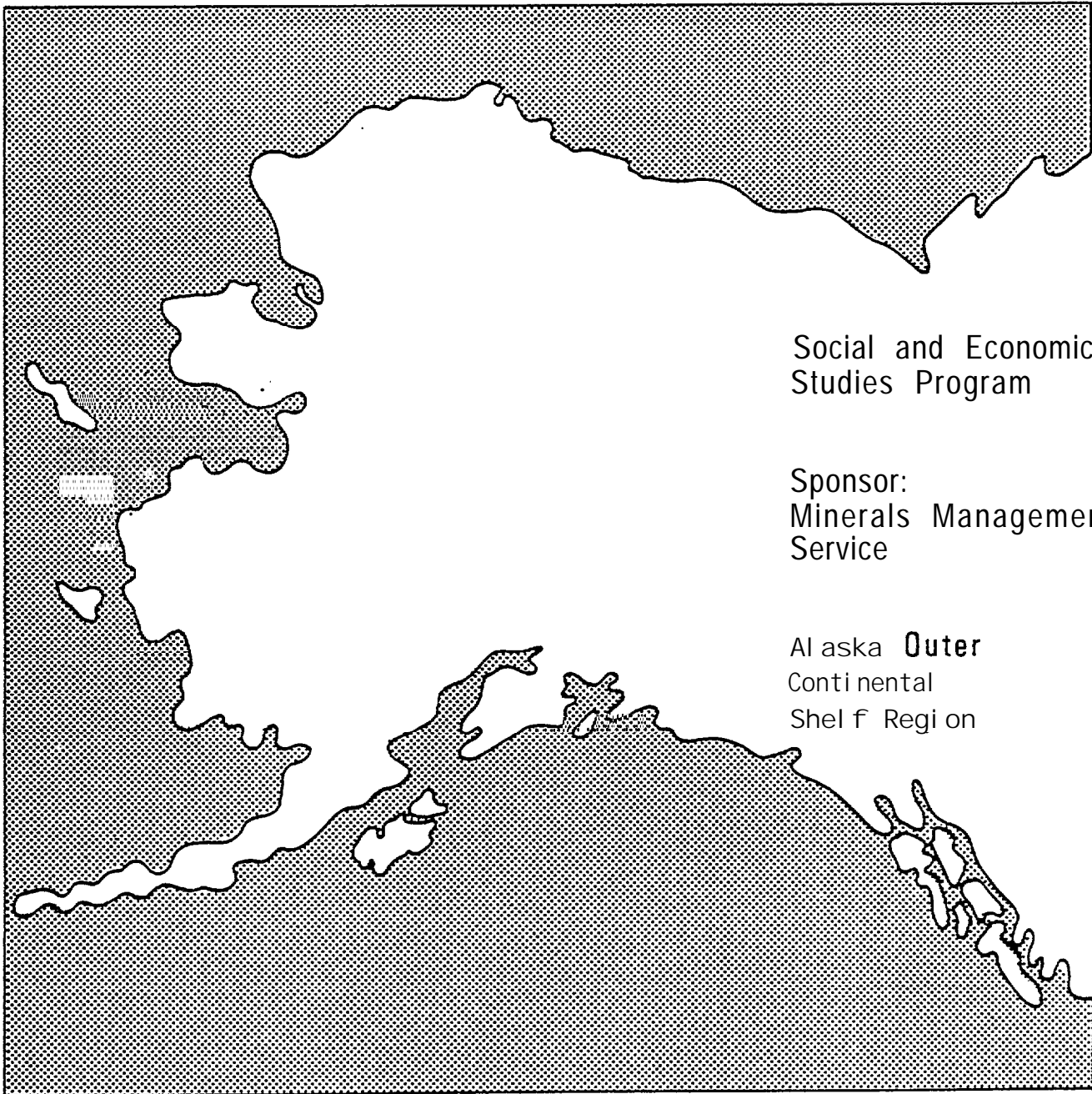


Technical Report
Number 92



Social and Economic
Studies Program

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Minerals Management
Service

Alaska Outer
Continental
Shelf Region

UNALASKA:

Ethnographic Study and Impact Analysis

Technical Report #92

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FINAL TECHNICAL REPORT

UNALASKA: ETHNOGRAPHIC STUDY AND IMPACT ANALYSIS

PREPARED FOR

MINERALS MANAGEMENT SERVICE
ALASKA OUTER CONTINENTAL SHELF REGION
LEASING AND ENVIRONMENT OFFICE

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Alaska OCS Socioeconomic Studies Program

Unalaska: Ethnographic Study and **Impact** Analysis

This report was prepared with the assistance of Karen Gibson, the Contracting Officer's Representative, and George Allen, the Project Inspector. Dr. Lawrence Palinkas prepared the bulk of the material presented in this report. Mr. Michael Downs conducted four months of field data collection in Unalaska and on the basis of this corpus of information the report was constructed. Dr. John Petterson, Dr. Bruce Harris and Mrs. Beverly Holmes each played key roles in the preparation of specific sections of the report.

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Abstract

This report provides an analysis of existing trends and potential changes in the socioeconomic and sociocultural systems of Unalaska, Alaska. The report provides a 1.) a baseline ethnographic description of Unalaska, and 2.) a series of one primary and three secondary scenarios of potential groundfish and oil-related development, including, respectively, groundfish industry development with no OCS-related development, the co-occurrence of groundfish and oil-related development, groundfish development followed by oil related development, and groundfish development preceded by oil-related development.

The ethnography is presented in a systems analytic format and is divided into input and structure. The socioenvironmental input of Unalaska includes external factors such as the ecological, historical, extrasocietal and intrasocietal forces which affect the course of change in Unalaska. The community's role as an administrative and commercial center stems from historical factors, its location near the Unimak Pass, and the availability of marine resources. Extrasocietal influences on Unalaska include external government agencies, commercial interests (particularly processing), neighboring communities, and the larger sociocultural system. Relationships between Unalaska and other communities in the region, particularly the Pribilof communities of St. Paul and St. George, and the Aleutian communities of Akutan and Nikolski, are examined. It was found that only residual ties between these communities and Unalaska exist today. Intrasocietal features of Unalaska's environment include existing community facilities, housing and real estate development, and population structure. Local community facilities, with the exception of the airport, are considered adequate to meet present needs. Quality housing is in short supply. The population has become characterized in recent years as predominately young, male, transient, and non-Aleut.

The structure of the community consists of the values, attitudes and behavior which comprise the social, cultural and economic activities of local residents. There are three different sets of values operating in Unalaska; traditional, frontier, and modern. Each of these include rules for social interaction, assessment of social status, and systems of belief. Interaction among segments of the community maintaining these different sets of values are detailed in the report.

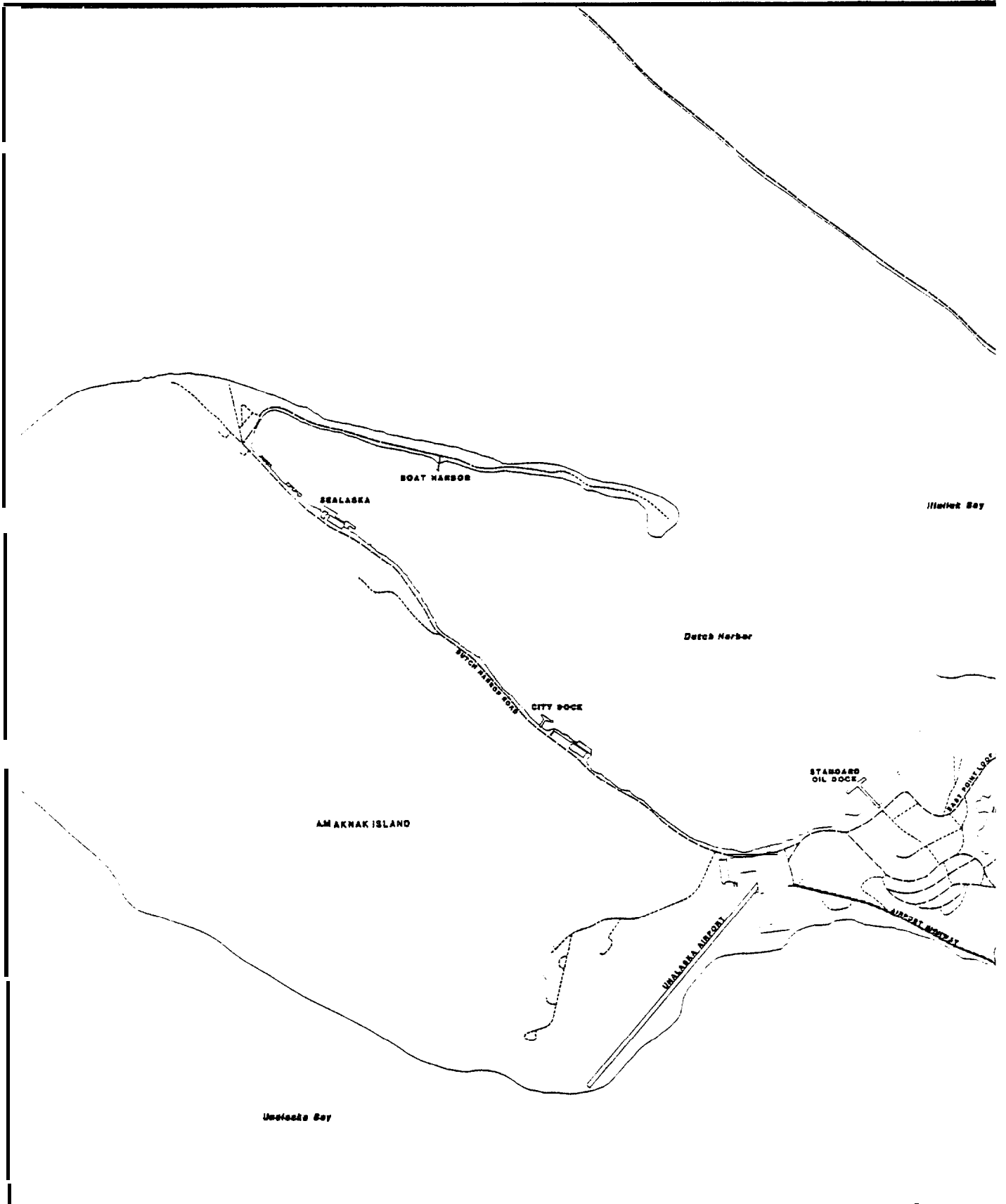
The structure of Unalaska's socioeconomic/sociocultural system can be divided into seven major subsystems: economy, social organization, politics, religion, education, social services, and recreation. The commercial sector of the local economy consists of the seafood processing industry and support services. The recent decline in the crab fishery has had a considerable impact on this sector. Social organization is based on two major and several minor criteria for social interaction. The major criteria are length of residence and ethnicity. Other features of social organization include kin-based, friendship, neighborhood, and workplace relations, and voluntary associations. The major political issues concern the present size of local government and its role in community development, and conflicts between the city government and the Unalaska Corporation. The religious subsystem is based on two major religious institutions, the Aleut-dominated Russian Orthodox Church and the non-

Aleut dominated Unalaska Christian Fellowship; leadership structure, extent of participation, and social activities of these and other, smaller churches in the community are examined. Educational opportunities for Unalaska residents range from pre-school to adult education, but the major element of the educational subsystem is the Unalaska school which provides both elementary and high school education. Medical and social problems, especially accidents, alcohol abuse, and domestic violence are increasing, but adequate facilities, services, and personnel exist to provide primary care and referral. The recreational subsystem is similar to other rural Alaskan communities but also provides numerous opportunities such as restaurants and bars not found in smaller communities. Major forms of recreation include subsistence-related and other outdoor activities, home entertainment, visiting and vacations, and community social events.

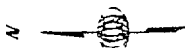
Four forecast scenarios are presented in the second half of this report. Each scenario contains projections of population and economic growth under certain, specified assumptions and the consequences of this growth for the community's response to environmental input (system output) and on the structure of the socioeconomic system itself (system feedback). The primary scenario is based on assumptions provided by the OCS Region regarding the growth of an American groundfish industry. Under this scenario it is projected that, in general, the socioeconomic and sociocultural systems of Unalaska will experience some consolidation in the 1980s. Changes that do occur will result from an expected leveling off and slight reduction in the rate of growth in the local economy, even though groundfish industry development is expected to occur during this period. Significant change in all facets of community life is expected to occur during the 1990s when levels of groundfish industry activity and population growth are expected to increase dramatically. While Unalaska will retain much of its "frontier" or "boom town" character, it will slowly acquire the permanent features of a growing community more closely integrated with the outside world. Interregional relationships will be characterized by an increased level of economic competition between the communities of Unalaska, Akutan, St. George, and St. Paul, especially as these communities develop their own facilities for groundfish processing. The use of Unalaska's port facilities for transshipment of processed seafood products, however, will involve a certain degree of economic cooperation between communities as well as a possible expansion of Unalaska's role as a regional air transportation center.

Many of these projections are applicable for the secondary scenarios presented. These scenarios include: groundfish development occurring in conjunction with projected levels of oil-related development (alternate Scenario 1); the early occurrence of groundfish industry development with a delay in oil-related development (Alternate Scenario 2); and immediate oil-related development with a delay in groundfish industry development. The most important finding is that oil-related development will be much more readily accepted, even courted, if it precedes groundfish development in a context of declining economic activity (as, e.g., if the crab industry continues to decline), while it will be resisted relatively strongly if it follows groundfish development and the latter is already entrenched as a major local industry.





LEGEND
 AIRPORT HI GHWAY ———
 SECONDARY ROADS ———
 PRIVATE/LOCAL ROADS ———



CITY OF UNALASKA AREA MAP

xvi

SCALE = 1" = 800'
 0 400 800 1200 1600 2000

Unalaska: Ethnographic Study and Impact Analysis

Introduction

This report contains an ethnographic description and impact analysis of socioeconomic and sociocultural change in the community of Unalaska, Alaska. The report is divided into two major sections, an ethnographic baseline and forecast scenarios. On the basis of ethnographic fieldwork and secondary sources, a baseline description of the contemporary community is presented and used as the foundation with which to assess the impacts of potential developments in the Aleutians region. This assessment is presented in the form of forecast scenarios based on certain specified assumptions regarding groundfish industry and oil-related development. These scenarios proceed from the baseline description along the lines of a systems analysis. In this report, one primary and three secondary scenarios are examined.

The baseline description of Unalaska, Alaska is presented here in the form of an ethnography, employing a format useful for both description and analysis of projected changes in the sociocultural system of the community. The ethnographic analysis of Unalaska will be presented in the following manner. First, we will discuss the input into the sociocultural system. That is, we will examine the various ecological, extrasocietal and intrasocietal forces that have coalesced to bring Unalaska into its present configuration. We begin with a brief description of the ecological setting of the community. We then present an abbreviated history of the Aleut population throughout the chain, gradually narrowing our discussion as the evidence begins to focus on the community of Unalaska itself. This is followed by detailed discussions of the various intra- and extra-societal forces and how they have brought about the current social and cultural patterns that comprise today's Unalaska.

