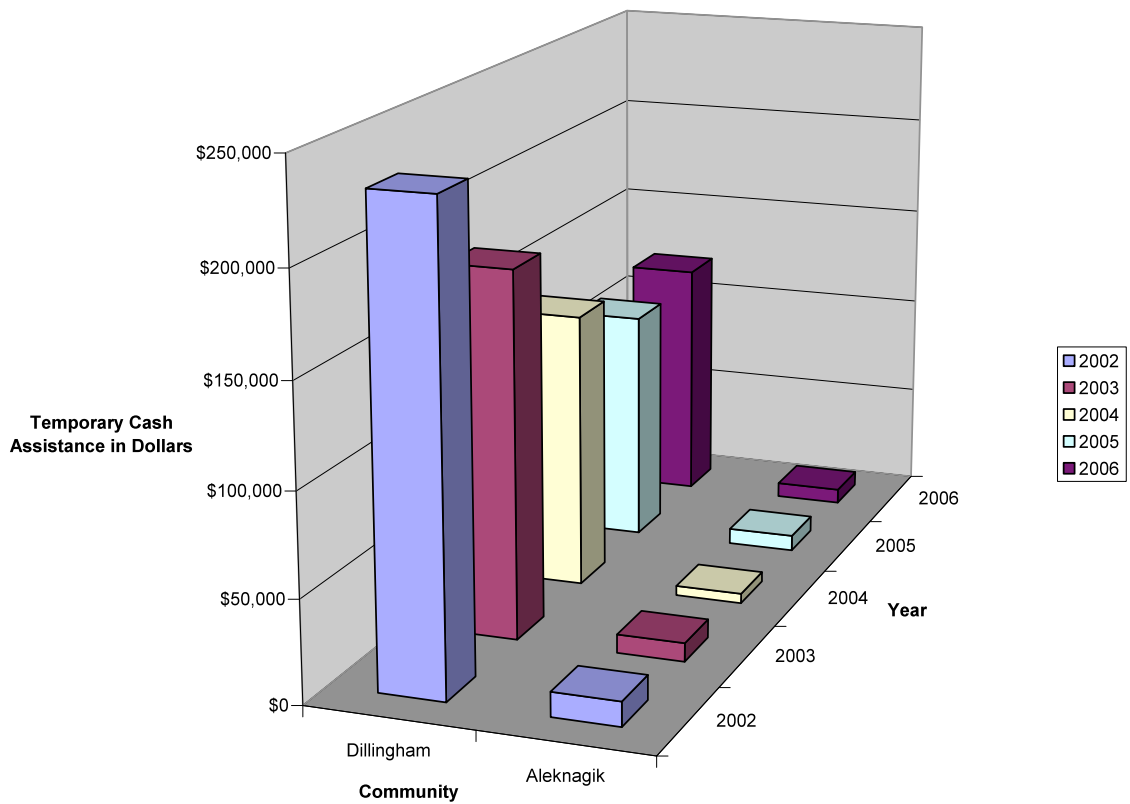
Figures 2.9 and 2.10 provide public assistance data on food stamps used and temporary cash assistance utilized between 2002 and 2006.

Figure 2.9 Federal Non-Cash Public Assistance: Food Stamps, Central Sub- Region 2002-2006



Source: ADHSS

Figure 2.10 Alaska State Block Grant Temporary Cash Assistance for Needy Families, Central Sub-Region



Source: ADHSS

TOGIAC BAY SUB-REGION

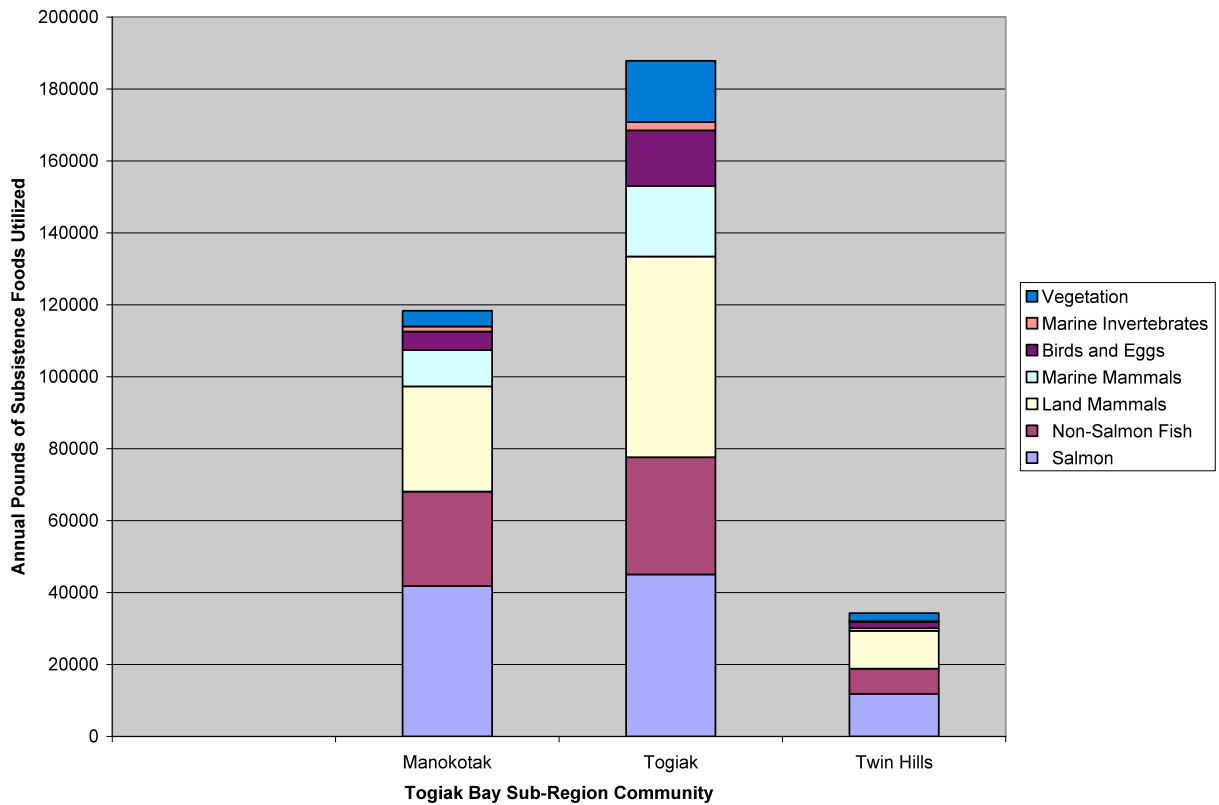
The Togiak Bay sub-region is predominantly Yupiit. Residents have strong cultural ties to the Yukon-Kuskokwim region, because many resident families originally migrated from there to Togiak following the 1918-19 influenza epidemic. The community of Togiak relies economically on commercial salmon, herring, and herring roe-on-kelp fishing. The communities of Togiak, Twin Hills, and Manokotak have an exchange relationship that was traditionally based on exchanging seal oil for blackfish. The primary subsistence foods harvested in the region are salmon, herring, seal, sea lion, whale, walrus, clams, geese, and ducks (DRCA).

See Table 2.10 and Figure 2.11 for subsistence resource use in this sub-region.

Table 2.10 Subsistence Resource Use in the Togiak Bay Sub-region, Estimated Pounds Utilized By Most Representative Year (1983-Present)

Community	Salmon	Non-Salmon Fish	Land Mammals	Marine Mammals	Birds and Eggs	Marine Invertebrates	Vegetation
Manokotak	41,847.00	26,229.00	29,270.00	10,052.00	5,197.00	1,391.00	4,349.00
Togiak	45040	32577	55806	19649	15463	2292	17002
Twin Hills	11867	6966	10515	751	1759	151.5	2250

Figure 2.11 Estimated Annual Pounds of Subsistence Foods Utilized by Community, Togiak Bay Sub-region



See Table 2.11 for resident participation in commercial fishing and Table 2.12 for reported employment statistics.