1. INPUT

1.1 Ecological Input

The City of Unalaska is located on the Bering Sea side of the Fox Islands group of the Aleutian chain in southwestern Alaska (Figure 1). It is approximately 790 statute miles from Anchorage, 170 statute miles from Cold Bay, and 1880 nautical miles from Seattle. Unalaska is remote from the other major population centers in the state and is accessible from them only by airplane or boat. This isolation has several important social and economic implications, as will be discussed in detail throughout this report. Nevertheless, there are certain factors regarding the community's location which contribute to its importance as a social and economic "center" of the region. First, because of its size, location, and relationship with the city of Anchorage, many of the state officials responsible for the entire Aleutian Islands chain are based in Unalaska. Second, Unalaska has the only developed deep water refuge in the Aleutian chain. It serves as a stopover and refueling point for sea lift operations serving Bering Sea communities, western and northwestern Alaska, and the North Slope. Unalaska is located some 70 statute miles southwest of Unimak Pass, the first ocean vessel access through the chain west of the Alaska Peninsula connecting the North Pacific Ocean

and the Bering Sea. All ship traffic between southeast, southcentral, the western and northern regions of Alaska travels through Unimak Pass. Unimak Pass is also part of a great circle route in the ocean migration of several species of fish, hence attracting many foreign groundfish processing vessels. Because of this strategic location along a major shipping route, Unalaska receives the benefit of greater frequency in shipping than other areas in the Aleutian chain (Unwin Scheben Korynta Huettl 1982:2.2). Third, the City of Unalaska is a major center for existing economic development in the Aleutian Islands and may undergo a dramatic increase in that role during the remainder of the century as a result of changes in Bering Sea fisheries and the development of Outer Continental Shelf energy resources.

The community of Unalaska is located on two separate islands. One part of the city, usually referred to as Unalaska proper, is located on the northern edge of Unalaska Island. The other part, known colloquially albeit incorrectly, as Dutch Harbor, is located on Amaknak Island. In the past, Unalaska and Dutch Harbor were regarded as two separate communities. To prevent this distinction from creating confusion in this report, some clarification of terms is in order. Unalaska is an incorporated first class city which includes physically a part of the island of Unalaska and the entirety of the smaller Amaknak Island. Dutch Harbor is a body of water adjacent to Amaknak Island, separated from Iliuliuk Bay by a natural sand spit several thousand feet long. Amaknak Island is separated from Unalaska Island by Iliuliuk Bay to the northeast and Captains Bay to the southeast, both of which are part of the larger Unalaska Bay. A connecting, protected passage between Captains Bay and Iliuliuk Bay is known as Iliuliuk Harbor. The developed portion of the City of Unalaska occupies all of Amaknak Island and a narrow flat area of land along the eastern side of the Bay and a relatively narrow valley extending southward and inland on the main island (Figure 2).

Formation of the Aleutian range and Islands began about sixty million years ago with massive outpourings of volcanic material. The islands themselves consist of a range of mountains known as the "Unalaska Formation" and several active volcanoes still dot the Aleutian chain.

Unalaska Island was probably a rugged land mass five million years ago. Many of the present major land features of the Island are the remnants of that period. Less than one million years ago, the activity of the Makushin Volcano and other nearby volcanoes diminished considerably and glaciers and streams began eroding the volcano's slopes and surrounding areas. The summit of Makushin Volcano eventually collapsed to form the present cauldrea.

There were two major periods of glaciation on Unalaska Island, during which the high country south of Makushin volcano and areas surrounding it were capped with glacial ice which flowed out into the bays widening and deepening them. Smaller glaciers existed on lower parts of the island. Today, however, the snowline lies near 3,000 or 4,000 feet elevation, except during the winter.

Much of the volcanic bedrock of the Island has been covered by occasional eruptions from area volcanoes with ash and other materials increasing in depth with each eruption. Makushin Volcano and the surrounding

volcanoes remain active. Makushin Volcano has erupted 14 times since 1700 A.D., the last major eruption occurring in 1938. Ash eruptions have occurred as recently as 1951.

There are several cirque bottoms (rounded depressions on slopes where glacial action has removed much of the material) throughout Unalaska Island.

Some contain irregular and blocky rock and soil materials. Other cirques, particularly those at lower elevations, contain glacial till dating to the last Wisconsin period of glacial ice advance. A thin veneer of glacial ground moraine covers parts of the island but is absent in the more rugged interior portions. Glacial till (a gravelly, rocky, unsorted soil) is present on the Island and is evidenced in nearly all road cuts in the Unalaska community (Tryck, Nyman and Hayes 1977:10).

There is a large alluvial deposit at the northern end of the Unalaska Creek Valley. Stream flow on Unalaska Creek has deposited soil from upper elevations, creating much of the flat land along the valley with coarse material being deposited at the upper end of the valley and finer material deposited downstream. Soil profiles in the valleys consist of 2 to 3 feet of humus-rich organic soil, 6 to 12 inches of ash, 6 to 18 inches of clay-rich soil, and 2 feet or more of glacial till overlying bedrock.

The Unalaska townsite is located on an extension of this alluvial deposit. "Resulting from a combination of natural forces, including deposition by stream, wave action creating beach deposits and uplifting on a large scale, the 'spit-like' formation is composed of sand and gravel" (Tryck, Nyman and Hayes 1977:10).

Given the ongoing geological activity, there are two characteristics of the Aleutian chain which make it prone to natural disasters. The first is the amount of earthquake activity in the area. The Aleutian Islands parallel the Aleutian trench, one of the most active earthquake zones in the world. Earthquakes of magnitude 8 or more on the Richter Scale have been recorded in this zone and smaller scale earthquakes are quite common. Associated with this earthquake activity is the potential for dangerous tsunamis or "tidal waves." These waves are a particular threat to the Pacific side of the island chain and while they constitute no immediate danger to the community of Unalaska, they have the indirect effect of causing local flooding of the lower elevations of the community's shoreline (Alaska Consultants 1981:50).

The City of Unalaska is located in a mountainous area with hills and flat areas along the coastline. It is bounded by mountain peaks ranging in elevation from 1,500 to 2,200 feet as well as numerous hills with such steep slopes that a considerable portion of the land both within and immediately adjacent to the city limits is unusable for community expansion or development. Elevations within city limits range from sea level to 2,365 feet above sea level. The four highest peaks in the immediate area are Mt. Ballyhoo (elevation 1634 feet) on Amaknak Island and Mt. Newhall (1648 ft.), Pyramid Peak and Mt. Coxcomb on Unalaska Island, in addition to numerous smaller hills which dot the landscape.

The downtown area of Unalaska proper is located on a gravel spit which extends outward from Unalaska Island into Iliuliuk Bay, forming the northeastern edge of Iliuliuk Harbor. At the southeastern edge of this spit is Unalaska Lake. The spit is separated from Unalaska Island by the Iliuliuk River which runs from the lake to the harbor.

Soil erosion is considered a problem in some areas, particularly along roads with steep side slopes and in certain sections of the shoreline. Inland, the combination of steep slopes and high moisture of the soil results in a continuous shifting of the soil mantle and numerous landslides. Landslides have also been the result with construction and development in the area. Marine erosion and deposition are evident throughout the area, resulting in the formation of steep hillsides and cliffs and wave-cut rock beaches in exposed portions of the coastline. Beach deposits of boulders, gravel and sand are found at the heads of all but the most protected bays. Wave action also constructs spits and bars, the two major ones being the spit that forms Dutch Harbor, separating it from Iliuliuk Bay, and the spit between the Iliuliuk River and Iliuliuk Bay on which most of the mainland Unalaska community resides.

The climate of Unalaska corresponds to the general maritime climate of the Aleutian chain. It is characterized by frequent, often cyclonic storms and high winds, countered by dense fog. Weather fronts generally move from west to east, but often climatic conditions on the Pacific side of the chain differ vastly from those on the Bering Sea, thus placing the islands at the center of a continuing weather war. Unalaska, however, with its location on the northern shores of the Aleutians, offers relatively greater shelter from this weather than afforded on the Pacific side of the Chain.

The Aleutian temperature is milder than most parts of Alaska because of the southerly location of the islands and the influence of the relatively warm Pacific Ocean Japanese current. Because it does not vary by more than a few degrees each season, the water temperature warms the air in the summer and cools it in the winter. Consequently, Unalaska experiences less variation in annual air temperature than other parts of Alaska. Mean annual February temperature is about 28 F and mean annual August maximum temperature is about 60 F. The prevailing wind direction is south-southeast and the average wind speed is 17 mph. Winds of up to 100 mph, however, are not uncommon. There is little or no permafrost.

Precipitation in Unalaska is greater than many other areas of the state but still less than the Southeastern region. Mean annual precipitation is 57.7 inches, including 81 inches of snowfall.

The marine resources available locally have traditionally comprised a major source of food for the residents of Unalaska and neighboring villages. These resources can be divided into three categories: marine mammals, fish, and invertebrates.

Traditionally, the major sea mammal resources have been sea otters, whales, sea lions, and seals. "Sea lions have been a major resource of the Aleut people since precontact times" (Veltre and Veltre 1982:59). These animals provided a source of both food and materials which were used extensively by Aleut residents. Two recent factors, however, have

combined to diminish the importance of sea lions as a local food resource. One has been the decline of these animals in the Unalaska area over the past few decades (Veltre and Veltre 1982:62). The second factor has been the Marine Mammal Protection Act of 1972 which limits the hunting of marine mammals to Natives only. An estimated 20 sea lions are killed each year (Veltre and Veltre 1982:62).

Harbor seals have also been a major local resource for the natives of Unalaska. An estimated 20 seals are killed each year by the same individuals who hunt for sea lions. Prior to the passage of the Marine Mammal Protection Act in 1972, seals were taken by non-Aleut residents of Unalaska, though much of the meat was distributed to Aleuts. Since that time, however, they have declined in numbers, although seal meat is still eaten and seal oil used by Aleut residents.

Whale and sea otters were once major resource items available locally which were used by Unalaska Aleuts. These mammals are no longer part of the local food resources of the area. No whaling is done by any of the residents of Unalaska today and sea otters have been protected from hunting since 1911.

The major fish resources used for food in the Unalaska area are the various species of salmon, Dolly Varden trout, halibut and cod. Salmon, according to Veltre and Veltre (1982:87), is the most important local marine resource in Unalaska today and there are few families which do not use salmon. Fish are caught in local streams and from Unalaska Bay with most of the fish coming from the Bay. King salmon are available from February to April while red salmon run to Unalaska Lake from mid-May until the end of June. The largest salmon run in Unalaska, however, are pink salmon which are found in Nateekin Bay, Broad Bay, Captain's Bay, and Humpy Cove in Summer's Bay.

The near shore intertidal zone of the Unalaska area is rich in marine invertebrates. The most important in terms of local resource utilization are: sea urchins (strongylocentrotus sp.), known locally as "sea eggs," shrimp, octopus, limpets (Acamea sp.), mussels (Mytilus edulis), chitons, known locally as "bidarkis," clams, and crabs (Veltre and Veltre 1982:50).

The local vegetation consists largely of Alpine tundra. The windy, cool climate, shallow soil, relatively recent geologic history along with the topography and isolated location of the Aleutian Islands away from larger mainland areas, prevents the natural establishment of larger vegetation types, especially trees. There are a few Sitka spruces in the area, the remnants of trees planted by Russian settlers in 1804 and, later, by American troops stationed in the area during World War II.

Plant species found in the vicinity include mosses, grasses, lichens, ferns, herbs, and small shrubs. Edible resources include blueberries, mossberries, crowberries, salmonberries, strawberries, lingonberries, wild celery known as "pootchky," a wild herb called "petrusky" (lingusticum hultenii) and wild rice. While a wide variety of berries and plants were used in traditional Aleut culture for food, medicinal, and fabricational purposes (Veltre and Veltre 1982:98), plant resources comprise only a minor part of the ecological component of the sociocul-

tural system. It is mostly limited to the gathering of berries in the summer as a form of recreational and subsistence activity and the use of pootchky and petrusky by local Aleuts.

Unlike other parts of the state, no major stocks of animal resources exist in the Aleutian Islands. Sheep are raised at the Chernofski Ranch on the western end of Unalaska Island and the remnants of a cattle herd roam in the vicinity of Unalaska but these do not comprise a significant component of the local environment. Reindeer were introduced on Unalaska Island by Sheldon Jackson in the late nineteenth century but fared poorly.

The one animal resource which does have some bearing on the social system of Unalaska, particularly from a historical standpoint, is the fox. Red foxes exist on Unalaska Island and are trapped by local residents, even though the fur is not as highly valued as that of the blue fox on other islands. Ground squirrels also exist on the island, while rabbits, originally imported as fox food, are found on Hog Island in Unalaska Bay.

Some 183 species of birds have been reported in the Aleutian archipelago and surrounding areas (Sekora 1973:143). The most frequently utilized resources are ducks and geese; some ptarmigan are also harvested locally. In addition to the meat, eggs from sea gulls and ducks are collected and utilized locally.

There are two potential sources of energy available locally, geothermal and hydroelectric. The potential for geothermal energy development is currently being explored in the vicinity of Makushin volcano. Preliminary studies indicate that the resource is available in great quantities. The development of this resource, however, depends upon the current demand for electrical energy in Unalaska as well as the prospect growth in demand. It is conceivable that the economy of scale is lacking to justify such development.

Hydroelectric power could also be made available by damming Pyramid and Unalaska Creeks. According to a local official of the City Department of Public Works, an estimated 1 megawatt of electricity could be generated by these streams. Additionally, according to the same source, hydroelectric power could conceivably be generated by utilizing the pressure built-up in the city water supply lines by locating turbines at those points where there are now pressure relief valves.

While the potential for locally developed energy resources is high, development of those resources will be expensive and most of the current energy needs are met by imported resources, principally diesel oil and propane gas. Diesel #2 fuel is used to provide most the the energy needs in the community, particularly heating and electrical power. Propane fuel is used in certain neighborhoods for cooking and heating. Gasoline is also being used in greater volumes as the number of motor vehicles in the community increases.

The local fisheries have historically provided the major resources for commercial utilization in Unalaska. The contemporary community was founded largely on the local crab fishery and, as will be discussed

later in the report, efforts have been made to exploit local bottomfish resources.

With the exception of a commercial fishery in the Makushin area, salmon is not harvested commercially in large quantities in the Unalaska vicinity, and cannot be seen as a local commercial resource for two reasons. The first reason pertains to the availability of salmon locally. While local salmon are in sufficiently large numbers to sustain subsistence needs, there are not enough fish to sustain a viable commercial fishery. What salmon is processed by local canneries usually comes from the Bristol Bay region and the Alaska Peninsula. Second, there are only four local fishermen who possess temporary Limited Entry permits in Unalaska. Due to the high cost of obtaining such a permit, it is unlikely that salmon will be an important commercial resource for local fishermen in the near future.

Until recently, the major commercial fish resource for the community was crab. Several different species have been available for commercial utilization, the most important ones being king, tanner, and dungeness crab. This resource is available throughout the Aleutian Islands-Bering Sea management area. Much of this resource is processed in Unalaska and for the past ten to fifteen years has served as the major economic impetus behind community growth and development.

Although existing stocks of king and tanner crab have been on the decline for the past three or four years, it is believed that the resource is a cyclic one. Several different theories exist to account for the recent decline. One theory is tied to the presence of large numbers of fishing vessels and processors in the area, resulting in overfishing of the resource. Another theory attributes the decline in crab stocks, to the presence of growing numbers of bottomfish, particularly cod, which feed upon crab larvae. A third theory has recently been advanced that a parasitic organism attacks the female crab reproductive system, causing the premature discharge of unfertilized eggs. For whatever reason, however, two definite conclusions can be made as to the availability of crab as a commercial resource for the community of Unalaska. The first conclusion, supported by the numbers of crab caught in the 1980/81 and 1981/82 catches, is that the resource is definitely experiencing a significant decline in availability. The second conclusion is that it is uncertain as to how long this decline will last.

Halibut stocks in the Aleutian region have been on the decline since 1960 with a major factor believed to be an increase in both domestic and foreign trawl fisheries which take halibut as an incidental catch (Alaska Consultants 1981:38). Nevertheless, existing stocks are still believed to be sufficiently large to support an important fishery in the area.

The Bering Sea and Aleutian Islands regions of Alaska contain one of the richest stocks of groundfish in the world.

Current estimates place the optimum sustainable yield for groundfish in the Aleutian Islands-Bering Sea region at around 1.6 million metric tons per year and optimum yields for various groundfish species have also been developed. These estimates

have been derived from observations of foreign fishing in the region over the past twenty years. When total groundfish production reached close to and above 2 million metric tons, population stresses were observed in a number of species, including pollack, yellowfin sole and Pacific Ocean perch. However, when catches were lowered and controlled at a close level to 1.6 million metric tons per year, the condition of the entire groundfish resource was observed to either improve or stabilize (Alaska Consultants 1981:39-41).

An estimate of the optimum yield of groundfish by each species is provided in Table 1. Although these figures refer only to 1981, they appear to be representative of estimated optimum yield for recent years.

Table 1

Proposed 1981 Groundfish Harvest Levels and Estimated Optimum Yields, Bering Sea and Aleutian Islands Areas
(metric tons)

Groundfish Species	Initial Domestic Annual Harvest	Initial Total Allowable Level of Foreign Fishing	Estimated Optimum Yield
Pollock	19,550	930,450	1,100,000
Yellowfin Sole	2,050	109,100	117,000
Turbot	1,075	84,425	90,000
Other flatfish	1,300	56,650	61,000
Pacific Cod	24,265	31,500	58,700
Pacific Ocean perch	2,760	7,453	10,750
Other rockfish	1,500	5,677	7,727
Sablefish	1,400	3,100	5,000
Atka mackerel	100	23,460	24,800
Squid	50	9,450	10,000
Other	2,000	68,537	74,249
<u>Total</u>	56,100	1,429,802	1,559,226

a. Bering Sea (statistical areas I, II, and III); Aleutian Islands (statistical area I)

b. Excludes Pacific halibut.

Source: Draft Environmental Impact Statement for the Groundfish of the Bering Sea and Aleutian Islands Area, September 1980. North Pacific Fishery Management Council.

Between 1928 and 1942, the stocks of herring available locally were considerable, supporting a moderately sized industry until the outbreak of World War II. Since the war, however, the resource appears to have declined. Although the numbers of herring in local waters appear to have increased in recent years, it has not yet become an important commercial resource. Studies are currently being conducted to determine the origin of the local stock and whether or not the local herring exist

in sufficient numbers to support a commercial fishery in Unalaska.

Shrimp has on occasion been available locally in quantities sufficient to support a small scale fishery. However, existing stocks appear to have declined in the past few years.

The mineral resources available locally are considered to be negligible. At the turn of the century, some mining for gold was done by prospectors who wintered in Unalaska on their way to the gold fields of Nome, Unga Island, and other parts of Alaska. What gold does exist in the area is in insufficient quantities to support a commercial industry. Sulfur is also available locally, primarily in the vicinity of Makushin Volcano, but it has been seen as too expensive to exploit on a commercial basis. Zinc, iron sulfide and copper also exist on Unalaska island but not in sufficient quantities to be of much commercial value.

There are no known petroleum resources within the immediate vicinity of Unalaska. The community is located close to three major oil lease areas: St. George Basin, Navarin Basin and the North Aleutian Basin, but it is uncertain as to how much oil is actually in these areas. However, judging from recent OCS lease activity in the St. George Basin, particularly the level of financial commitment of petroleum firms to exploiting certain areas of this lease area, it appears likely economically viable production levels will be achieved within ten years.

1.2 History of Unalaska

1.1.1 Introduction

In order to understand the current processes of sociocultural change in Unalaska with the objective of explaining the existing sociocultural organization of the community as well as assess the likely consequences of major external forces of change, it would seem that an examination of the history of the community is in order. While this history has been examined and discussed in far greater detail elsewhere, this report will attempt to summarize some of the more salient aspects of the historical record in the hopes of establishing a pattern of continuity which extends from the early Aleut settlements on Unalaska Island to the current experience of social organization and social change in Unalaska.

Most historical accounts of the Aleutian Islands Chain are divided into five major time periods: 1) the pre-contact stage of Aleut society, 2) the Russian period (1741-1867), 3) the American period (1867-1940), 4) World War II, and 5) post-war period. Our examination will also briefly touch on each of these five major periods, even though the last and most recent period has the greatest relevance to the ethnographic present. Our rationale for this examination is twofold. First, these major periods provide a chronicle for the development of Unalaska as a commercial and administrative center for the Aleutians region. Second, existing patterns of adaptation of Unalaska residents to a shifting environment can best be understood in the context of a theme which links together the five major historical periods of the community. Lantis (1970:277-280) suggests such a theme in the form of stress in the Native community. Our theme, an extension of this, focuses on the historical

patterns of adaptation of Aleut and Euro-American residents of Unalaska to stress resulting from exogenous forces of change, including the cyclical fluctuation of resources and intrusions into community affairs by external governments, businesses, and non-residents. Crucial to this pattern is the extreme fluctuation in the socioeconomic environment, oscillating between periods of prosperity and depression. A description of this pattern is essential to an understanding of the contemporary community's response to external forces of change.

1.2.2 Prehistory

1.2.2.1 Origins

Most of our information on early Aleut society comes from the two volume work Notes on the Unalaska Island District by Ivan Veniaminov, a Russian Orthodox priest who lived in Unalaska for ten years (1825-1834). Other important sources are Langsdorff (1814); Coxe (1787); Cook (1784) Sarychev (1806, 1960); Sauer (1802); and Shelikov (1793). Major secondary sources include Lantis (1970), Dan (1873, 1878), Petroff (1884), Jochelson (1933), and Hrdlicka (1945). While our objective is to present a history of the community of Unalaska, our survey will of necessity touch upon some of the more general aspects of the history of the entire Aleutian Islands Chain.

There has been considerable speculation as to the origins and development of Aleut culture and society. It is generally believed that the earliest inhabitants of the Aleutian Islands were immigrants from the Beringia coast (Bering Land Bridge) (see e.g. Laughlin and Aigner 1975; Dummond 1972). However, the point at which the ancestors of the present-day Aleuts diverged from the Eskimo and other Native Alaskan groups is still subject to considerable speculation.

The earliest remains of Aleut settlements in the islands dates back some 8,700 years, the oldest site existing on Anangula Island off the northwest coast of Umnak Island. According to Aigner (1975:15-16), the inhabitants of this site were deep sea fishermen and hunters of sea mammals. Although most histories of the Aleutian Islands begin by referring to the Anangula remains, there is some doubt as to whether the inhabitants of this settlement were indeed ancestral to the contemporary Aleuts. According to Black (1980:21), the Anangula site was occupied for less than a century before falling victim to severe volcanic activity. There is thus a 4,000 year gap between the Anangula settlement and evidence men again lived in the area. A second important archaeological site, the Chaluka site near the village of Nikolski on Umnak Is land, shows continual occupation of the area for 8,700 years (Laughlin 1975:515). According to Laughlin, archaeological evidence points to the existence of a transition culture linking the Anangula tool tradition with the later Aleut culture of Chaluka.

There are several theories on the origin of the Aleuts. Laughlin argues that the emergence of the Aleuts as a distinct racial, linguistic and ethnic population occurred about eight or nine thousand years ago as "the ancestors of the Aleuts had walked around the southern coast of Beringia, taking their boats where necessary and entered the eastern Aleutians from the east" (1975:507). Gross and Khera (1980:11-13),

however, point to other evidence which indicates that the Aleut entered the chain from the east about 5,000 years ago. Before this time, they had interacted with native groups in southeastern Alaska such as the Kenaici, Chugach, Yakutat, and Kolosi (Veniaminov in Hrdlicka 1945:31). Black (1980:84) cites evidence uncovered by de Laguna who found several Aleut place names in the area inhabited by the Yakutat in Southeastern Alaska and Tlingit records of Aleut domination over their territory. Furthermore, according to Veniaminov, the Aleuts of the early nineteenth century had two different traditions as to their origin. One of these, held by the inhabitants of Unalaska, was as follows:

An Aleut tradition used by the old men in an ancient song says that the Aleuts of this region came from the West, from a large land called Aliakhekjak or Tanam anguna, which was the place of their origin, and that they came thence to these islands and after that little by little spread eastward, reaching eventually the Peninsula and further (1840 I:109, in Hrdlicka 1945:27-28).

One attempt to resolve this controversy is provided by Black who states:

...in my opinion, the data could all be reconciled by assuming that the Aleutian Islands, as today, were a crossroads for different people and that, over a long span of time, there were periods of relative isolation and other times when strangers came from the East, and some, in lesser numbers, from the West and South (1980:84).

The population of the Aleutian Island Chain is believed to have been considerably larger before the time of Russian contact than at any point after contact. Some sources have estimated this population to be as high as 25,000, although Black (1980:21) points out that this figure has been challenged by contemporary researchers who note that Aleuts traditionally maintained two or more villages which were occupied on a seasonal basis. A more realistic figure, in Black's opinion, would be 16,000.

It appears that even when the Aleuts became isolated from the other native groups of Alaska and emerged as a distinct ethnic and linguistic group important sociopolitical distinctions existed among the inhabitants of the Aleutian Islands. For instance, Bergsland (1959:11-14), Veniaminov (II:2-3), and Black (1980:82-84) all note that the early inhabitants of the island chain were divided into a number of named populations and that a major distinction could be made between those living in the eastern islands and those residing in the west. Black, for instance, identifies several major subgroups and describes the relationships between these Aleut groups:

Before the Europeans came their island world was divided: in the West, on Attu, Agattu and Shemya, lived the people who called themselves Alait or Aleut, but by others were called Sasixnan, which meant, perhaps, "The exiles from the Islands," "The Strangers." In the Islands between Amchitka Pass and Buldir Island lived the Qagun, related to the Attuans. They were not very numerous and not much feared by their neighbors. East of

Amchitka Pass lived the warlike and powerful Niigun (Niigugis and Naamigus) who held the islands between Amukta and Kanaga passes and who once almost exterminated the Sasixnan of Attu. Eastward of Amukta Pass were their enemies, the Qawalangin, Sons of Sea Lions, who held the large Islands of Umnak and Unalaska, and still farther east, in the Krenitzen Islands, were the allies of the Qawalangin, the Slukalingin, Sons of Sea Gulls. The Qawalangin had pushed another group, whom they called by a name roughly meaning "The Locals," "Those over there," in the inhospitable Four Mountains Islands and they raided the Four Mountains people for women and loot. The people of Umnak and Unalaska knew that Unangan lived in the lands even further east: the Quagagin on Unimak and Sanak - "The Easterners," to be feared, who came in large flotillas to burn and pillage; and beyond them, on the great Land, on Alaxshaq (the Alaska Peninsula), the Alagsgin, who fended off Qanagin - "The Fishermen" of Kodiak and the people of Bristol Bay, and beyond the Alagsgin, in the Shumagins, were the Qawaqngin - "Those Beyond the Easterners."

While it is unclear as to whether these differences warrant the classification of Aleuts into distinct tribes, as Bergsland (1959:11-14) maintains, it does appear that linguistic differences between natives living on different islands made communication difficult. However, all these groups are considered to be part of the same sociocultural system by virtue of language, participation in a maritime economy, similar belief systems and forms of social organization.

1.2.2.2 Residence

The location of Aleut villages was largely determined by the terrain and existing resources. The steep slopes and mountainous terrain covering much of the interiors of the Aleutian Islands restricted habitation to locations close to shore. A classic description of the location of an Aleut village is provided by Jochelson:

All the ancient Aleut villages were situated on the sea shore, not on the high land above the sea, and usually on land between two bays, so that their skin boats could easily be carried from one body of water to another at the approach of foes. Thus the usual location of villages was on narrow isthmuses, on necks of land between two ridges, on promontories, or narrow sandbanks. An indispensable adjunct to a village was a supply of easily accessible fresh water--a brook, fall, or lake (1925:23).

Aleut settlements were usually located on the northern sides of the islands, "facing the Bering Sea, which is richer in fish, other sea animals, and especially whales" (Veniaminov 1840 II:199-200, in Hrdlicka 1945:36). The Bering sea location also afforded protection from Pacific Ocean storms and tsunamis.

A pre-contact Aleut village of the eighteenth century is believed to have been comprised of two or three large houses with ten to forty nuclear families (50-1500 people) per house (Veniaminov 1840 II:204).

The houses, called barabaras, were between 70 and 210 feet long and 28 to 49 feet wide. An account of the barabaras on Unalaska Island was provided in 1807 by Sarycev (II:72, in Hrdlicka 1945:46):

The floor of such a hut is sunk somewhat into the ground, and the roof is made of the floating wood which they fish out of the sea, covered with moss and grass. The light is admitted through some small openings in the roof, that serve also for the egress and ingress of the inhabitants, by means of a ladder, which consists of different steps cut out of a plank.

Within the barabara, separate compartments were carved into the side walls for individual families and were separated by partitions, affording some privacy. "The arrangement of the family inside of the dwelling, and the order of occupation of the structure by these families, was all in accordance with the standing and age of the family" (Veniaminov 1840: 205, in Hrdlicka 1945:47). The family of the village chief usually resided at the front of one of the barabaras in the village and relatives lived in adjacent sections.

While barabaras were the major place of residence in the permanent village, summer villages tended to have smaller individualized dwellings known as 'baraborkas' (Veniaminov 1840 II:206) or 'yurts,' each housing one family. "A household comprised a man and his wife or wives, his older married sons and their families, and perhaps a younger brother and family" (Lantis 1970:292). Residence was either matrilineal or patrilineal.

1.2.2.3 Social Organization

Social organization in traditional Aleut society was guided by the principles of kinship and class. The Aleut kinship system was matrilineal in character.¹ Boys were sent to their mother's village to be trained by her elder brother and young men were often required to live in the village of their betrothed until a period of bride-service was completed. The preferred form of marriage was cross-cousin and a man could marry as many women as he could afford, although during the nineteenth century most men had only one or two wives. Marriages were usually arranged by the parents and boys were required to perform a bride

1. Although most contemporary scholars assert that traditional Aleut society was based on matrilineal descent, the evidence is not entirely conclusive. Veniaminov, for instance, observes that the transfer of leadership usually passed from fathers to sons (II:167-168). Lantis (1970:227-235), however, argues that this observation may have been influenced by the Russian system of descent. Gross and Khera (1980:60-61), on the other hand, question this conclusion on the basis of three observations. First, residence after the birth of the first child is primarily patrilineal. Second, the office of chief, when it does pass intergenerationally, tends to go to a man's male offspring and not to his nephew. Third, in cases where a male citizen would have children from a female slave, those children would be free unlike the case in other matrilineal societies.

service in the household of the bride's family for a period of one to two years. After the official betrothal that concluded the period of bride-service, the young man would reside with the girl's family until after the birth of the first child, at which time, the man, his wife and child would return to live in the village of the man's family (Cf. Veniaminov 1840 II:74-76; Lantis 1970:205-208, 227-232).