Table 2.11 Togiak Sub-region Resident Participation in Commercial Fisheries

	# Fishing Permits 2006	Estimated Gross Value*	#Fishermen Who Fished	Est 2006 Population**
Manokotak	318	\$1,832,214	147	423
Togiak	854	\$7,192,264	365	783
Twin Hills	27	X	11	77

Source: Alaska Commercial Fisheries Entry Commission Database

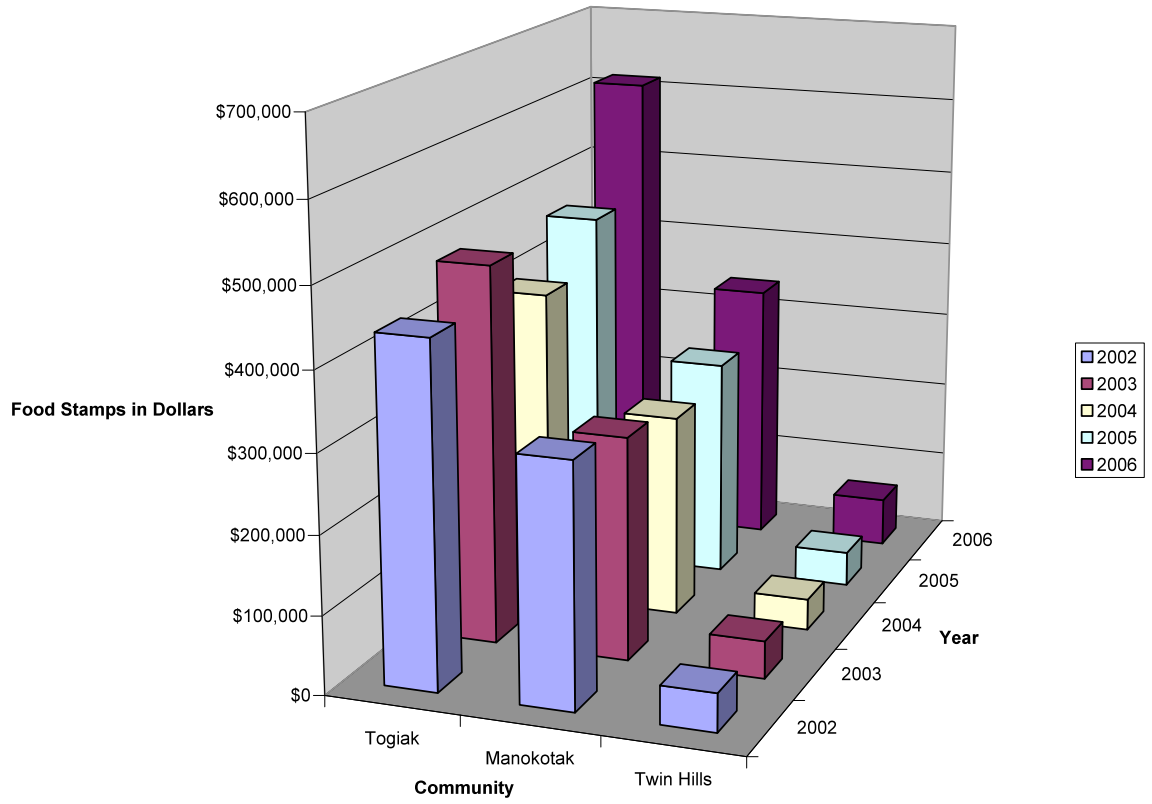
Table 2.12 Togiak Sub-region Census 2000 Reported Employment

Community	Population	Pop_16_Over	Unemployed	Pct_Adults_Not_Working	Pop_In_Poverty
Manokotak	423	256	14	64.80%	141
Togiak	783	519	62	66.70%	247
Twin Hills	77	30	0	50.00%	12

Source: DRCA

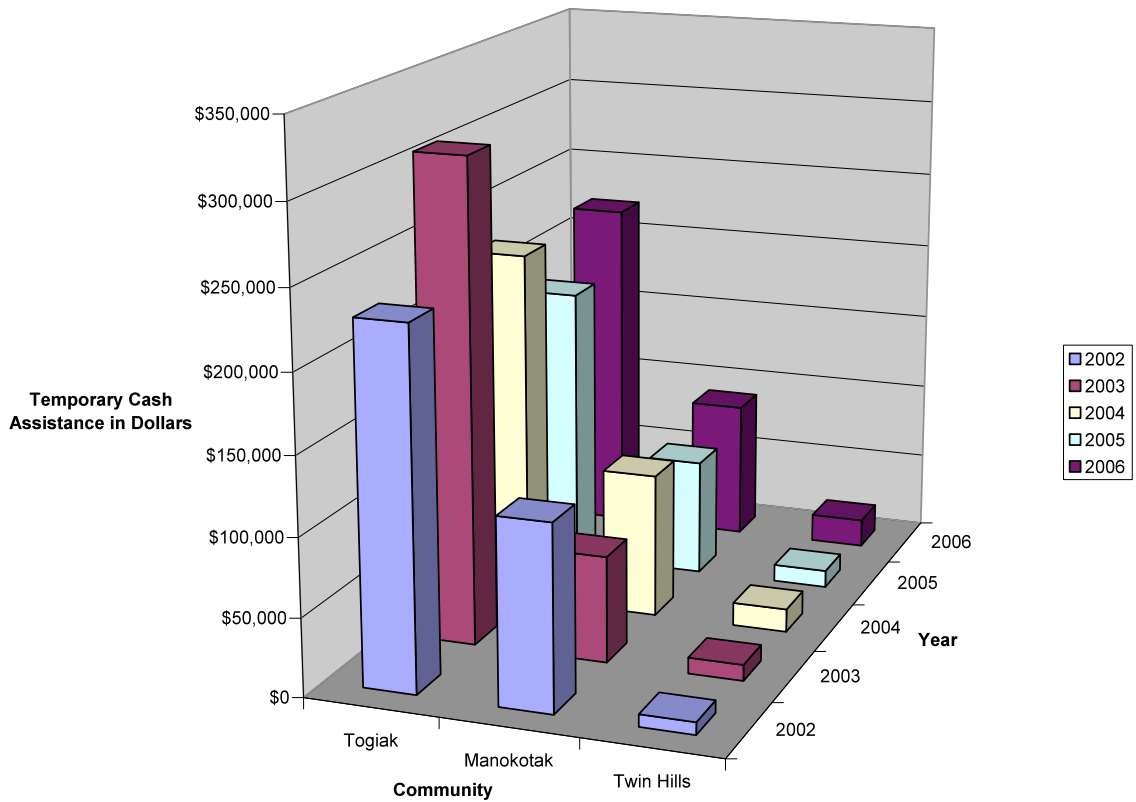
Figures 2.12 and 2.13 provide public assistance data on food stamps used and temporary cash assistance utilized between 2002 and 2006.

Figure 2.12 Federal Non-Cash Public Assistance: Food Stamps, Togiak Bay Sub- Region 2002-2006



Source: ADHSS

Figure 2.13 Alaska State Block Grant Temporary Cash Assistance for Needy Families, Togiak Bay Sub-Region



Source: ADHSS

NUSHAGAK BAY SUB-REGION

Traditionally, Ekuk was a Yupiit village. It was established as a processing site by non-Alaska Native settlers in 1888 (DRCA) and is only occupied in the summer today, serviced by Dillingham. It serves as a summer subsistence salmon set net site for local families. Wards Cove Packing Company’s processing facility was closed down in 2002 but Trident Seafoods also operates a processor there. Clark’s Point was also established as a cannery site in 1888 by settlers from outside Alaska. Today the residents are predominately Yupiit and the population swells in the summer in salmon fishing season. Trident Seafoods maintains a processing plant