Kinship was one of two major principles which governed social relations in pre-contact Aleut society. The other principle was hierarchy or rank. According to Veniaminov (1840 II:164-165, in Hrdlicka 1945:25-26), there were three major social classes in traditional Aleut society:

In former times the Aleuts were divided into three classes, namely the distinguished, the common people and the serfs. The Chiefs and their children and relatives formed the higher class; the middle class was constituted of the ordinary Aleuts and liberated serfs. And the serfs consisted of captives and their progeny.

The possession of slaves was usually the prerogative of the upper class, although slaves were occasionally owned by commoners as well. Slaves were usually captives taken in raids on other communities but orphaned children could also be made slaves. In addition to being exchanged as a commodity, slaves were also sacrificed at funerals of upper-class Aleuts. According to Veniaminov (1840 II:320, in Hrdlicka 1945:149), "the Aleuts, in their former condition, and following the beliefs of their forefathers, used to kill their slaves so that they might serve the dead."

One of the major indices of social status was the display of wealth. "An island chief was entitled to a share of each village's hunt, and members of the upper class could obtain more wealth through the sale of slaves, or through trade" (Stein 1977:33).

The political system of the Aleuts was organized around intra-village and intervillage relations. The largest political unit, where some rule of law and cooperation obtain, would be an island of villages interconnected through ties of leadership, kinship, and marriage (Gross and Khera 1980:58). "In each region or territorial polity encompassing several allied villages there was a chief, primus inter pares, whose sole function as far as we know, was to declare war and establish peace" (Black 1980:88). However, the village was far more effective as a political unit.

The chiefs or village representatives had two major spheres of responsibility: hunting and warfare. They were chosen or elected on the basis of their personal attributes such as valor, wisdom, and hunting skill. Although the position was achieved rather than hereditary, kinship was also an important factor. Those with the largest kindred in a village were the most often selected local chief (Coxe 1787:278). Age was also a critical factor.

The Aleut government was of a patriarchal nature. Each group had its toen or chief, but the power of the chief was essentially that of a father over his children. In general he

received no special honor, nor had he any special powers; and he could not act independently in any serious manner (Veniaminov 1840 II:166, in Hrdlicka 1945:26).

Whatever real power the chief may have exercised, it was usually in war. Veniaminov (1840 II:105) observes that chiefs had despotic power over a community during war but that an ineffective leader could be killed by his own warriors.

While relations between Aleut villages were often constrained and governed by the rules of warfare, intravillage relations were generally peaceful and maintained by a rigid system of social control. Force was rarely necessary to secure adherence to community norms. A reprimand, even slight, was considered a grievous injury. Veniaminov (1840 II:28) noted that victims of such public displays occasionally would commit suicide rather than live with the shame.

1.2.2.4 Technology

While much has been written about the technology of early Aleut society, it must be kept in mind that this technology both depended on and was designed to specifically exploit maritime resources. The two major items required for this exploitation were water craft and weapons.

The primary mode of water transport of the Aleut was a vessel known as a baidarka.

The baidarka consisted of a wooden structure about 18-21 feet long, 2 feet wide, and 1-1/2 to 2 feet high. The heavier keel was usually made out of two to three pieces of driftwood. To it were fastened ribs of willow and alder branches by means of split whalebone. A wooden frame with cross bars was placed over it and held everything together. This wooden structure was then covered with the tightly stretched skin of seal or sea lion. On the upper surface the boat had a round opening for a man to sit in. Occasionally a baidarka had two openings thus allowing the use of the boat by two men. Seal gutskin was sewn to the hoop fitted around the sitting hole. Once seated in the boat the man pulled the gut skin up to under his arms and tied it together tightly to prevent water from coming into the boat (Gross & Kheral 1980:30).

The baidarka was usually built by a specialist (Veniaminov 1840 II:221). One European observer found the baidarkas of Unalaska to be "infinitely superior to those of any other island" (Sauer 1802:157). Each man possessed at least one single-hatched baidarka and hunting partners often shared a two-hatched vessel.

Besides these baidarkas, with one, two, or three seats, the Aleutians make a sort of large open leather boat, called a baidar, which will hold 15 to 20 persons. These boats were formerly the common property of a whole village. . . (Langsdorff 1814:44, in Hrdlicka 1945:125).

This boat was seldom used for hunting, however.

Weapons largely consisted of darts of various sizes and shapes which were propelled by means of wooden throwing boards about 12 to 14 inches in length. A slight hollow ran lengthwise through the middle of the board to hold the dart. A sharp piece of bone located at one end of the board held the end of the dart and a hole at the other end of the board enabled the hunter to control the board by means of a forefinger. Such weapons were believed to be accurate to a distance of 80 to 90 yards (Cook 1967). Different darts were developed for hunting different animals such as sea otters, whales, seals, and birds. A string was attached to a dart so that they it and the attached prey could be retrieved by the hunter (Sauer 1802:157).

1.2.2.5 Economy

As noted earlier, Aleut society was based on a marine subsistence economy. The most abundant resources harvested by the Aleuts were seals and sea otters. Seals were hunted by means of harpoons with a float attached. Swimming seal were also harpooned from the shore and when found on shore were clubbed to death with a special seal club. Fur seals and sea lions were usually hunted collectively; hunting the sea otter required from four to twenty baidarkas to surround the animal.

Whales were hunted with harpoons and usually involved several hunters for each animal pursued. A hunter whose dart struck the whale closest to the rear fluke enjoyed great prestige in the community. According to Veniamenov (1840 I: 176), whales would arrive each summer in Captains Bay and Unalaska natives would get from 10 to 40 a year.

Walrus were hunted on shore by groups of hunters who used heavy spears or lances. Cod and Halibut were caught with hook and line from the boat. Salmon were taken by spears, sinew bagnets or trapped by stone wiers.

Aleut society was characterized by considerable division of labor which occurred on both age and sex dimensions. Men were largely responsible for the hunting while women assumed the duties of cooking, sewing, and gathering. In certain activities, the skills of both men and women were required. In constructing the all-important baidarka, for instance,

...it was the men's task to build the wooden structure and prepare the skins, and the women's to sew the skin cover and the gutskin protection so that it fitted correctly. ..The protective garments which were imperative under the constant exposure to water on the sea and even on land were the other result of the combined skills of men and women. The men brought home the skins and prepared them by soaking them in urine and stretching them. The women undertook the sewing (Gross & Khera 1980:32).

Sea urchins, mussels, limpet, whelks and clams were gathered by men, women and children particularly during the winter when rough seas prevented hunting for sea mammals (Tolstykh 1761, in Jochelson 1933:11). Sea urchins were particularly important as a resource in time of scarcity and famine. Women, children and old men also fished for salmon. Cormorant eggs were gathered from nests located on high cliffs by young

men. Women and children also gathered numerous varieties of berries and other plant life.

1.2.2.6 Value System and World View

The value system of the Aleuts gave particular emphasis to the personal qualities of generosity, cooperation, endurance, bravery, self-sufficiency, self-effacement and humility, and excellence of performance.

The Aleuts gloried in 'killing as many enemies and animals as possible; saving others, or even oneself, in the time of a storm and other difficulties with plain danger to one's life; relieving general woe or want in food during journeys or expeditions by one's own bravery and prowess; being brave in war and proving this; knowing that for his transgressions his life is in danger, but going uprightly to death; safeguarding unflinchingly a secret with which he was entrusted; being faithful to companions; helping others immeasurably, especially when he alone is wanting; observing justice on all occasions; giving life and freedom to one's serfs when they were to be sacrificed, and providing them with everything possible for their journey to their family.

All such acts the Aleuts lauded, and their remembrance passed from generation to generation in songs, tales, and even in the women's decorations (Veniaminov 1840 II:116, in Hrdlicka 1945:205).

The universe was believed by the Aleuts to be divided into three separate worlds: the higher world, the world in which the Aleuts themselves lived, and the underground (Veniaminov 1840 II:121). The Aleuts also believed in the existence of an immortal soul and life after death. The souls of the dead would remain close to living relatives and be the cause of both fortunate and unfortunate events.

The Aleut world view included a belief in a creator, a male whose life giving powers were manifested in the sun and in the waters of the earth. According to Black (1980:89), "each man could establish a link with the Creator through a personal guardian "presence" - manifest as an animal, bird, or feature of the terrain - and each man carried an object symbolizing this presence with him at all times."

The Aleut world view also had a notion of evil which was focused in the belief in the Evil Spirit. "Specific places were associated with this evil principle and these were dangerous to visit. Good people avoided them altogether. It was evil that caused death, illness and misfortune" (Black 1980:89).

Sea otters occupied a special place in Aleut world view, according to Black.

The first sea otters were an incestuous human pair, a brother and sister who, some said, committed suicide or, said others, the man was murdered by his sister when she discovered the identity of her secret lover. She threw his body and then

herself down into the sea from a high cliff, leaving the grieving parents to bewail the fate of their children. It was in response to parental grief that the Creator transformed the pair into the sea otters. It is for this reason that a sea otter hunter must dress himself in festive clothing and adorn his person with items used by men as well as women when he set out on a sea otter hunt (1980:89).

1.2.2.7 Personality

Aleut personality could be attributed to two major aspects of traditional child-rearing practices. On the one hand, Aleut children were given much affection by all the members of the community. When possible, children were fed even as their parents faced starvation and were given the best furs to wear for clothing (Veniaminov 1840 II:32). Boys were trained in hunting and fishing, how to handle baidarkas and be warriors, while girls learned from their mothers and female relatives how to cook, sew, embroider, and make baskets. On the other hand, children were exposed to the rigors of the harsh environment at an early age.

If an infant cries, the mother carries it to the seaside, and holds it naked in the water until it is quiet. This custom hardens them against the cold, and they go bare-footed through the winter without the least inconvenience. They are also trained to bathe frequently in the sea; and it is an opinion that they are thus rendered bold; and become fortunate in fishing (Oceredin and Popov, 1767-70, in Hrdlicka 1945:171).

Associated with this child-rearing pattern was a personality structure characterized as an alternating system of restraint and release. When Aleut males engaged in the hunting of marine mammals, all urges and impulses, including hunger, thirst, excretion, sex, sleep and fear, were suppressed. Given the hazardous nature of such activity and the constant threat of mass starvation, such restraint was viewed as essential to success in subsistence, and, ultimately, to survival of the social group. After the hunt, all constraints vanished. "The completion of the hunt or of the fishing season was celebrated by days of feasting and festivity. Habits of patience, endurance, and fortitude were supplanted by abandon and indulgence" (Jones 1969:27).

This theme of release and restraint is also exemplified by the radical divergence in behavior towards in-group and out-group members. Within the community, Aleuts were generally hospitable, cooperative and considerate. According to Veniaminov (1840 II:56, in Hrdlicka 1945:203), "in time of want of food the Aleuts divide among themselves anything any one of them can get. They also in other circumstances help each other all they can." With respect to outsiders, however, Aleuts were suspicious and aggressive. Raids on communities on other islands or on the mainland were common and bravery in war was highly valued. Even within the village, fighting, usually over women, was a common occurrence. Thus, as one observer noted, "the character of these people is generally kind-hearted and obliging, submissive and careful, but if roused to anger they become rash and unthinking, even malevolent, and indifferent to all danger, nay to death itself" (Langsdorff, in Hrdlicka 1945:196).

1.2.2.8 Health

What is known about the pre-contact population indicates that Aleuts were generally of good health.

The health of the Aleuts in pre-European times must have been relatively good, since there is evidence that the people were prosperous and that the population was vigorous and widely dispersed through the island chain. Though their life was hard and certainly fraught with constant physical hazards, it is apparent that the Aleuts as a people had learned to cope successfully with a difficult environment (Fortiune, Hudson and McGarvey 1976:2).

The major health practitioner in pre-contact Aleut society was the shaman. Shamans were also the chief religious practitioners and derived their power from their association with spirits. Both men and women could be shamans and although they were respected for their knowledge of anatomy, acquired from the dissection of dead serfs or killed enemies, and their special skills at healing the sick, medical knowledge was widespread.

The major threat to the health and well-being of pre-contact Aleuts was the prospect of starvation. Despite the subsistence skills of Aleut men and women, there was never a guarantee that food would always be plentiful and early accounts indicate that widespread famine was a common occurrence (Coxe 1787). Accidents, especially drownings, was another major health problem in traditional Aleut society (Fortiune, Hudson and McGarvey 1976:6). Infectious diseases were also common but apparently not as overwhelming as those of the contact periods.

1.2.2.9 External Relations

Fairly rigid social boundaries between families, communities and islands were recognized by the Aleuts, and served as guidelines for social relations within and between communities. Inter-village ties within the domain were further strengthened by the avunculate and matrilineal kinship orientation.

Each island had numerous villages and perhaps dozens of seasonal satellite camps that belonged to individual villages (cf. Lantis 1970:176-178). Although all villages on an island would be connected by bonds of kinship, trespass on territories belonging to another village, even if they were unoccupied, was quite serious and visitors were viewed with suspicion. Once the intentions of visitors were made clear, however, they were usually warmly greeted and treated as guests (Berger & Associates 1982:79).

Relations between domains, islands in most cases, were much more constrained.

Wars, or more justly, killings and pillage, existed among the Aleuts nearly always. Particularly among the Aleuts of the later former time, i.e., with the grandfathers and great grandfathers of the present generation, wars were

extraordinarily frequent and most destructive. They were either internecine or 'foreign'. The former were between families or groups of the same people; the others were with outside enemies, the Aglemiutes (Eskimo) and the Kadiaks (Veniaminov 1840 II:93. in Hrdlicka 1945:144).

The chief motivations for war were vengeance, jealousy, and desire for booty. Blood feuds were common and older men and women of defeated villages were killed while younger members became slaves. Female slaves often became concubines. Because the children of the concubines were free citizens, it is possible that a number of vicarious kinship links could have existed among many different domains. These marginal kinship relations may have permitted the creation of trade links with other domains and mediated contact between them.

When the Aleuts were not fighting amongst themselves, they would engage in trade.

Trade seems to have been highly developed among the Aleuts. This trade was mainly between contiguous villages, inter-island trade being relatively uncommon. The Aleuts dealt mainly in items such as masks, bracelets, parkas and other items of clothing, dentalium, amber, sea otter skins, and sometimes slaves and hunting equipment (Stein 1977:34).

1.2.3 Early Contact

1.2.3.1 Russian Exploration

The first recorded instance of Russian contact occurred in 1741 when an expedition under the command of Vitus Bering reached the Aleutians. "Those on board the St. Petr (Bering's flagship) first came in contact with a group of Aleut men in the Shumagins" (Black 1980:92). The ship's commander, Swen Waxel, met them while attempting to replenish the ship's water supply. The expedition returned to Russia with a cargo of furs, inspiring further exploration and the formation of commercial ventures to trap for furs in the Aleutians.

The first Russian visitor to Unalaska was Stepan Glotov who arrived in 1759.