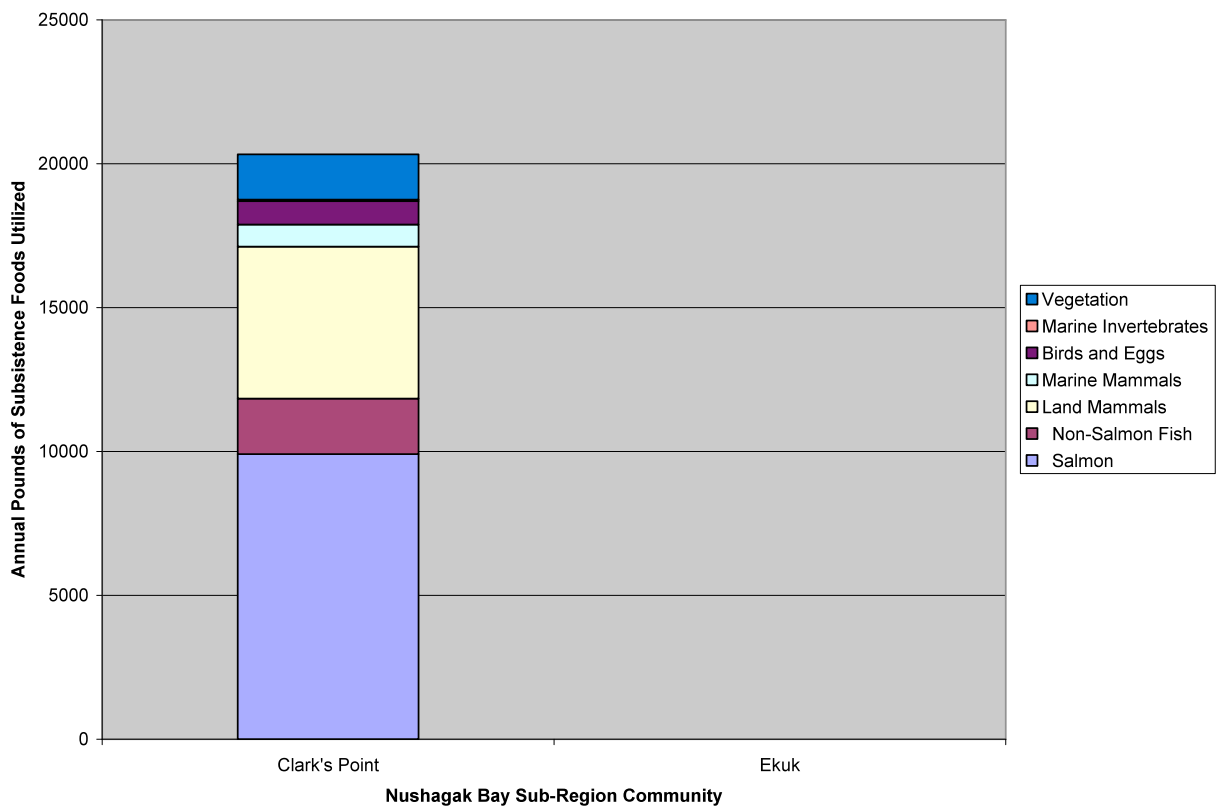
there. Locals pursue salmon, smelt, moose, bear, rabbit, ptarmigan, duck and geese in their subsistence activities (DRCA). See Table 2.13 and Figure 2.14 for subsistence resource use in this sub-region.

Table 2.13 Subsistence Resource Use in the Nushagak Bay Sub-Region, Estimated Pounds Utilized By Most Representative Year (1983-Present)

Community	Salmon	Non-Salmon Fish	Land Mammals	Marine Mammals	Birds and Eggs	Marine Invertebrates	Vegetation
Clark's Point	9911	1927	5279	772	815	48	1573
Ekuk							

Source: ADFG *No data for Ekuk

Figure 2.14 Estimated Annual Pounds of Subsistence Foods Utilized by Community, Nushagak Bay Sub-Region



See Table 2.14 for resident participation in commercial fishing and Table 2.15 for reported employment statistics.

Table 2.14 Nushagak Bay Sub-region Resident Participation in Commercial Fisheries

	# Fishing Permits 2006	Estimated Gross Value*	#Fishermen Who Fished	Est 2006 Population**
Clarks Point	35	\$531,211	29	69

Source: Alaska Commercial Fisheries Entry Commission Database

Table 2.15 Nushagak Bay Sub-region Employment Statistics

Community	Population	Pop_16_Over	Unemployed	Pct_Adults_Not_Working	Pop_In_Poverty
Clark's Point	69	59	3	57.60%	37
Ekuk	0	4	0	50.00%	0

Source: DRCA

Figures 2.15 and 2.16 provide public assistance data on food stamps used and temporary cash assistance utilized between 2002 and 2006.

Figure 2.15 Federal Non-Cash Public Assistance: Food Stamps, Nushagak Bay Sub- Region 2002-2006

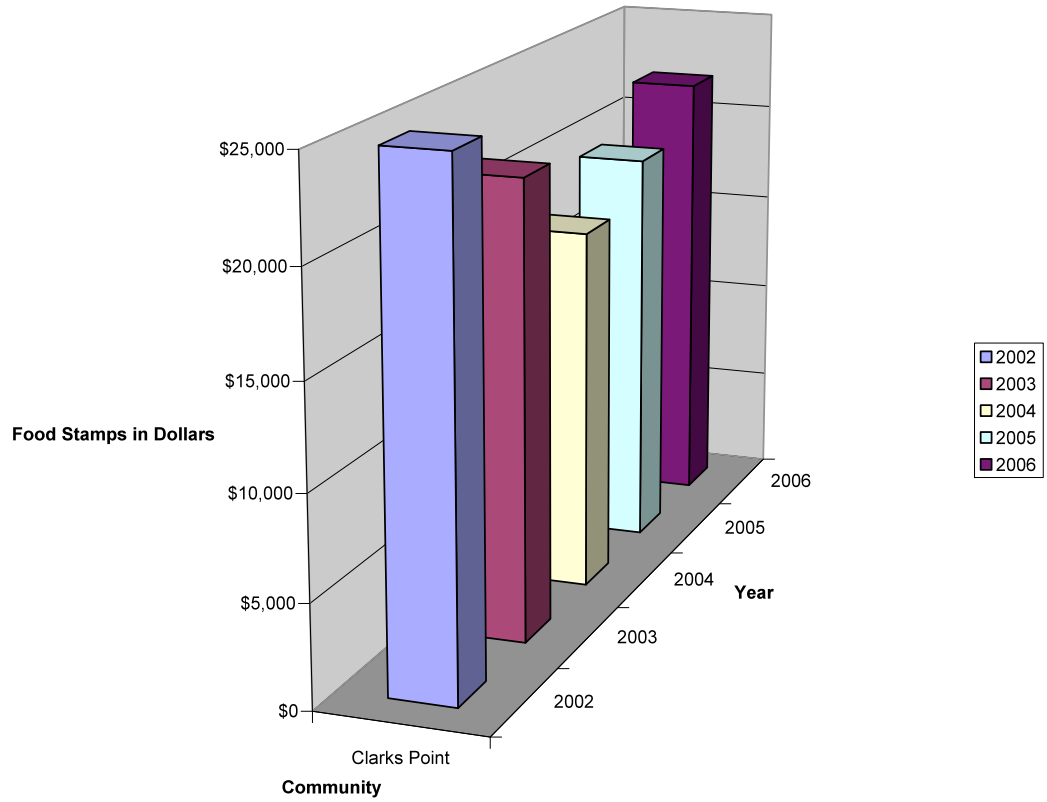
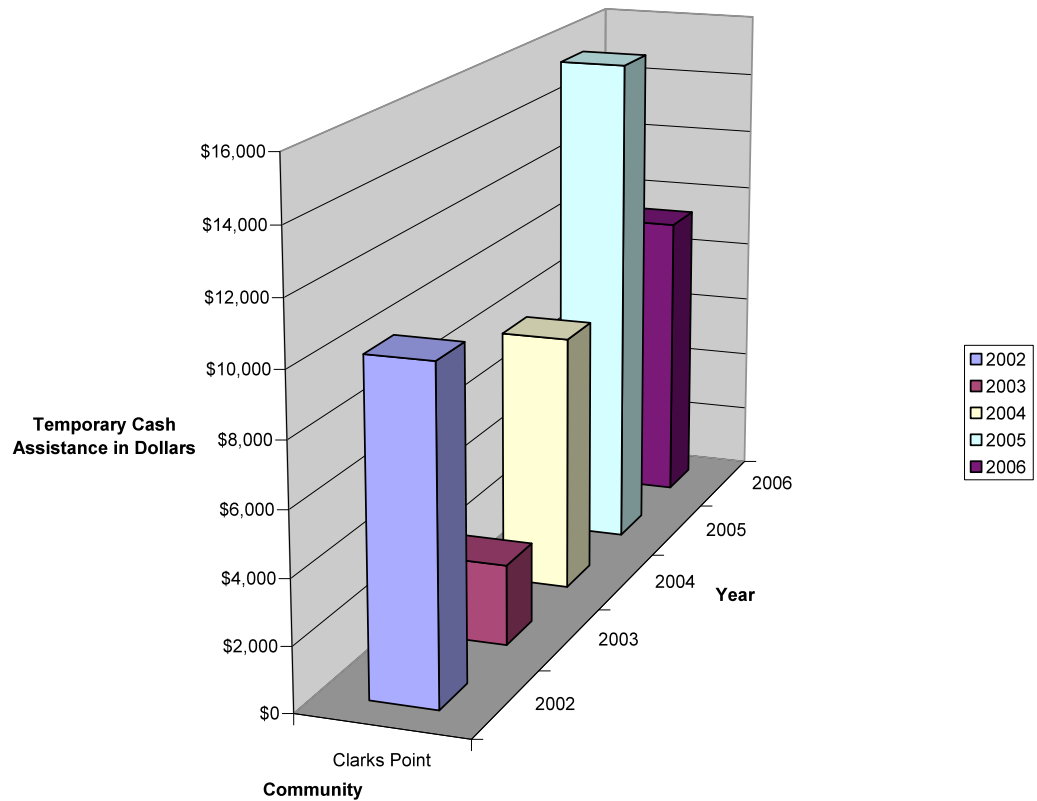


Figure 2.16 Alaska State Block Grant Temporary Cash Assistance for Needy Families, Nushagak Bay Sub- Region



Source: ADHHS

KVICHAK BAY SUB-REGION

This sub-region has a long settlement history with continuous occupation for 6,000 years by both Yupiit and Dena’ina residents. Naknek as the sub-region center, was used as a fort site by the Russian navy in the mid-1800s and after the U.S. purchase of Alaska became a salmon canning site beginning in 1890 (DRCA). Today, Naknek is one of Alaska’s main fishery service centers from which salmon is trucked to the airport in King Salmon, bound for markets abroad.

South Naknek was also established as a processing town although it also has a long history of indigenous settlement. This community also participated in the reindeer herding experiment of the 1930s as described above. Wards Cove also closed its operation in South Naknek in 2002

although Trident Seafoods has a facility there as well. Levelock’s residents are Alutiiq and Yupiit. Residents commercial fish for cash and engage in a high level of subsistence activities.

The community of King Salmon was settled by Alaska Natives after the 1912 eruption of Mt. Katmai and is characterized as an ethnic mixture of Alutiiq, Yupiit, Dena’ina, and non-Alaska Native residents. King Salmon was originally excluded from the Alaska Native Claims Settlement Act but its Alaska Native residents achieved tribal status in 2000. It became an U.S. air force base during the Aleutian Campaign of World War II. Although DRCA describes the base in “caretaker status” today, the community has become a “government, transportation, and service center” with highly accessible airport. The National Park Service, the National Weather Bureau, and the Alaska Department of Fish and Game all maintain offices in King Salmon. Some locals are employed in these government agencies, many in air services, and commercial fishing. It also serves as a transfer point to the many tourist destinations on the Alaska Peninsula: Katmai National Park and Preserve and the McNeil River State Game Sanctuary, Brooks Camp, the Valley of Ten Thousand Smokes, and sport fishing areas (DRCA).

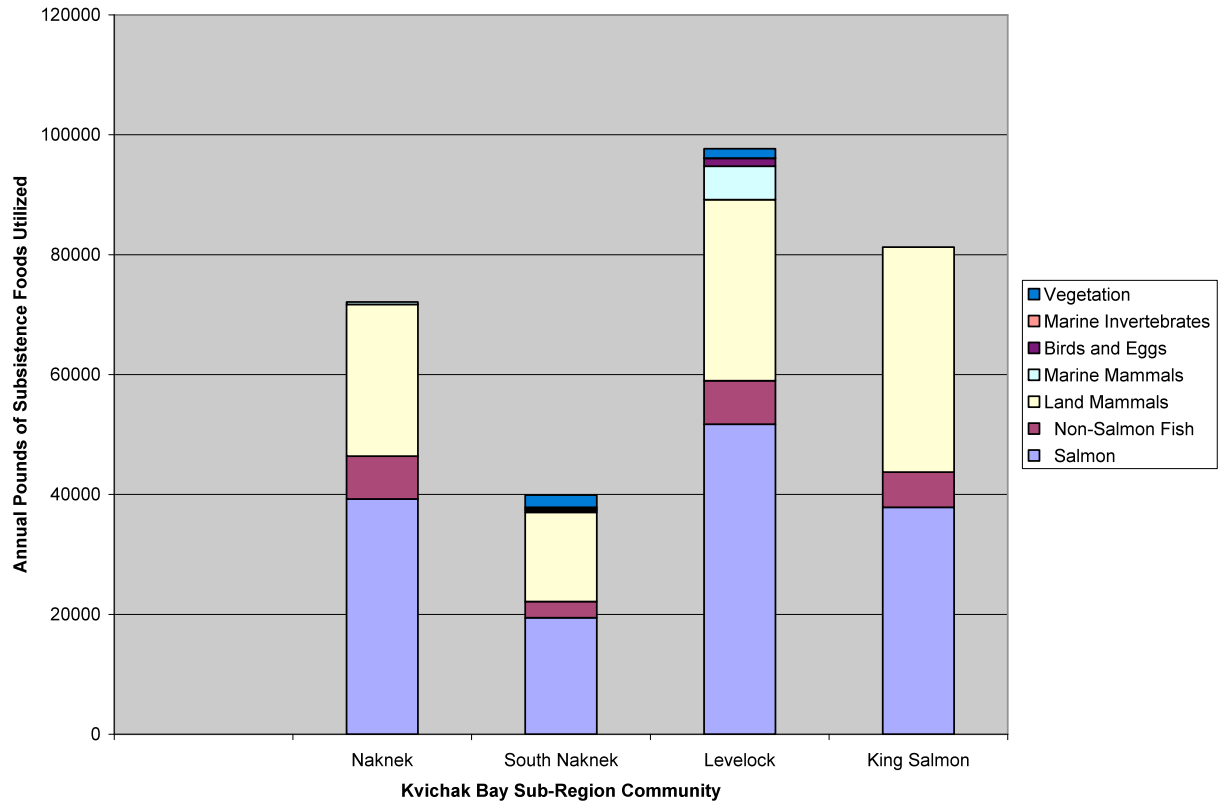
In the Kvichak Bay sub-region, trout, caribou, moose, rabbit, porcupine, seal, and berries are harvested and some people trap. See Table 2.16 and Figure 2.17 for a summary of the Kvichak region’s subsistence harvest by community.

Table 2.16 Subsistence Resource Use in the Kvichak Bay Sub-region, Estimated Pounds Utilized By Most Representative Year (1983-Present)

Community	All Resources	Fish	Salmon	Non-Salmon Fish	Land Mammals	Large Land Mammals	Small Land Mammals	Marine Mammals	Birds and Eggs	Marine Invertebrates	Vegetation
Naknek	72,110.00	46,393.00	39,259.00	7,134.00	25,320.00	24,766.00	554.00	397.00	0.00	0.00	
South Naknek	39,893.00	22,154.00	19,451.00	2,703.00	14,880.00	14,832.00	48.00	269.00	277.00	272.00	2,042.00
Levelock	97,677.00	58,988.00	51,710.00	7,279.00	30,208.00	27,742.00	2,466.00	5,548.00	1,311.00	71.00	1,551.00
King Salmon	81,261.00	43,727.00	37,854.00	5,873.00	37,535.00	36,429.00	1,104.00	0.00	0.00	0.00	

Source: ADFG Community Profile Database

Figure 2.17 Estimated Annual Pounds of Subsistence Foods Utilized by Community, Kvichak Bay Sub-Region



See Table 2.17 for resident participation in commercial fishing and Table 2.18 for reported employment statistics.