At Umnak, Glotov is known to have established good relations with the Aleuts of southwestern villages: the names of Glotov's shipmates are still in use as family names by several important families of the Nikolski village; Glotov himself gave his name to the nephew of the local chief (Black 1980:93).

At the time, the Aleuts claimed that 120 villages were scattered throughout the island while the Russians could only account for 24 (Hrdlicka 1945:40). Glotov was soon followed by other Russians eager to exploit the rich sea otter herds in the area.

Most writers on the history of this period have characterized the relationships with local natives as being generally hostile from the outset.

According to Black, however, conflict between the two groups largely depended on the personalities involved and on the situation. "While some skippers and foremen permitted kidnappings and rapings, others maintained tight discipline and managed to establish excellent relationships with local Aleuts" (1980:93). Between 1760 and 1780, however, the level of violence began to increase in proportion to the competition for furs. As the Russians attempted to force the Aleuts into submission, the latter retaliated by attacking several of the Russian parties. In 1763, for instance, Aleut warriors attacked the crews of vessels wintering on Umnak, Unalaska and Unimak Islands, destroying the ships and killing over 190 men (Black 1980:94). In 1764, Ivan Soloviev retaliated by attacking every Aleut village from Umnak to Akutan Pass. With minimal casualties to his own force, he is believed to have killed over 200 Aleut warriors (Black 1980:94) although some accounts have claimed as many as 3,000 dead Aleut men, women and children at the hands of Soliev's men (cf., Bancroft 1886:105). Similar occurrences are known to have happened throughout the Aleutian Islands Chain.

With the defeat of Aleut forces on Unalaska, Soloviev established the village of Iliuliuk as a Russian trading station. "The Russians called this village Dobroye Soglasie - The Harbor of Good Accord" (Black 1980:95). Despite the peaceful appellation, however, the settlement became a point of embarkation for several notorious trading expeditions, including the Levashev expedition to the Krenitsyn Islands and Soloviev's expeditions to the Peninsula and Sanak Islands. These expeditions succeeded in expanding the sphere of Russian influence, usually by force of arms.

In 1778, Unalaska was visited by Cook's expedition.

Cook's ships, the Resolution and the Discovery touched briefly on Unalaska Island in July 1778, and then proceeded north to explore the Bering Sea shore of Alaska. They returned October 3, 1778 to the same harbor, which today is called English Bay (Samagnudax) and spent there a total of 23 days (Black 1980:96).

The expedition resulted in an intensification of Russian efforts to secure political and economic control over the area.

In 1791, a commission arrived in Unalaska to investigate charges of misconduct by Russian traders. The local Aleut chiefs testified that some of the traders had abducted natives of both sexes, withheld payment for delivered furs, and robbed natives of their food stores and other provisions (Okun 1951). Other traders from a rival company, however, were praised, indicating an Aleut predilection for playing rival companies off against one another.

In 1796, Emelian Larionov, a shareholder in the trading company of Grigoriy Shelikhov, was dispatched to establish a permanent settlement in Unalaska (Okun 1951). From this location the company administered the Aleutian and Pribilof Islands (Tikhmenev 1940:395). Larionov remained in charge of the Unalaska facility until his death in 1806 but his authority over the Unalaska District was assumed by Alexander Baranov in 1804.

He ordered that all natives and Russian settlers sign a statement that they would deliver furs only to the company at prices set by the company. As labor was needed at Kodiak, as the Koniag population diminished, Larionov began to implement Baranov's order to ship men, Russians and Aleuts were transferred from Unalaska and the Pribilofs to Kodiak (Black 1980:100).

In 1806 a census was taken of the Unalaska District and 1,898 Russians and Aleuts were recorded.

Larionov was succeeded by Fedor Burenin who remained in charge of the Unalaska settlement until 1812. During the winter of 1806-1807, the community was stricken with an epidemic of what is believed to have been tuberculosis. "Burenin reported that the disease killed about 350 people" (Black 1980:100). Such loss of life in a relatively short period of time undoubtedly had a dramatic impact on the sociocultural system of the settlement. It is also significant that after this epidemic, the enforced acculturation of the Aleuts into the Russian economic and political system was much more successful than ever before.

By 1812, Burenin's place was taken by Ivan Kriukov, formerly a crew chief in the Shumagins. Kriukov eventually settled at Nikolski, married an Aleut woman and founded the influential Kriukov family. He built in 1806 the first Orthodox chapel in the eastern Aleutians at Nikolski, and in 1808 the chapel at Unalaska was built. It was Kriukov, who on a visit to Irkutsk, persuaded the young priest Ioann Popov Veniaminov to come to the Aleutians (Black 1980:100).

As has been well documented, contact with the Russians brought numerous changes to the Aleut population of Unalaska and other parts of the Aleutians. Perhaps the greatest change was the drastic reduction in population. According to Gross and Khera (1980:47),

The most salient characteristic of the population, from whatever number it was at the first contact, is that decline was so rapid that by the end of the first two generations of Russian contact, 80 percent of the Aleut population had disappeared either through relocation to other areas, e.g. California or Russia, or the Kuriles, or they simply disappeared through starvation, disease, and violent conflict with the Russians (Lantis 1970:179). If we take the *12,000* figure of Lantis as the 1741 population... , then the population was estimated as 1900 by 1791 and it was counted to be a figure of 2,200 in 1830 by Veniaminov (II:202-203; 1944:17) with a low of about 1500 at the turn of the century.

Much of this is usually attributed to the violence incurred by the Aleuts at the hands of the Russians. However, the exact number of Aleuts killed by the Russians is open to question. An even greater threat to the Aleuts than the weapons of the Russians were the diseases introduced by the explorers and traders. In fact, disease may have been a greater factor in the severe loss of life among the Aleuts than the intermittent

warfare with the Russians. Captain James Cook, on his third and last voyage of exploration, stopped in Unalaska in October 1778. He found that "the Natives here are afflicted with that heavy curse attending every set of People, who are unfortunate enough to get by any means European Connections, viz: the Venereal Disease" (1967:1337). From that time forward, the natives of Unalaska have experienced numerous epidemics of infectious diseases.

In 1838, a great epidemic of smallpox struck all of the villages of Unalaska Island. It is believed that the disease was introduced to the island from one of the ships which had arrived to vaccinate the local residents. "Many of the natives felt the Russians had come to spread the disease rather than cure it and therefore resisted vaccination until 'a most preemptor order' had been issued by the commander of the District" (Fortune, Hudson and McGarvey 1976:14). An estimated 130 persons in the nine villages of Unalaska District died from the disease.

The villagers of Unalaska were at the mercy of numerous illnesses and epidemics throughout the nineteenth century. Tuberculosis, pneumonia, influenza, and alcoholism were the major problems. The use of alcohol was initiated during this period. Although the traders were forbidden by law from selling liquor to the natives, they were responsible for the introduction of a homemade brew called kvass which was consumed in great quantities. According to Elliott, many of the Aleuts managed "to keep intoxicated and stupified for weeks, and even months at a time, beating their wives and children, destroying their houses, and recently, on several occasions, committing murder" (1875:25). Despite the introduction of these new diseases, however, the population began to stabilize and eventually began to show a small but steady increase.

In addition to the loss of life, other factors associated with Russian contact had significant impacts on the numbers and residence of Aleuts. One such factor was the use of Aleut hunters to secure furs for the Russian traders. Acknowledging the proficiency of the Aleut hunters, the Russians forced them into supplying furs while women and children were held as hostage. Aleut men were required to travel great distances throughout the Aleutians and other parts of Alaska on perilous journeys in their baidarkas. As visualized by Bancroft:

Either by force or by agreement with chiefs the Aleuts...were obliged to give hostages, generally women and children, to ensure the safety of their visitors, or performance of contract. They were thereupon given traps and sent forth to hunt for the season, while the Russians lived in indolent repose at the village, basking in the smiles of the wives and daughters, and using them also as purveyors and servants. When the hunters returned they surrendered traps and furs in exchange for goods, and the task-masters departed for another island to go repeat their operation (1886:235-236).

The practice of taking hostages was outlawed by Catherine the Great but was continued nonetheless. Occasionally, hostages were able to derive some benefit from this practice. Village chiefs would offer their own sons and daughters as hostages. The hostages were then sent to Russia where they would receive an education and other "trappings of civiliza-

tion, " thereby accelerating the process of cultural change.

Another of the major consequences of Russian contact was the major relocation of the Aleut population, "especially after the Russian-American Company began its monopoly of the trade in the 1790s. The inhabitants of numerous small villages scattered throughout the Aleutian Islands were resettled into larger villages (which became the stations of the Russian-American Company) on several of the larger islands. Here the Russians were able to secure a cheap supply of labor and send out male Aleuts to hunt for furs while women and children remained behind as hostages. The pelt trade commercialized Aleut life and disintegrated the networks of intra- and inter-village ties, breaking up families and aggregating village populations at centralized locations for ease of administration. Many contact villages on Unalaska Island, which numbered about 12, were abandoned and the population was moved to Unalaska. The Unalaska villages of Chernovsky, Makushin, Kashega and Biorka had been residential 'villages in the last century, but the early effort was to congregate the population in Unalaska or nearby (Tikhmenev 1940:346-395) .

In addition to the demographic changes, the Russians were responsible for several changes in the social system of the Aleuts. During this period, the traditional system of leadership underwent modification as the Russians traders, to facilitate control over the community and secure the services of local residents, established a three-tiered chieftainship. The Aleuts, however, continued to rely on the 1st or "head" chief and a joint system of company-village administration developed. The head chief worked with the company in an attempt to secure every possible advantage for his people.

A perhaps even more profound change in the social system of the Aleuts was the introduction of a cash-based economy. Although the Aleuts continued to harvest sea otters for subsistence use, the furs obtained were now used in trade with the Russian companies as well. A traditional resource was now used for a novel economic activity. With the income received from this activity, Aleuts could purchase tobacco, clothing, food (but usually in times of resource scarcity) and other items from the local company store. The introduction of the company store had a small impact on the traditional subsistence economy, but it helped to facilitate control over the Aleuts by creating a pattern of dependence on the trading companies. By introducing a barter system of exchange, the company store helped to prepare the way for Aleut involvement in a cash-based economy (Okun 1951:198). With this new system of exchange, the traditional patterns of reciprocity were weakened.

1.2.3.2 Orthodox Missionaries

Perhaps the most far-reaching change resulting from contact with the Russians was the pervasive influence and spread of the Russian Orthodox faith. This spread can be attributed to several different factors. The most obvious was the power and influence of the Russian traders. Preferential treatment was given by the traders and local officials to those natives considered to be "civilized" and acceptance of the Russian Orthodox faith was a prime index of such a status. Another factor was the decline of the traditional religious system. The chief practition-

ers of the old religion, the shamans, found their power seriously diminished by the rapid influx of new diseases which they were unable to cure (Stein 1977:47). A third factor was the similarities between the old and the new religious systems which facilitated the adoption of the Russian Orthodox faith by the Aleuts. Such similarities include the belief in the coming of a messiah.

The first Russian Orthodox missionary to visit Unalaska was Hiermonk Makarii who arrived in 1794. His most notable accomplishment was to lead a delegation of Aleuts to St. Petersburg to make public the charges of violence and cruelty at the hands of Shelikov's men (Gross and Khera 1980:85).

The best known Russian missionary in Unalaska was Ivan Popov Veniaminov. Veniaminov resided in Unalaska from 1824 to 1835. He was responsible for the entire Unalaska District which included the Fox and Pribilof Islands. In 1825 he established a school in Unalaska and built the church the following year. In 1835, Veniaminov was sent to Sitka where he became the first Russian Orthodox bishop of Alaska.

Veniaminov played a major role in the history of Unalaska, both through his efforts at spreading the Russian Orthodox faith and converting the Aleuts as well as through his interest in and respect for traditional Aleut culture. Veniaminov produced the first written dictionary of the Aleut language, encouraged the preservation of traditional Aleut customs such as basketweaving and navigational techniques, and wrote the first and perhaps most complete ethnography of Aleut society. The school established by Veniaminov altered the traditional system of training the young. Such training now occurred in a formal context by non-kin and involved the study of the Russian language, religion, history, and mathematics.

1.2.3.3 Russian Domination

According to Lantis the aboriginal culture of the Aleut disappeared as the result of the "extreme stress" experienced during the period of Russian domination. Contributing to this stress were five major factors: 1) the great loss of population; 2) the inability of the Aleuts to defend themselves from hostile invaders and fur traders; 3) the massive relocation of men and women, leading to the breakup of communities and families; 4) the loss of morale and self-confidence and 5) the disappearance of the old religion, including a society of men withholding sacred secrets from women (Lantis 1947:27-30; 1970:277-280). Included with these factors, we must note the rapid cultural changes which produced new expectations. The new language, formalized educational system, new religion, economic activities, and ethic of social inferiority, all contributed to generating a state of uncertainty and anxiety. A whole new set of rules were imposed on the Aleuts, a set which placed them in a state of confusion and despair.

In addition to the stress experienced by all Aleuts, contact with the Russians also produced a new social class of creoles. While this class served an important function of mediating between the two cultural systems, serving as "transmitters of each culture to the bearers of the other culture" (Lantis 1970:291), it also "was a tremendously powerful

force for undermining the old Aleut way of life, and its replacement with something new" (Stein 1977:36).

By the late 1770s, Russians were looking eastward for better pelts and to a large degree had abandoned the Aleutians. Unalaska remained a Russian outpost until 1850 when fur availability had declined to a point where the outpost was not longer economically feasible.

1.2.4 The American Period

Russian control of the Aleutian Islands ended in 1867 with the purchase of Alaska by the United States. Under the terms of the transaction, Alaskan Natives were entitled to American citizenship, a right they did not fully enjoy until 1924. Although the Aleuts were no longer subject to the harsh policies of the Russians, in many ways they found life under the Americans even more oppressive. With the "pacification" of the Aleutians and the adoption of the Russian Orthodox faith by the Aleuts, the Russians and Aleuts had come to grudgingly respect one another. The native population had gradually come to be recognized as "civilized" by the Russian traders and officials, and Russian authorities were concerned that native interests would be protected once Alaska was transferred to the Americans. The Americans, on the other hand, viewed all Alaskan Natives as primitive and uncivilized. The Aleuts, therefore, were subjected to greater discrimination and economic exploitation at the hands of the Americans.

One of the more subtle forms of this discrimination was the lack of support for the Russian Orthodox churches and schools in the Aleutians. With access to funds from Russia eliminated after the sale of Alaska to the Americans and the unwillingness of American authorities to lend financial support to these religious institutions, many schools were closed and priests returned to Russia.

While the Aleuts were no longer subject to the domination of the Russian American Company in their communities, the pattern of economic relations between native and non-native essentially remained unchanged during the American period. The policy of advancing credit to Aleut hunters, thus establishing a dependency relationship, was adopted by the new American trading companies. The American traders would advance supplies to the natives and then take the furs brought in the following season as payment. "The most effective method used by the trader to assure the services of the people was to 'buy' their baidarkas -- that is, to take possession over them to cover debts. Without the baidarkas the natives could neither hunt sea otter nor catch fish. They were thus at the mercy of the traders" (Gross and Khera 1980:98).