Table 2.17 Kvichak Bay Sub-region Resident Participation in Commercial Fisheries

	# Fishing Permits 2006	Estimated Gross Value*	#Fishermen Who Fished	Est 2006 Population**
Naknek	343	\$7,271,562	305	577
South Naknek	108	\$914,640	108	74
Levelock	15	\$211,998	18	61
King Salmon	128	\$2,217,244	122	409

Source: Alaska Commercial Fisheries Entry Commission Database

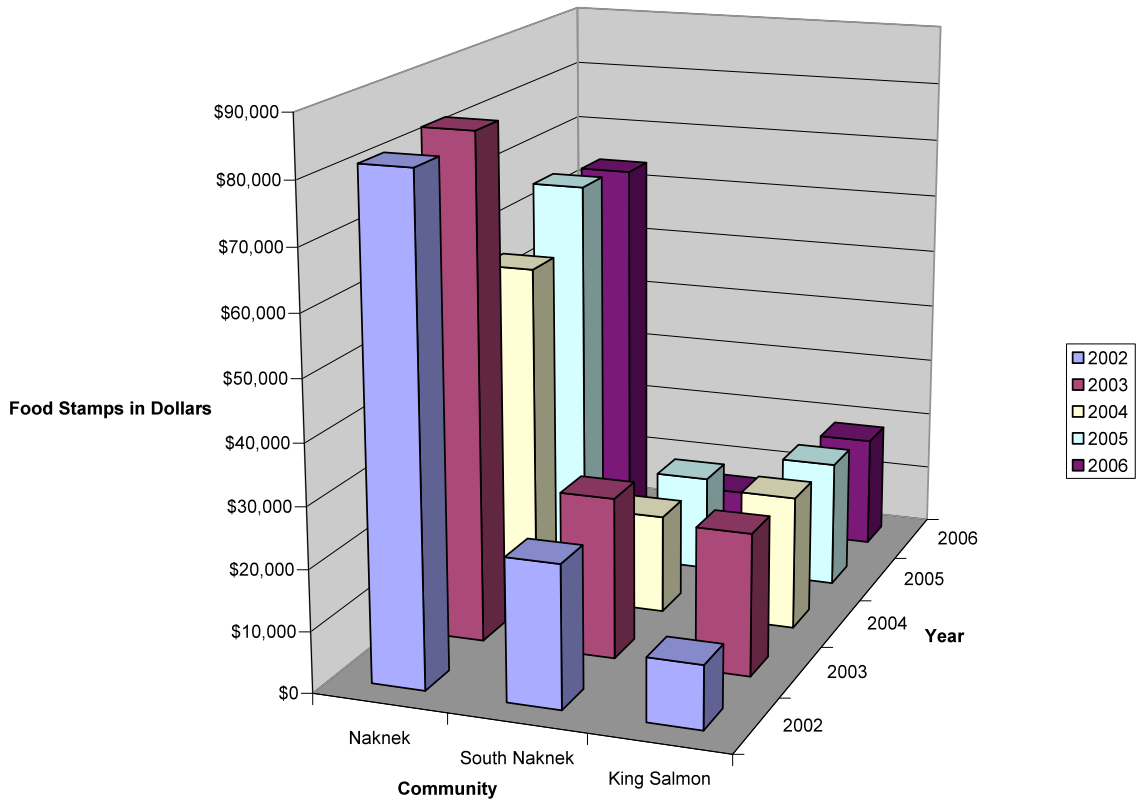
Table 2.18 Kvichak Bay Sub-region Census 2000 Reported Employment

Community	Population	Pop_16_Over	Unemployed	Pct_Adults_Not_Working	Pop_In_Poverty
King Salmon	409	346	24	28.60%	55
Levelock	61	73	0	53.40%	27
Naknek	577	450	30	35.60%	25
South Naknek	74	112	14	60.70%	39

Source: DRCA

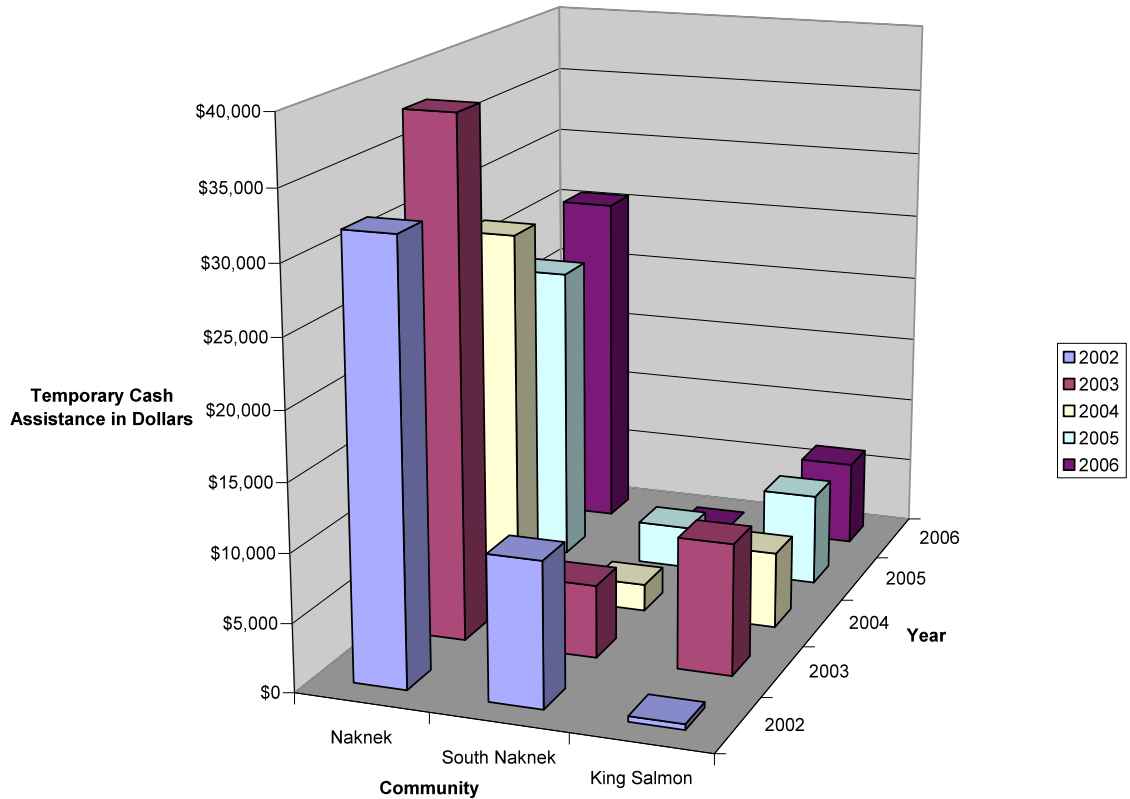
Figures 2.18 and 2.19 provide public assistance data on food stamps used and temporary cash assistance utilized between 2002 and 2006.

Figure 2.18 Federal Non-Cash Public Assistance: Food Stamps, Kvichak Bay Sub- Region 2002-2006



Source: ADHSS

Figure 2.19 Alaska State Block Grant Temporary Cash Assistance for Needy Families, Kvichak Bay Sub-Region



Source: ADHHS

NORTH SIDE OF THE ALASKA PENINSULA SUB-REGION

Alaska Native residents of Egegik, Port Heiden, and Ugashik are primarily Alutiiq while Pilot Point is more of a mixed community whose residents are Alutiiq and Yupiit. Fish processing is important in Egegik and Ugashik although Ugashik only has a very small year-round population caretaking the processor. Pilot Point’s processor closed in 1958 (DRCA). Both the populations of Egegik and Ugashik expand during the summer fishing months—Egegik by the thousands. There are five on-shore processors in Egegik in addition to several floating processors. The sub-region is serviced by King Salmon’s airport and by barge from Naknek. Port Heiden has a 5,000 foot runway that services communities on the south side of the Alaska Peninsula. Residents of this sub-region harvest seal, beluga, salmon, trout, smelt, grayling, clams, moose, bear, caribou,

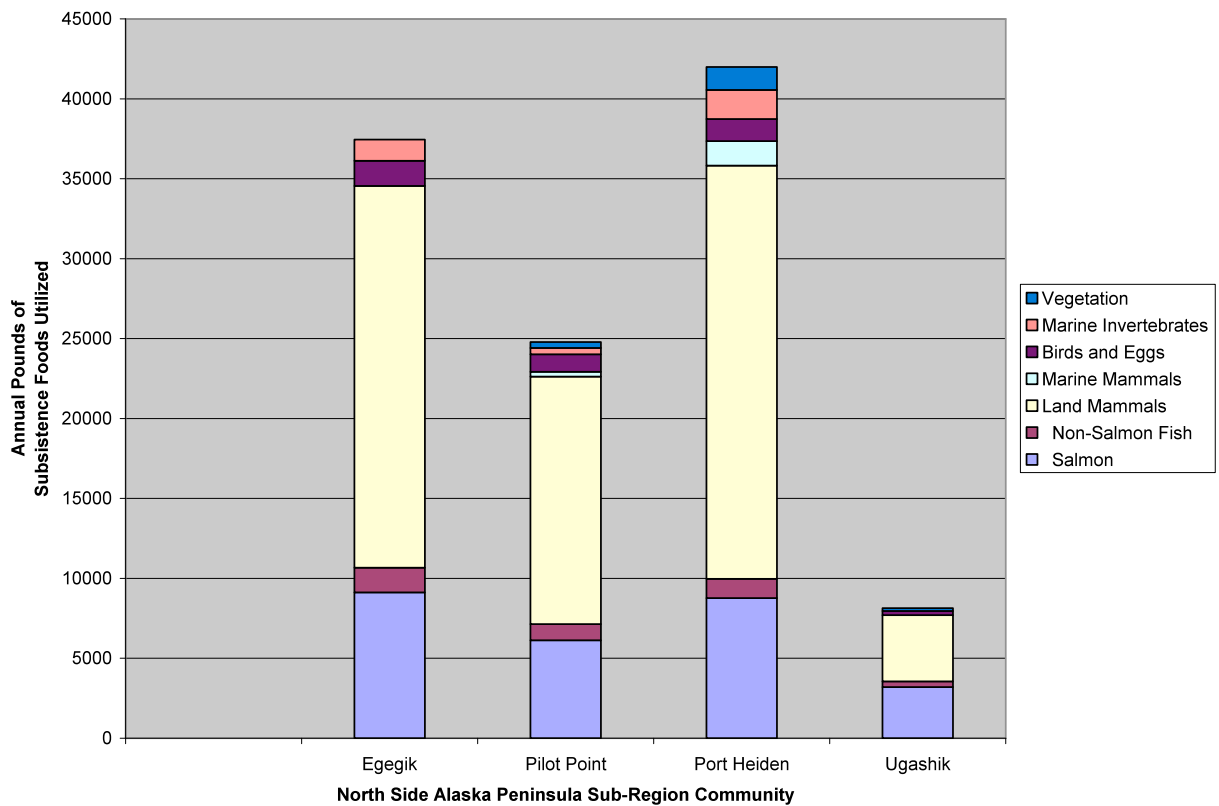
porcupine, waterfowl, berries, and wild greens for subsistence. See Table 2.19 and Figure 2.20 for subsistence resource use in this sub-region.

Table 2.19 Subsistence Resource Use in the North Side Alaska Peninsula Sub-region, Estimated Pounds Utilized By Most Representative Year (1983-Present)

Community	All Resources	Fish	Salmon	Non-Salmon Fish	Land Mammals	Large Land Mammals	Small Land Mammals	Marine Mammals	Birds and Eggs	Marine Invertebrates	Vegetation
Egegik	37,450.00	10,662.00	9,128.00	1,534.00	23,888.00	23,587.00	301.00	0.00	1,573.00	1,326.00	0.00
Pilot Point	24,783.00	7,137.00	6,133.00	1,004.00	15,486.00	15,342.00	144.00	296.00	1,097.00	401.00	364.00
Port Heiden	41,985.00	9,971.00	8,766.00	1,205.00	25,846.00	25,740.00	105.00	1,543.00	1,374.00	1,824.00	1,427.00
Ugashik	8,144.00	3,562.00	3,201.00	361.00	4,138.00	4,080.00	58.00	0.00	255.00	0.00	189.00

Source: ADFG Community Profile Database

Figure 2.20 Estimated Annual Pounds of Subsistence Foods Utilized by Community, North Side Alaska Peninsula



See Table 2.20 for resident participation in commercial fishing and Table 2.21 for reported employment statistics.

Table 2.20 North Side Alaska Peninsula Sub-region Resident Participation in Commercial Fisheries

	# Fishing Permits 2006	Estimated Gross Value*	#Fishermen Who Fished	Est 2006 Population**
Egegik	67	\$1,059,914	57	76
Pilot Point	46	\$481,338	23	66
Port Heiden	43	\$766,077	41	79
Ugashik	15	\$318,736	12	11

Source: Alaska Commercial Fisheries Entry Commission Database

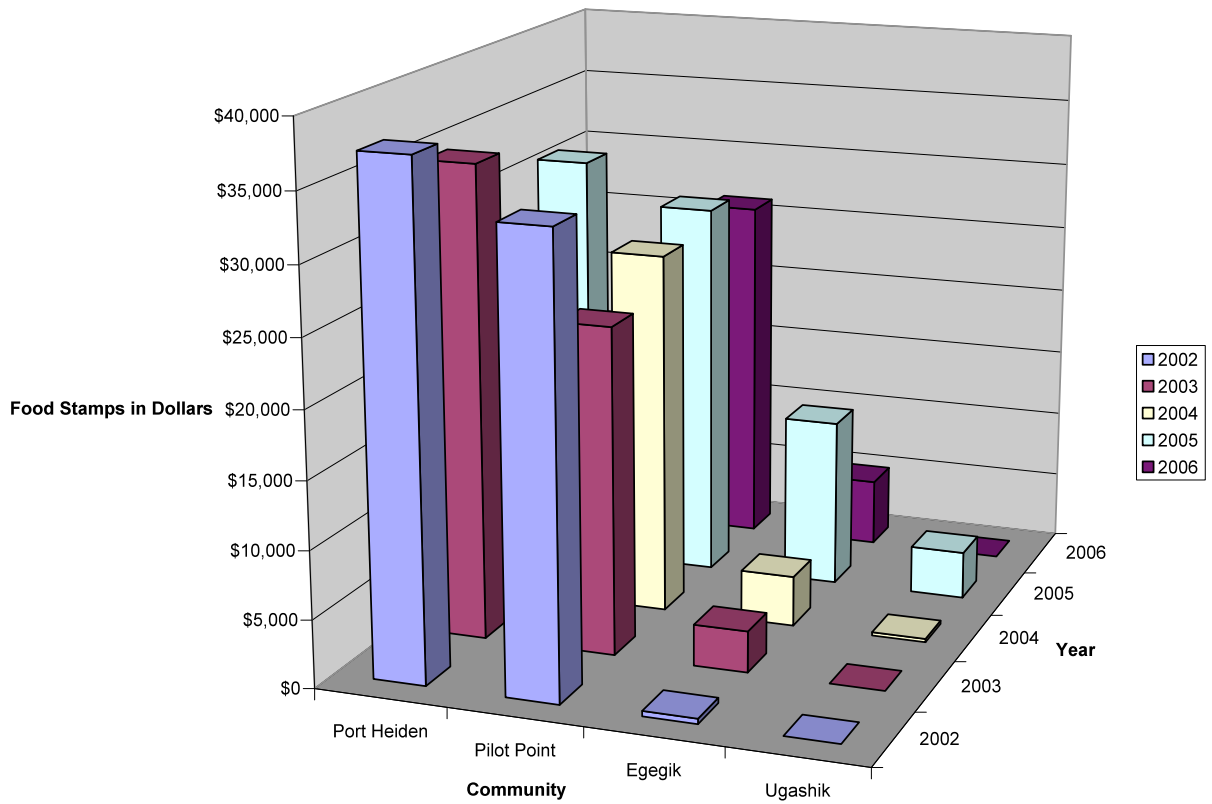
Table 2.21 North Side Alaska Peninsula Sub-region Census 2000 Reported Employment

Community	Population	Pop_16_Over	Unemployed	Pct_Adults_Not_Working	Pop_In_Poverty
Egegik	76	80	8	73.80%	8
Pilot Point	66	69	4	30.40%	25
Port Heiden	79	69	8	42.00%	5
Ugashik	17	10	0	60.00%	1