The pre-war American period (1867-1945) in Unalaska was characterized by a series of commercial booms and busts. However, throughout this period, the number of villages on Unalaska Island (4-5) and the population of Unalaska village remained relatively constant, with the notable exception of the abrupt increase and decrease in population due to the Nome gold rush. This stability is reflected in Table 2 below,

Table 2

Population and Number of Settlements,
Unalaska Village and Unalaska Island, 1379-1940

Year	Population Unalaska Village	Number of Settlements Unalaska Island
1879	304	incomplete
1890	317	5
1897	250	5
1900	428	4
1910	281	4
1920	299	4
1930	226	4
1940	298	4

Source: Jones 1969:66.

The holdings of the Russian American Company throughout the Aleutian Islands Chain, including the facilities at Unalaska, were purchased by the Hutchison and Kohl Company. In 1870, Hutchison and a group of investors formed the Alaska Commercial Company which operated the Unalaska facilities for the next twenty years. Most of these facilities were located on Amaknak Island by Lincoln Harbor, later to be known as Dutch Harbor (Alaska Geographic 1980:116). The trading post's business was primarily in sea otter skins which remained the major economic activity for local natives until the end of the century (Jones 1969:46). The trading companies provided a major source of employment for the Aleut residents of Unalaska in the late nineteenth century. "The common pattern for males was to work the Pribilofs during the summer, hunt sea otters during the winter, and work in the warehouses or fish in the village during the spring and fall" (Jones 1969:46).

Under the Americans, Unalaska grew as a commercial center. Four specific factors were largely responsible for the economic prosperity which, for the most part, began in the late nineteenth and early twentieth century. The first was the location of the community close to major shipping lanes. Dutch Harbor had become a major coaling and supply station for vessels bound for the Bering Sea and Arctic Ocean. Both the Northern Commercial Company and the Alaska Commercial Company maintained trading posts and warehouses there. Unalaska also became a major port of call for the Revenue Marine Service and later the Coast Guard which provided medical aid and guarded against the illegal liquor traffic beginning in the late nineteenth century.

The second factor was the gold rush from the lower forty-eight states to Nome and other parts of Alaska. Thousands of prospectors enroute to Nome during the Gold Rush passed through Unalaska. In 1900, 10,000 were said to have passed through, many remaining the winter. A few mining ventures were even attempted locally, with Klondike and Nome stampedeers enjoying modest success prospecting off Unalaska beaches. A strike was reported on Pyramid Peak in 1900. "Stock was sold in a company to produce this gold, but high values promised in early assays never were realized and

legend has it the whole venture was a scam" (Alaska Geographic 1980:118).

The Northern Commercial Company established a post on Amaknak Island and built a hotel and a dance hall. Twelve saloons opened. Six ships were built there in a single year and jobs were abundant. In addition to the bars and brothels catering to the transients, the community also provided more "refined" social activities. "The 1910-1912 diary of Noah and Clara Davenport, resident teacher and judge of that era, records a steady stream of visiting ships, lively social evenings and engagements with the 'Unalaska Royal Brass Band' and 'Russian Symphony Orchestra'" (Alaska Geographic 1980:117).

In time, the boom subsided, the job market constricted, and Unalaska faced economic depression. Sea otters, on which the Aleut had depended for thousands of years, had nearly disappeared. The ship building industry subsided and jobs in the village were increasingly scarce (Jones 1969:47). With the exception of the store, the Northern Commercial Company abandoned its holdings on Amaknak Island.

The third source of economic prosperity in the early twentieth century was the emerging seafood industry. Although Unalaska was not to have a major fishery until the late 1920s, several seafood processing plants are known to have operated in the region in the early 1900s, processing herring, salmon, and whale meat (Bomhoff 1977). Codfish salteries were located near Chernofsky and a floating cannery owned by the International Packing Company visited Makushin each year, for several years until 1919, to process salmon.

The fourth source of economic prosperity was fox farming. The first foxes in the Aleutian Islands were believed to have been introduced by the Russians on Atka and Attu Islands in the late eighteenth century. According to Swanson (1982:64), Sam Applegate was the first fox rancher in the Aleutian Islands. Applegate began raising foxes in the early 1900s and even introduced ground squirrels on Unalaska Island as food for the foxes. (The foxes, however, left the squirrels alone). Blue fox pelts were considered to be the most valuable. Unalaska, however, was inhabited by red foxes whose pelts were least valuable. To trap, one had to lease an island from the federal government for an annual fee of \$25. Permits, however, were free to natives, making them sought after partners for white entrepreneurs (Alaska Geographic 1980:122). Whole villages would lease islands for this purpose; Unalaska village for example, leased Carlisle Island. The price for pelts rose in 1915 and by the 1920s, trappers could earn between \$100 and \$300 each for a blue fox pelt (Swanson 1982:66). Fox farming continued to be a lucrative venture until the Great Depression when the market was wiped out.

In addition to fox farming, other farming ventures were attempted which in one way or another affected the community of Unalaska. One such venture was the attempt by Sheldon Jackson to introduce reindeer into Alaska to aid the natives. Unalaska served as one of the initial testing grounds for this venture but the stock introduced in the area did not survive.

One agricultural venture which met with limited success and occasionally

failure, but has persisted to the present day, has been sheep ranching.

The Russians introduced sheep raising in 1835 to provide meat. In 1918 Andrew C. Smith, with William Macintosh of Oregon, decided to cry ranching on a large scale, introducing 500 ewes to Dutch Harbor, Unalaska. Over half the stock died the first winter, and the following year Macintosh and Smith split the survivors, sending half to Chernofski and the other half to Nikolski, and then separated their operations as well into the Western Pacific Livestock Company (Unalaska) and the Aleutian Pacific Livestock Company (Umnak).

In 1926 an additional \$60,000 worth of stock was shipped to Umnak with Seattle newspaper headlines which declared western Alaska was destined to become one of the greatest sheep raising centers in the world, but by 1932 both operators were in receivership and subsequent managers only broke even at best, due to problems of rough terrain, hard weather and remote markets (Alaska Geographic 1980:119).

In all of these instances, economic growth and prosperity was short-lived. The Gold Rush was short-lived, the fisheries declined and the fox farming was ruined by the Great Depression. Unalaska declined as a commercial center in the 1920's when oil replaced coal as a fuel for ships and the Dutch Harbor coaling station folded. The buildings of the Northern Commercial Company were purchased by the Alaska Commercial Company and oil tanks were constructed adjacent to Dutch Harbor. Despite this move, however, many of the buildings were abandoned and the settlement near Dutch Harbor became a ghost town.

Unalaska did experience a minor economic boom in the late 1920s with the mysterious appearance of large stocks of herring. In 1928 local fishermen began to harvest the resource and within two years several major processors came to Unalaska to process herring. Most remained for only two years though several smaller processors remained until 1935. After that, the herring fishery continued, but on a reduced scale, until the outbreak of World War II (Swanson 1982:139-140). Cod and salmon were also fished on a small scale but, for the most part, Unalaska was not in the mainstream of fisheries exploitation until the late 1960s and early 1970s.

While the commercial sector of the local economy was unstable and shifting, the subsistence sector remained essentially unchanged. The company stores were utilized by local residents for the purchase of certain items such as tobacco or clothing, but

...until the beginning of World War II the Aleuts basically retained their aboriginal technology, and depended upon the natural resources of their environment for many materials and most of their food supply. There was simply no substitute for the aboriginal technology in regard to hunting and fishing and the aboriginal food resources (Gross and Khera 1980:100-101).

Despite the instability and uncertainty of the commercial sector, Unalaska grew as a regional center, drawing a significant number of immigrants from neighboring villages during the pre-war period. The

four villages of Biorka, Chernofski, Makushin, and Kashega, each experienced a population decline as residents went to Unalaska or elsewhere looking for better economic opportunities, Makushin's involvement in commercial fishing suffered a serious blow when the International Packing Company curtailed its operations in 1919, and the entire village of Chernofski moved away in 1928 (Cuttlefish 2 1978). According to Jones (1973:19), these immigrants were attracted by the few jobs which were available as well as by the high level of community services and facilities in Unalaska.

One of the most important services to be obtained in Unalaska during the American period was education. A school was established and operated by the Methodist Women's Home Mission under contract to the federal government.

The mission also founded the Jesse Lee Home, comprising primarily orphans from the north brought to Unalaska on whaling vessels. The Jesse Lee Home operated from 1890 to 1926 and furnished nearly all the students in the early years of the American school (Jones 1969:48-49).

According to Jones, three events popularized the American school,

With the decline in the fur trade at the end of the century and increased reliance on jobs requiring English (unloading ships for English-speaking bosses), growing numbers of students from the Russian school attended for instruction in English. During the first two decades of the century, Aleuts came to depend on the mission director, a physician, for medical care. And, in 1911, when the Russian school closed, the American school became the sole source for education (1969:49).

While both schools were in operation, the typical pattern was to attend the American school in the mornings and the Russian school in the afternoons.

Unalaska was an important center for Aleuts living in the area because it was the only place where health services could be obtained. Throughout the American period, local residents were subjected to several different diseases and illnesses. Alcoholism was a growing problem for native and non-natives alike. In 1881, the villages of Unalaska Island suffered from an outbreak of typhoid pneumonia. "A major influenza epidemic, accompanied by measles and pneumonia, swept through the Aleutians and western Alaska in the year 1900. One-third of the population is said to have perished, chiefly from measles" (Fortiune, Hudson and McGarvey 1976:26). A similar loss of life occurred when Unalaska fell victim to the great Spanish influenza epidemic in 1919. Throughout most of the period, health services were limited and sporadic. A small hospital for visiting seamen operated briefly around the turn of the century and services were provided to natives on an intermittent basis by a physician and dispensary provided by the Alaska Commercial Company, and the medical staff of visiting Coast Guard cutters. In 1934, a hospital was constructed by the Bureau of Indian Affairs. It provided medical services to the local community until its takeover by the military in 1941.

Another feature which attracted Aleuts to the village was the importance of Unalaska as a port of call for supply ships and mail boats. The Coast Guard maintained its headquarters for the Bering Sea patrol in Unalaska from May 1 to November 1 of each year. The Coast and Geodetic Survey also used the community as a base to carry on survey operations in the Aleutian Islands Chain (Cuttlefish 5 1981:1). During the summer, Unalaska was visited on a regular basis by the steamer Victoria enroute from Seattle to Nome and by the S.S. Starr from Seward, Alaska.

Given the community's status as a port of call, supplies could be more readily obtained at the market and alcohol at a local bar in Unalaska than in the outlying villages. The community was also an administrative center for the Russian Orthodox church. Chapels could be found in almost all of the outlying villages (Cuttlefish 2 1978) but the church in Unalaska was the administrative center of the Aleutian Islands District as well as the most impressive in the Aleutians.

During the American period, there were two different systems of political authority and administration, one Aleut and one non-Aleut. The principal leaders of the Aleut system were the village chief and the Russian Orthodox priest. Prior to World War II, Alexi Yatchmenoff, the chief, wielded considerable influence among the Aleuts in Unalaska. The non-Aleut authorities were the deputy U.S. commissioner, the deputy U.S. marshal, and the chief agent of the Alaska Commercial Company.

The marshal handled so-called drastic problems--murder and insanity--but the chief continued to handle drunkenness, adultery, quarreling, and betrayal of secrets. The priest's role was limited to moral injunctions, usually against sexual promiscuity and illegitimacy, but he had no formal enforcement powers (Jones 1969:53-54).

1.2.5 World War II

Until 1940, the only military facility in the vicinity of Unalaska was a Navy radio station located on Amaknak Island. The facility consisted of two or three wooden frame buildings used as a radio office and power house and a six-family, brick apartment house (Cuttlefish 5 1981:2). With the danger of war imminent, however, plans were made to construct military bases and airfields throughout the Aleutian Islands Chain. The contracting firm Siems-Drake-Puget Sound was responsible for the early construction of the Dutch Harbor facilities for the military (Cuttlefish 5 1981:63). The company brought civilian workers to build military bases on Unalaska and Amaknak Islands and the local population doubled to nearly 400 residents in less than one year.

In 1941, concerned over the possible threat to Alaska by Japan, the U.S. Army began to move considerable numbers of men and supplies to Alaska. In July of 1941, 225 officers and 5,200 enlisted men were sent to Dutch Harbor (Kirtland & Coffin 1981:2). The Navy took over Dutch Harbor and began to construct barracks, gun emplacements, munitions storage bunkers, airfield and docking facilities.

The rapid influx of the military into the area had several different impacts on the residents of Unalaska. On the one hand, the need for available laborers brought numerous job opportunities for community members in construction. The needs of the servicemen also resulted in an influx of entrepreneurs who opened, among other things, a brothel, dance hall, restaurant, gambling houses, markets, and additional bars (Jones 1969:55).

While the increased activity in the commercial sector was applauded by some local residents, it was accompanied by a fear of growing encroachment of the military on community life. Amid rumors that the military was planning to appropriate the entire village and move the residents, local leaders, primarily white businessmen, proposed incorporating as a first class city. "Incorporation, they said, would prevent appropriation of land and force the military to purchase land, resident by resident. Moreover, it would establish a legal base from which to negotiate the transfer of military facilities after the war" (Jones 1969:55).

The issue was brought to a vote and on December 23, 1941, two thirds of the Unalaska electorate voted to incorporate as a first class City. With the exception of one city councilman, all of the elected officials were non-Natives.

Once incorporated, the city moved to manage economic growth by limiting business licences to persons residing in the community for a minimum of one year and closing down the brothel. Regulations were drawn up for establishing a school and sales tax, limiting the hours that liquor could be sold, and controlling the spread of disease. Three standing committees were created: "one on public health, police, and fire protection; the second on public morals and relief of destitution; and the third on public hearings, streets, sewage, and garbage disposal" (Jones 1969:57).

Despite these efforts, however, the city council was to be an ineffective institution for two major reasons. First, the council, despite its efforts, lacked a tax base and thus the revenues to provide the required community services and execute the programs to deal with the population influx. Second, with the Japanese invasion of the Aleutians in 1942, the community essentially came under military control, co-opting the civilian authority.

1.2.5.1 The Japanese Invasion of the Aleutians

Despite the U.S. buildup of troops, supplies, and bases throughout 1940-41, the Japanese successfully invaded the Aleutian Islands in June of 1942. Kiska and Attu Islands were taken and held by Japanese troops. On Attu Island, 42 Aleuts and an Alaska Indian Service employee were taken prisoner and sent to Japan where they were interned for the remainder of the war. On June 3-4, the naval facilities at Dutch Harbor and the Army post of Fort Mears were attacked by Japanese aircraft, causing substantial damage, including destruction of a major portion of the local hospital, the destruction of the beached ship, Northwestern, which had been used as a makeshift hotel, the loss of fourteen aircraft, and 78 dead (Cuttlefish 5 1981:22).

Although the invasion by Japanese troops of American soil had great propaganda value, its major purpose was to distract American forces while a major Japanese task force under Admiral Yamamoto attacked Midway Islands. The severe defeat of the Japanese task force at the hands of the U.S. Navy altered this objective, however, and the major concern became protection of Japanese soil from possible attack by the Americans via the Aleutians. Air bases were constructed on Attu and Kiska and, for a time, the Japanese constituted a nuisance to the American forces stationed in Alaska.