Source: DRCA

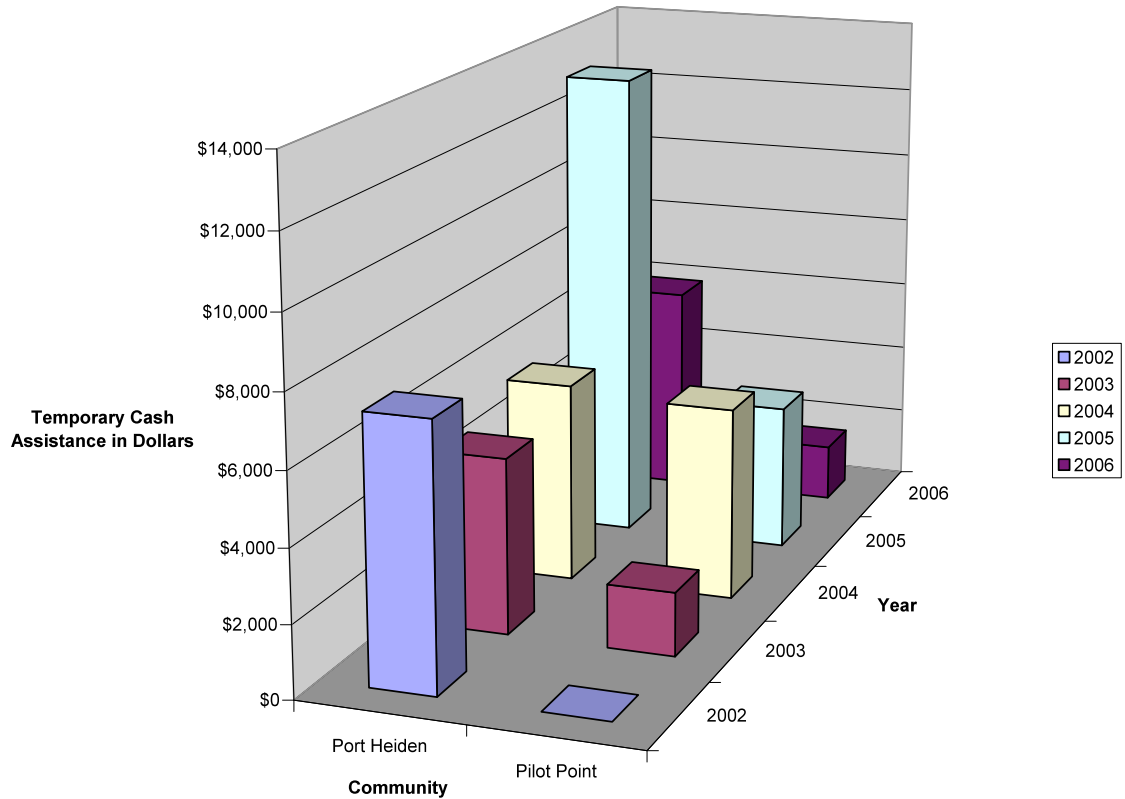
Figures 2.21 and 2.22 provide public assistance data on food stamps used and temporary cash assistance utilized between 2002 and 2006.

Figure 2.21 Federal Non-Cash Public Assistance: Food Stamps, North Side of the Alaska Peninsula Sub-Region 2002-2006



Source: ADHSS

Figure 2.22 Alaska State Block Grant Temporary Cash Assistance for Needy Families, North Side of the Alaska Peninsula Sub- Region



Source: ADHHS

SOUTH SIDE OF THE ALASKA PENINSULA SUB-REGION

Like many other parts of rural Alaska, villages in this region were consolidated into trading posts in the beginning of the 20th century. Chignik (also known as Chignik Bay) was established in the late 1800s as a fishing village and cannery site. Chignik’s population today is a mixture of non-Alaska Natives and residents of Alutiiq ancestry while Chignik Lagoon and Chignik Lake are primarily Alutiiq. Partnow (2001) characterizes Chignik as the financial center of the region. All three communities rely heavily upon salmon fishing and processing. Norquest Adak and Trident Seafoods have processing plants in Chignik. Both Chignik and Chignik Lagoon experience an influx of fishermen during the summer months. The population swells by 200

during the fishing season.

Ivanof Bay and Perryville are predominantly Alutiiq villages. Perryville was also a community established by refugees from the 1912 eruption of Mt. Katmai. Ivanof Bay had a salmon cannery, which closed in 1954, but most residents leave these two villages in the summer today to participate in the Chignik fishery.

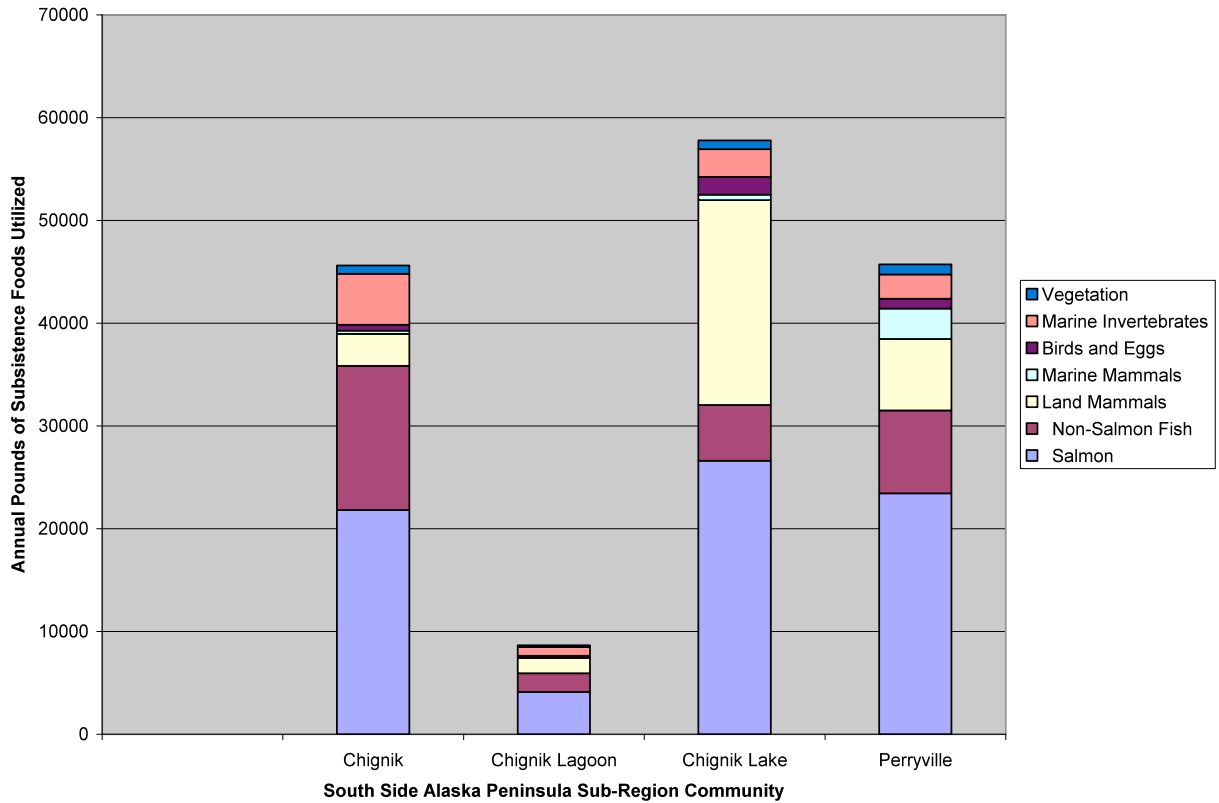
Salmon, trout, crab, clams, moose, caribou, bear, porcupine and seals are taken in local subsistence harvests. See Table 2.22 and Figure 2.23 for subsistence resource use in this sub-region.

Table 2.22 Subsistence Resource Use in the South Side Alaska Peninsula Sub-region, Estimated Pounds Utilized By Most Representative Year (1983-Present)

Community	All Resources	Fish	Salmon	Non-Salmon Fish	Land Mammals	Large Land Mammals	Small Land Mammals	Marine Mammals	Birds and Eggs	Marine Invertebrates	Vegetation
Chignik	45,610.00	35,846.00	21,825.00	14,021.00	3,112.00	3,112.00	0.00	329.00	555.00	4,958.00	810.00
Chignik Lagoon	8,669.00	5,937.00	4,110.00	1,826.00	1,496.00	1,496.00	0.00	0.00	213.00	851.00	172.00
Chignik Lake	57,783.00	32,042.00	26,614.00	5,428.00	19,929.00	19,855.00	74.00	539.00	1,719.00	2,711.00	842.00
Perryville	45,729.00	31,506.00	23,451.00	8,055.00	6,955.00	6,889.00	67.00	2,967.00	945.00	2,373.00	983.00

Source: ADFG Community Profile Database

Figure 2.23 Estimated Annual Pounds of Subsistence Foods Utilized by Community, South Side Alaska Peninsula



See Table 2.23 for resident participation in commercial fishing and .Table 2.24 for reported employment statistics

Table 2.23 South Side Alaska Peninsula Sub-region Resident Participation in Commercial Fisheries

	# Fishing Permits 2006	Estimated Gross Value*	#Fishermen Who Fished	Est 2006 Population**
Chignik	55	\$698,868	21	85
Chignik Lagoon	137	\$7,691,158	82	70
Chignik Lake	24	\$420,948	21	120
Perryville	16	\$982,931	25	120

Source: Alaska Commercial Fisheries Entry Commission Database

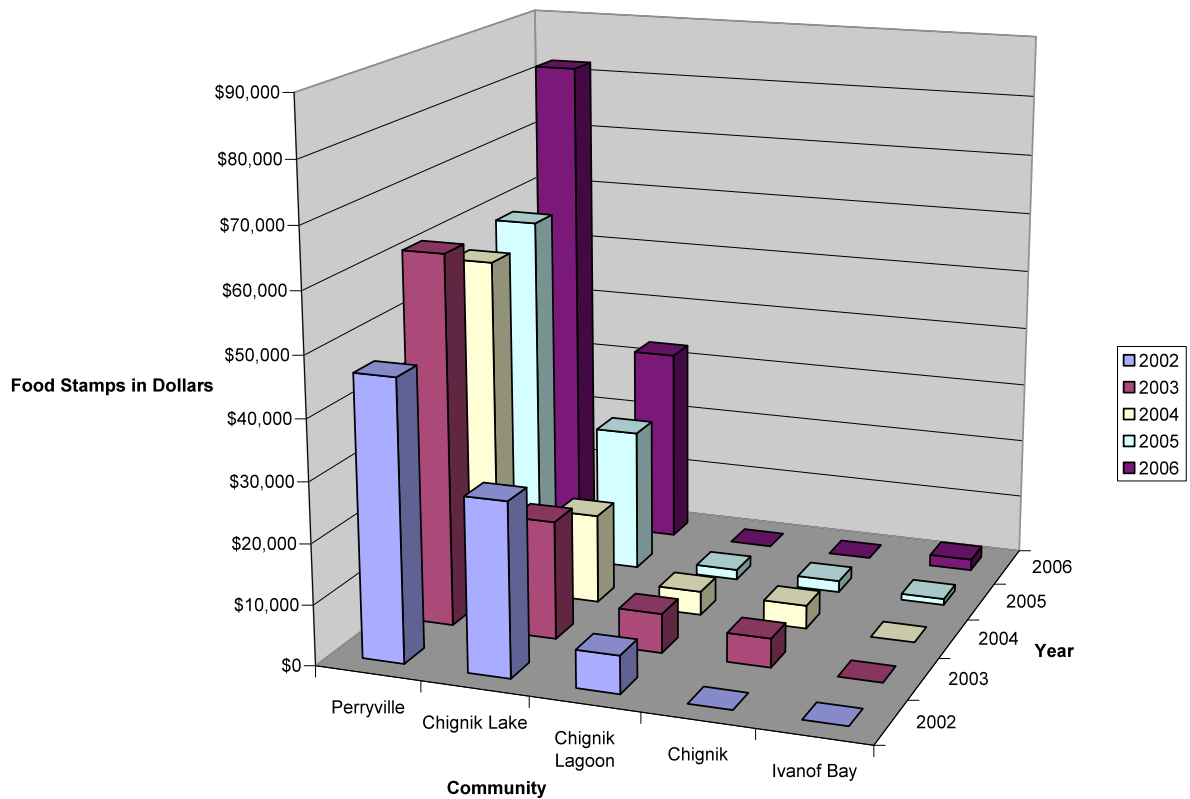
Table 2.24 South Side Alaska Peninsula Sub-region Census 2000 Reported Employment

Community	Population	Pop_16_Over	Unemployed	Pct_Adults_Not_Working	Pop_In_Poverty
Chignik	85	65	19	46.20%	4
Chignik Lagoon	70	76	0	47.40%	2
Chignik Lake	120	84	3	61.90%	29
Ivanof Bay	0	25	0	36.00%	0
Perryville	120	67	4	52.20%	16

Source: DRCA

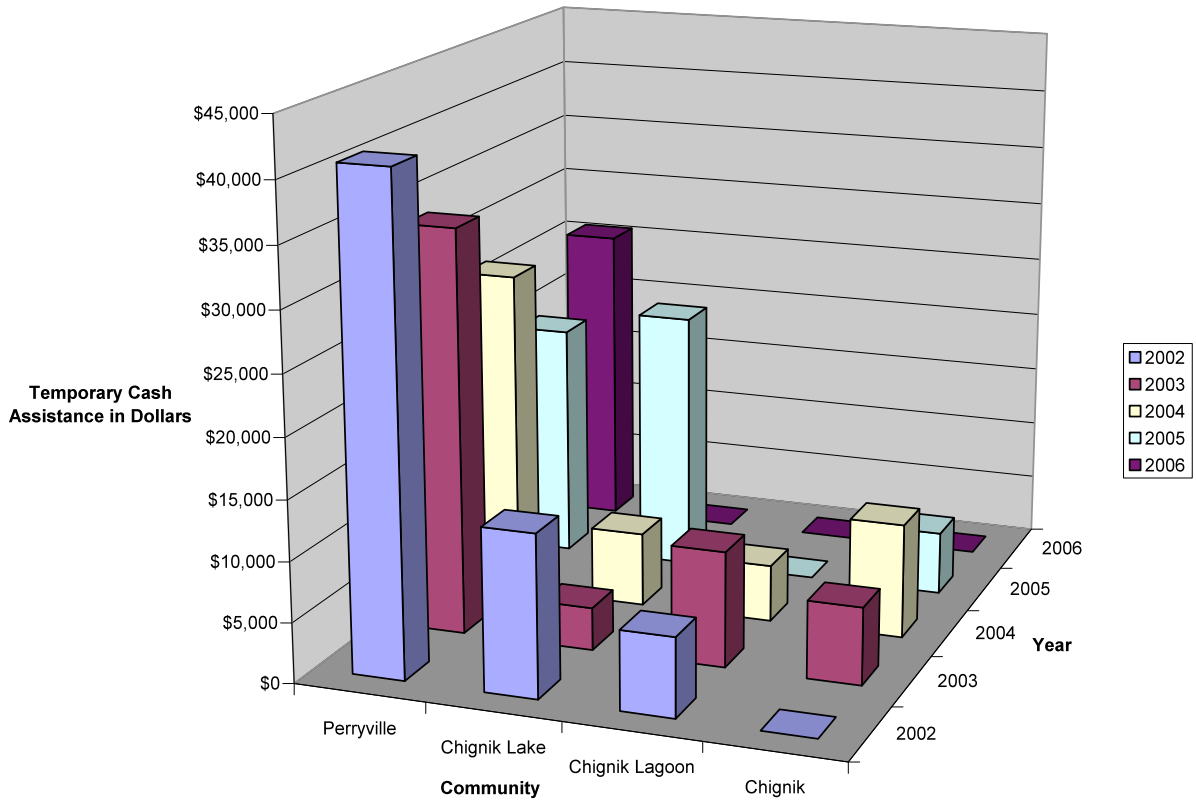
Figures 2.24 and 2.25 provide public assistance data on food stamps used and temporary cash assistance utilized between 2002 and 2006.

Figure 2.24 Federal Non-Cash Public Assistance: Food Stamps, South Side of the Alaska Peninsula Sub-Region 2002-2006



Source: ADHSS

Figure 2.25 Alaska State Block Grant Temporary Cash Assistance for Needy Families, South Side of the Alaska Peninsula Sub- Region



Source: ADHHS

PART 2 SUMMARY

This overview demonstrates that many of the region’s residents are substantially dependent upon local fish and wildlife as food sources and upon the commercial fisheries for cash income. In summary, an examination of Bristol Bay’s sub-regions reveals how residents in the Iliamna Lake sub-region have traditionally harvested more subsistence foods than those of the other sub-regions. Approximately one-third of the population over the age of 16 (1,690 residents) in the region commercially fished in 2006. Census 2000 data indicate that large communities, such as Dillingham and Togiak, account for a greater percentage of people living in poverty than other

communities. Between the years 2002 and 2006, cash assistance and food stamps were generally utilized the most in the largest communities, such as Dillingham, but also in some villages in the Iliamna Lake and Nushagak River sub-regions.

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