It was not until May of 1943 that American forces were able to successfully drive the Japanese out of the Aleutians. On May 11, Army units under the command of Major General Albert E. Brown secured a beachhead at Massacre Bay on Attu Island. The battle lasted for two weeks and cost the Americans 549 dead, and 1,148 wounded (Kirtland & Coffin 1981:6).

1.2.5.2 Internment of Aleuts

With the exception of the residents of Attu who were captured by the Japanese and sent to Japan as prisoners, the Aleuts living in the island chain at the outbreak of the war suffered more at the hands of the American military and civilian authorities than the Japanese. The history of the internment of the Aleut population is one of the little known events in American history. Unlike the internment of Japanese living on the West Coast in the lower 48 states, the removal of Aleuts from their homes in the interest of their own safety during World War II while the non-Aleut residents were allowed to remain in the Aleutians has only come to public attention with the recent movement on the part of the Aleuts, through their Native corporations, to seek compensation for the losses suffered in their evacuation.

The history of this internment actually begins with a concern on the part of government officials for the safety of the Alaskan natives in the months immediately preceding the Japanese attack. Despite a general agreement that evacuation plans should be drawn up, however, it was not until the Japanese invasion of Attu and Kiska, and the air raids on Dutch Harbor, that any serious thought was given to such planning (Kirtland & Coffin 1981:11). This bureaucratic indecision and delay had two significant consequences on the course of the evacuation when it finally occurred. First, the Aleuts were unable to take any of their personal possessions along with them or secure their homes in their absence. The residents of Unalaska, for instance, were given less than twenty-four hours notice before being evacuated and were allowed to bring only their personal clothing (Tutiakoff 1981:8). Adequate supplies and medical personnel were unavailable and the lack of sufficient transport resulted in overcrowded vessels and unsanitary conditions. Second, the decision to relocate the Aleuts in southeastern Alaska rather than other parts of the Aleutian chain appears to have been based on an administrative desire to place the Natives in areas where they would be "manageable" rather than in areas where the Natives themselves would be most comfortable.

Aleuts from the Aleutian and Pribilof Islands were placed in four camps. Residents of the Pribilof Islands were sent to Funter Bay or. Admiralty

Island in Southeastern Alaska while the residents of Atka were sent to Killisnoo, also in Southeastern Alaska. "After the evacuation and destruction of Atka, the only Aleuts remaining west of Unimak Island (other than the captured Attuans) were located in the villages of Akutan, on Akutan Island; Unalaska, Kashega, Biorka and Makushin, on Unalaska Island; and Nikolski, on Umnak Island" (Kirtland & Coffin 1981:33). On July 13, 1942, 72 Aleuts from Nikolski, 41 from Akutan, 20 from Kashega, 18 from Biorka and 9 from Makushin, arrived at the Wrangell Institute, Wrangell Alaska. From there, the refugees were sent to a Civilian Conservation Corps camp at Ward Cove near Ketchikan, established some weeks later. The villagers of Unalaska were the last to be evacuated from the Aleutian Island Chain. One hundred and eleven Unalaska Aleuts arrived on the S.S. Alaska at the Wrangell Institute on July 26, 1942 (Kirtland & Coffin 1981:35). From there, they were sent to live in an abandoned cannery at Burnett Inlet where they remained for three years. In all, over 881 Aleuts had been relocated from the villages west of Unimak Island and the Pribilofs.

The conditions of the camps and the harsh treatment of the Aleut "residents" has been well documented though little publicized. All of the camps lacked adequate housing, proper sanitation, medical personnel or supplies, and other essential facilities. Philemon Tutiakoff, in his address before the National Coalition for Redress/Reparations, described the conditions at Burnett Inlet as follows:

Initially, the overcrowded conditions were an abomination. There were twenty-eight of us forced to live in one, designated 15 x 20 foot house. There existed no church, no school, no medical facility, no store, no community water or sewage system, no recreation or community facility, no skiffs or dories, no fishing gear and no hunting rifles (1981:8).

One of the greatest problems faced by the Aleuts in the camps was disease. Disease was a problem in all of the camps, especially at Ward Cove where the refugees, living in proximity to a large non-native population at Ketchikan, were hit with epidemics of venereal disease, tuberculosis, and alcohol abuse (Kirtland & Coffin 1981:57). The death rate at Ward Cove was perhaps the highest among all the Aleut internment camps. The residents of the Funter Bay camps who came from the Pribilof Islands also suffered much, forty of whom died there. Ten Aleuts died at Killisnoo, twenty eight at Ward Cove, and four at Burnett Inlet. Although conditions for the Unalaska residents living at Burnett Inlet were difficult, it appears that they were less life-threatening than at the other camps (Kirtland & Coffin 1981:60).

The military threat to the Aleutians had been eliminated by December of 1943. Nevertheless, the Aleuts remained in the camps until April through June of 1945. According to Kirtland and Coffin (1981:77), this was due largely to the stance of the Bureau of Indian Affairs:

Although military commanders, civilian and uniformed, had agreed that the Aleuts of the Aleutian Island Chain could be repatriated in 1944, officials of the Bureau of Indian Affairs expressed some reluctance to cooperate. These officials were concerned about the 'impracticability of obtaining school

teachers... , the difficulty of supplying the villagers and the impossibility of prevention of intermingling with military personnel. . . ' In discussions with Navy officials, the Bureau went on record in opposition to repatriation of the Aleutians in 1944.

1.2.6 Post-war Unalaska

The internment experience of the Aleuts did not end with removal from the camps in southeastern Alaska. Upon returning to their own villages, they found their homes had been broken into and their property either stolen or destroyed. In some communities, Aleut homes were used to house military personnel. Though troops were not billeted in Unalaska, Aleut homes were vandalized and looted by both civilian and military personnel. Because of the haste with which the evacuation took place, local residents did not have time to prepare and were forced to leave personal possessions behind. A survey of the community in 1944 revealed that:

The furnishings, clothing and personal effects, remaining in the homes showed, with few exceptions, evidence of weather damage and damage by rats. Inspection of contents revealed extensive evidence of widespread and wanton destruction of property and vandalism. Contents of closed packing boxes, trunks and cupboards had been ransacked. Clothing had been scattered over floors, trampled and fouled. Dishes, furniture, stoves, radios, phonographs, books, and other items had been broken or damaged. Many items listed on inventories furnished by the occupants of the houses were entirely missing (U.S. Army Survey 1944, in Kirtland and Coffin 1981:88).

Despite the widespread destruction of property in Unalaska, compensation was not forthcoming. The Army attempted to make amends by moving thirty-five, 16' x 20' cabins into Unalaska village to supplement housing that survived the military "protection" of the village (Kirtland and Coffin 1981:89). However, the Unalaska Aleuts are not recorded as qualifying for any of the funds allocated by the President for payment in satisfaction of personal claims for loss of property. Among the entire Aleut population interned during World War II, the average per capita payment for personal property loss is estimated to have been \$35.25 (Kirtland and Coffin 1981:90).

Another consequence of the resettlement of the Aleutian Islands Chain was the merger of residents of Biorka, Kashega and Makushin into the village of Unalaska. Recapitulating the experience under the Russians in the late eighteenth and early nineteenth century, residents from outlying villages were relocated at Unalaska village for "administrative" purposes. According to Jones (1973:18), however, there are also economic reasons for this consolidation. Although the government directed the consolidation of the Unalaska villages in 1945, the resettlement process had already begun before the war. Chernofsky, Makushin, Biorka and Kashega had had no economic base since the end of the otter hunting period "save for Makushin where a floating salmon cannery operated periodically for a few years between 1916 and 1928. Although the economy at Unalaska village during the 20th century was unstable and

intermittent , the village frequently provided job opportunities for members of the other villages in the complex" (Jones 1973:18). By 1940, Chernofsky had already died as an Aleut village, and Kashega, Biorka, and Makushin had only 26, 20, and 10 residents respectively (Jones 1973:19). 1

In addition to the attempts of government officials to consolidate the villages into one large community, local residents were restricted by the continued presence of the military which remained in Dutch Harbor and Unalaska until 1947. In the meantime, much of the area was declared off limits to local residents, creating additional obstacles to the effort to return to normalcy. Residents were restricted to an area 2500 feet long and 400 feet wide and could not leave the village without a special pass from the military (Jones 1969:58).

The post-war period in Unalaska is characterized by considerable uncertainty and imitability in the economic, political and cultural spheres of community life. One of the major problems faced by the residents on their return to Unalaska was the lack of economic opportunities. According to Henry Swanson,

The only time Unalaska really was poor and had nothing was right after World War II. Rest of the time there was always something here. After the war there was an economically low point. I don't think it was much improved until the crab started (1982:190).

1. According to Swanson (1982:191), Biorka was the last of the outlying villages to be consolidated. "Biorka had been a strong village clean up to the war. Makushin and Kashega people kept leaving for Unalaska, but Biorka was living good. They were closer to Unalaska too and could come in when they wanted to."

A few local residents were hired by the military to dismantle and salvage the fortifications and facilities at Dutch Harbor, but for the most part, residents of Unalaska had to go outside the community to find employment. A few went to the Pribilof Islands to work in the annual seal harvests while others went to King Cove to work in the canneries. In the 1950s, construction of the DEW Line in Alaska provided employment opportunities for some local residents.

The lack of economic opportunities and a source of revenue contributed to instability and uncertainty in local government. The city government was unable to provide even minimal services and even considered disincorporation because it was unable to meet its obligation of furnishing 15 per cent of the costs of the local school as required by territorial law (Jones 1969:60). The traditional leadership also experienced a decline in authority as the power and influence of the local chief diminished with the growing number of non-Aleut residents and the need to conduct complicated, legalistic negotiations with outside bureaucracies (Jones 1969:60).

Despite this atmosphere of uncertainty and instability, the quality of life in Unalaska began to show improvements in the late 1950s and early

1960s. "Interest in the fishery resources of the Aleutians began to gather impetus around 1950 with the harvesting and processing of halibut, salmon and king crab. Many new jobs became available, and the local economy improved considerably" (Alaska Consultants 1981:78). With this latest period of economic growth, the community experienced a significant increase in the rate of population growth, largely as a result of the influx of natives from other Aleutian communities such as Akutan and Nikolski and non-Aleuts from other parts of Alaska and the lower forty-eight states.

As the commercial economy began to improve, the local government also began to display signs of stability and growth. "In the late 1950s and early 1960's Unalaska succeeded in stabilizing its tax base to the extent of meeting its share of the school costs and paying the salary of a half-time employee to operate the municipal electric company" (Jones 1969:62).

In the post-war era, Aleuts began to gain greater political power in the community. The first evidence of this was the gradual change in the composition of the city council. According to Jones, "Aleuts replaced white businessmen on the council and school board as the latter left during the post World War II depression in Unalaska" (1969:62). By 1967, the City Council was all Aleut in its membership.

The passage of the Alaska Native Claims Settlement Act in 1971 has a significant impact on the Aleut residents of Unalaska. The Act, which established the existence of 12 regional corporations and numerous village corporations throughout the state, resulted in the formation of the regional Aleut Corporation which owns the subsurface rights to most of the land in and around the community of Unalaska and the local Unalashka Corporation which owns the surface rights.

Politically, ANSCA helped to foster a pattern of withdrawal of the Aleut community from the administration of the city government by focussing attention of the native corporations, a point that will be discussed in greater detail later. It was during the 1970s that the Aleut residents began to withdraw from effective political participation in Unalaska and be underrepresented in both elected and appointed offices.

As will be discussed in greater detail throughout the report, the Alaska Native Claims Settlement Act has precipitated a revival of sorts in traditional Aleut culture and identity. Nevertheless, in the post-war period, the Traditional sociocultural system was on the decline. According to Jones (1969:63),

The dominance of modern organizations in Unalaska and the increasing numbers of youth attending BIA high schools in cities combined to further weaken traditional organizations. In the late 1950's, the church brotherhood ceased to exist, and soon after, the sisterhood abandoned its traditional welfare activities. Church attendance dropped to a mere handful, especially as the returning youth detached themselves. The American Russian-Orthodox priest, unlike his awesome and learned Russian counterpart, remained in the community for relatively short periods of time and became

detached from the community and its problems. The chief by this time had become merely a symbol of the past and exercised no powers.

Even by the mid-1960s, the Aleut population remained in the majority of the local population. In 1966, there were no more than three dozen non-Aleuts living in Unalaska. This began to change, however, with the advent of the crab fishery.

The present crab fishery in Unalaska can trace its origins to 1961, when Carl Moses arrived in the community and purchased the old Northern Commercial Company Store. Carl started his own business, Carl's Commercial near the site of the present-day store. In 1966, Moses sold a small piece of land on the Unalaska side to Pan Alaska, Incorporated, for a sum of \$50,000. Other processors in the community during the mid 1960s were Captain Thompson's Seafoods, which owned the processor Aleutian King Crab, and San Juan Fisheries, a subsidiary of New England Seafoods.

In 1967 the federal government sold a portion of its holdings on Amaknak Island in a sale conducted by the General Services Administration, Pan Alaska was the high bidder for much of the property. The land was eventually sold by Pan Alaska to Vita Foods which eventually established their own processing facilities. In the early 1970s, the manager of Vita Foods, aided by the financial support of Japanese commercial interests, began another seafood processor, Universal Seafoods. Soon, other seafood processors arrived in Unalaska. The history of this arrival is discussed in greater detail in the examination of local economic structure.

1.2.7 Summary

This brief historical review of Unalaska reveals several features which characterize the contemporary community. First, Unalaska has historically been a commercial and administrative center of the Aleutian Islands region. Since its foundation by Russian traders in the late eighteenth century, Unalaska has existed on a variety of commercial enterprises relating to exploitation of natural, usually marine, resources. Second, Unalaska has, since the mid-1700s, never been a true Aleut community. The community was formed by Russian traders near the site of an existing Aleut village (Iliuliuk) and Aleut residents from the villages of Unalaska Island were brought here to assist in commercial activities. Since this time, Unalaska has included in its population both Aleuts and non-Aleuts. Third, Unalaska has historically had to contend with a significant cyclic fluctuation in its economy, largely due to changes in resource availability and exogenous demand for these resources. This has resulted in a boom and bust cycle throughout the community's history. Each of these features, as will become apparent throughout the remainder of the report, continue to characterize the contemporary sociocultural system of Unalaska and will undoubtedly play important parts in determining the future course of sociocultural change in the community.

1.3 Extrasocietal Forces

1.3.1 External Government

Unalaska has been affected somewhat less than most communities in the Aleutians by external governmental forces in the last decade. This is not to say there have been no effects. In particular, the passage of the federal Alaska Native Claims Settlement Act of 1971 (ANCSA), which resulted in the formation of both local and regional Native corporations, has had major local effects. However, the other important external governmental act of the seventies, the State of Alaska Limited Entry Act of 1973, has had less impact locally than might be expected. Other external governmental agencies, particularly federal agencies such as the BIA and the BLM, have less local influence today than was the case in the past, largely as a result of the emergence of the local and regional native corporations as legal trustees of most of the land in and surrounding the community. However, the federal government has had, and continues to have, consistent influence in terms of the management and regulation of fisheries activity, as in, for example, the establishment of the 200 mile foreign fishing limit.

In this section we will note those external governmental forces which have exerted the most influence on local Unalaskan activity. We will not go into detail concerning the local activities of these external agencies, however, a discussion we reserve for the sections on political and economic structure.

The federal government has had a consistent influence in the area through several pieces of legislation and agencies. It has influenced local fisheries through its establishment of and vacillation concerning the application of the 200 mile limit, through ANCSA, oil lease area development, and federal agencies such as the BLM and BIA.

The establishment of the 200 mile limit is generally seen as a progressive move by most Unalaskans. However, most locals feel that the Bering Sea fisheries are simply political footballs. If a country is on good terms with the United States, or if the U.S. has a vested interest in improving relations with a country, this is likely to be reflected in the relaxation of restrictions on fishing in the Bering Sea. At the same time, if the U.S. and another country become estranged the result may be an increase in restrictions concerning that country's ability to exploit the Bering Sea fisheries. Thus, if all foreign fishermen were excluded totally from the fisheries the United States would lose one of its major tools for leverage, its means of reward and punishment. Locals feel these factors influence American fisheries policy more than local needs and desires.

The establishment of the 200 mile limit itself had major ramifications locally, although it is difficult to be certain what the exact effects of the limit were. Some Unalaska residents feel that the 200 mile limit hurt the local crab fishery by eliminating foreign harvesting of groundfish, in particular cod. This allowed the population to grow and threaten the crab fishery since a prime food for cod is crab larvae. Others take the opposite view, that the foreign fishermen essentially "cleared

out " the crab before they left. In other words, the 200 mile limit came too late.

The Alaska Native Claims Settlement Act of 1971 has had pervasive impact in Unalaska. The Act resulted in the establishment of the Ounalashka Corporation which took responsibility for the determination of the lands to be conveyed to the Aleut residents of Unalaska under the provisions of the Act. Since 1971 the Corporation has claimed most of the land in and surrounding the community, and has administered that land in the name of the shareholders of the Corporation. The Corporation has also been involved in several local construction projects, and leases land to several local processors and businesses. We will discuss these activities in detail under the section on economic structure. In addition to the profit corporations, the non-profit Aleutian/Pribilof islands Associations exerts some influence on the community. Its precursor, the Aleutian Islands Planning Commission, was a con-profit corporation funded by federal community action (OEO) program funds. The Aleutian Islands Planting Commission served to promote land claims prior to the enactment of the Alaska Native Claims Settlement Act.

A major federal impediment to the development of Unalaska as a port is the Jones Act. This is an Act of Congress, passed in 1936, which specifies that Puerto Rico and Hawaii are in a special trade category which gives them special privileges with respect to regulations concerning subsidized foreign trade carriers. In Unalaska this relates most directly to the presence of American President Lines. APL is primarily an international carrier subsidized by t'he United States Government. By law any such carrier subsidized with federal funds cannot ship goods domestically, but must restrict itself to international shipping. However, the Jones Act allows circumvention of this restriction in the case of shipping going through either Puerto Rico or 'Hawaii. There has been a concerted attempt on the part of some Unalaskan businessmen, along with others, to have the act amended to include Alaska. As of yet this has not occurred; in fact, with the recent decision of the Aleut Corporation to divest itself of its shipping interests, much of the impetus for the exemption may be lost. Thus, Unalaska will remain constrained by the federal regulations concerning subsidized international carriers for the time being.

A second federal constraint in this area has to do with a Foreign Trade Zone. Unalaska is not at this time designated a Foreign Trade Zone, but there has been local agitation to have this done, This would allow foreign shipping to come into the port without paying taxes or tariffs. As a FTZ Unalaska, for shipping purposes, would not be legally pare of the United States. Any taxes or tariffs would be assessed at the goods port of entry, where they would be shipped after passing through Unalaska. Goods could be brought in unassembled, be assembled in Unalaska, and then shipped to other parts of the United States. This would be much cheaper than the current arrangement, as shipping parts of, e.g., automobiles, is much more efficient than shipping the automobile already assembled. However, the community would still be at a disadvantage for most types of commercial enterprise which do not require proximity to the Bering Sea; hence, it is unlikely that FTZ status would attract any ne-w type of industry.

An alternative to the Foreign Trade Zone idea is the establishment of Unalaska as an official United States Port of Entry. This, however, is a remote possibility at best as the federal law covering Ports of Entry has recently been amended to require that any such port have a minimum population of 300,000.

A final general area in which the federal government has a great deal of local impact is, of course, in the area of oil development. The decision by the Department of the Interior to open bidding on several lease areas adjacent to Unalaska, including the St. George, Navarin, and North Aleutian Basins in general, has raised the possibility of a great deal of oil-related activity in the future. The initial phases of mapping and exploration have already affected the community, as we will see when we discuss economic structure, and if the finds are promising, the future will see an acceleration of these effects. In all of this the economy of the city is dependent on the prevailing political climate of Washington, and it is national priorities and national political currents which will determine much of the future of the community.

There are several federal agencies which have historically played major roles in Unalaska. These include especially the Bureau of Indian Affairs (BIA), which was responsible for management of most of the affairs of the Aleut population until statehood and, later, the passage of ANCSA, and the Bureau of Land Management (BLM) of the Department of the Interior. These two still have a presence in the region, but as we will see their role has been much reduced and promises to be reduced even further in the near future. Other federal agencies which have been heavily involved in the area are the Fish and Wildlife Service and the Minerals Management Service, both of the Department of the Interior.

Prior to the introduction of ANCSA the BIA was in much greater control of the affairs of the Native population, but in the late 1970s non-profit Native corporations began to assume certain BIA programs under contract. With this decentralization of authority, the Bureau has been eclipsed as a major political force in Unalaska. The last major act of the BIA was the determination of those eligible to be members of the Corporation when it was founded. The BIA determined the qualifications for individuals to become shareholders, and then evaluated individual applications. They had kept family records for the Aleut population until statehood, so they were able to determine which of the residents met the criterion of one-quarter Aleut "blood". Nowadays, the BIA's major function in the community is to serve as a trustee for property owners of Native allotments and Native Trustee Deeds.

The BLM finds itself in much the same situation as the BIA. The BLM was at one time the trustee for city lands in Unalaska, prior to the enactment of ANCSA. They are the agency which sold some of the land as General Service Administration Parcels to some of the processors prior to ANCSA. Along with a 6-acre site sold by the Ounalashka Corporation to East Point Seafoods, this is virtually the only privately owned land on Amaknak Island not now under the control of the Ounalashka Corporation. With the passage of ANCSA and the formation of the local native corporation, control of these lands has passed from the BLM to the Corporation.

The BLM also had significant local influence through the Native Allotment program, in which local Aleuts were given the opportunity to own BLM land, to which their families had "traditional use" claims. Several families in Unalaska did this, and this represents some of the small amount of land in the area which is privately owned and not controlled by the Ounalashka Corporation. As such, these individuals have become the focus of some interest on the part of the oil companies who would prefer to purchase land or lease from an individual rather than lease from the Ounalashka Corporation because of difficulties in negotiations with the corporation.

The BLM is also involved, if only tangentially, with the only major land ownership dispute in the community. Haystack Hill, adjacent to downtown Unalaska, was not selected as part of the lands desired by the Ounalashka Corporation, because they thought the land was classified as a "Native Township Reserve" managed by the BLM. Later, as a result of a land transfer, a BLM employee and Townsite Trustee came to believe that the land could be legally homesteaded. Though it was later agreed that this was not the case, there are individuals who have homesteaded, and remained on the hill, and as recently as this past summer (1982) there have been individuals attempting to establish homestead claims by rapidly building small shed-like buildings. The ultimate ownership of the land will be decided in court as a result of lawsuits now pending.

We have already toted the influence of the offshore lease sales now in progress in the region. The Minerals Management Service is responsible for the lease areas and their sale. In addition to the influx of oil companies themselves, the impact statements generated by the MMS are read by many in town and have helped to shape the town's perception of itself, as well as influencing what outsiders think of Unalaska.

Another federal program which has had local consequences is the Comprehensive Education and Training Act (CETA). As a result of an administrative inaction, there are no CETA jobs held by city government employees in Unalaska. There are other agencies in the community that have taken advantage of CETA funding, however. The Unalaska Aleut Development Corporation has recently used CETA funding to employ several workers, and the paralegal who serves the community began as a CETA trainee. CETA funds were also used to fund an alcohol program in town. We will describe these programs in more detail in later sections of the report. The future of CETA funds in town is open to question as the program is undergoing a nation-wide cutback in funds. As of yet it is unclear to what extent these cutbacks will affect Unalaska in particular.

A final federal presence in town is the Fish and Wildlife Service of the Department of the Interior. They are responsible for the administration of land on "Little South America" on Amaknak Island which is part of the Alaska Marine National Wildlife Refuge. The Ounalashka Corporation currently owns the surface estate to "Little South America" subject to the administration of the Fish and Wildlife Service, which is negotiating with the Aleut Corporation to exchange the subsurface estate for other property in the region.

Unalaska is also under the political influence of the State of Alaska. One way in which state level political decisions have affected Unalaska

is in the area of the development of alternative energy sources . The geothermal exploration currently under way on Unalaska Island is dependent largely on state funding, which renders it vulnerable to state political forces . These forces have recently begun to cut back on funding for such projects as a result of the decline in oil prices. As the price of oil comes down, state revenues will decline and political decisions will have to be made concerning the allocation of funds which are becoming increasingly scarce. Unfortunately, in such cases, one of the first things to go unfunded is research and exploration for alternative energy forms, since, the reasoning goes, oil is now less expensive than before and there is therefore less need for the development of alternatives .

Another important state level political development which will affect geothermal development, is the recent election for state representative. The former representative was a resident of Unalaska and a strong supporter of the geothermal project who pushed it consistently at the state level. With his defeat in the last election, the geothermal project has thus lost one of its most powerful supporters, This, in combination with state funding cuts, puts the project in serious jeopardy. Nevertheless, the state is proceeding with a limited "small bore" exploration program.

The state also has a great deal of control over transportation facilities, particularly air transport and harbor facilities, in Unalaska. The most important recent controversy here has to do with plans to expand the airport. Airport expansion was approved as a part of the state budget, but the appropriations bill in which it was included, was subsequently vetoed by the governor. Nevertheless, the FY84 state budget includes an appropriation of \$4.5 million for the Unalaska Airport with authorization to spend up to \$45 million in federal funds. The city has also sought alternative means of financing expansion, such as a recently approved general obligation bond to finance construction of a new terminal, and it is unclear what the future will bring. The recent construction of a snail boat harbor in Unalaska is a state financed project which is part of the state master plan.

The state is also represented in Unalaska through the State of Alaska Department of Health and Social Services, Division of Family and Youth Services, which deals with child and adult protection, information and referral, and family and individual counseling. The office in Unalaska is the regional office, and includes in its jurisdiction the area from Anchorage to Atka and north to St. Paul. It is the largest region in the state.

The state court system is represented in Unalaska by a state district court . The court handles misdemeanors and civil suits under ten thousand dollars. The major functionary present, is a magistrate who lives in Unalaska. The court handles approximately 300-350 misdemeanors per year and perhaps 40 to 50 felonies.

Most people in Unalaska feel that the area, indeed the entire Aleutian chain, lacks political clout at the state level. This is the reason they give for the lack of a district attorney or a public defender in town, There is essentially no professional legal aid regularly avail-

able for anyone in town.

The state had particular impact in the community through certain legislative programs which it has passed in the last decade. The most important of these was the Limited Entry Act. This Act has had a major influence throughout the region, though in Unalaska this influence has been diluted by several factors.

The Limited Entry Act regulates entry to the state's salmon fisheries. The reason it has had less effect in Unalaska, than in other parts of the region, is that prior to the introduction of the Act there was 110 significant salmon fishery immediately adjacent to the community, due largely to a down cycle in the fishery. As a result, relatively few people were involved in commercially exploiting the resource and very few were able to qualify for a permit. Whatever impact the statute has had, has been negative, that is, it has precluded the development of a local salmon fishing industry. In fact the area has witnessed the emergence of a salmon fishery in the last decade, but very few people in Unalaska have been able to take advantage of it. As we will see in the discussion of economic structure, there are no permanent permit holders in the community, and only four people have been able to gain temporary permits which must be renewed every year, even though there are a significant number of individuals who have fished every year of their lives that there has been a good salmon run.

Another related area is the halibut fishery. Although the halibut fishery is not technically limited entry, the state has established an overall quota for catches. Once this quota is reached no further fishing is allowed. Effectively this has meant that the "highliners" from Seattle and the west coast rather quickly catch the quota and leave the local fishermen with nothing. There is currently a good deal of discussion about the possibility of establishing a limited entry program for this fishery similar to the salmon fishery. Thus far, the suggestions center around a share system in which the individual fisherman is guaranteed the same proportion of the total catch as he caught in the qualifying years. Thus, if the individual had one-tenth of one percent of the total catch during the years used for qualification, he would be guaranteed that share of the total in each subsequent year. If the total quota is doubled from one year to the next, the individual's gross catch would also be doubled. This is a point of some contention in Unalaska, and we will discuss it extensively below.

These state and federal policies have also had important regional effects which in turn have affected Unalaska. The Alaska Native Claims Settlement Act, established both local and regional native corporations. The regional corporation relevant to Unalaska, is the Aleut Corporation, which represents all Aleuts in the islands. The Aleut Corporation owns all subsurface rights to the local corporation lands. Village corporation members are also shareholders in the regional corporation. The regional corporation can gain surface rights in a case where the local corporation has selected land where subsurface rights are not available, as for instance in a federal wildlife preserve. Unalaskan residents, on the other hand, have had a major influence on the overall directions taken by the regional corporation, since the city has by far the largest population of Aleuts in the chain, and thus the greatest number of

shareholders. The regional corporation has worked in tandem with the local corporation in several projects which we will describe in detail in the section on economic structure.

For the most part, the non-profit Aleutian/Pribilof Islands Association is not as heavily involved in Unalaska as it is in other, smaller communities in the region, largely because the services normally provided by the APIA elsewhere are the responsibility of the City of Unalaska. Nevertheless, this regional non-profit association has been involved in several local projects. One of their subsidiaries is the Aleutian Housing Authority, which was responsible for the construction of the H.U.D. housing in Unalaska. The association is also involved in procuring reparations money as a result of the relocation of Aleuts during World War Two. They also have provided the CETA training for the paralegal now located in town, and are involved with the placement of a regional clinical psychologist in Unalaska.

A political organization which is both state-wide and Native and which has recently opened a branch in Unalaska is the Alaska Native Women's Statewide Organization. This is a group based in Anchorage and formed in 1980. Its goals are to preserve culture in the home, to provide shelter for cases of abuse and assault, and to address political issues which it feels are relevant to its membership.

1.3.2 External Commercial Influences

This section is focused on the external economic forces, commercial operations, and so on, which influence the various sectors of the Unalaska economy, including the processing and harvesting sectors of the fishery, the cash economy in general, transportation and communications, private development, and general regional, state, national, and international influences felt in the community. In the section covering the economic structure of Unalaska we will detail the local operations of these organizations.

As noted in the historical review of Unalaska, the community and the entire Aleutian chain can be characterized as being dominated by a boom and bust economy. During boom periods the area is dominated by outsiders who come in, make a quick profit, and leave to spend the money elsewhere. When times are lean these outside forces generally abandon the area to the extent possible. Even when the city of Unalaska itself hires people for projects these are usually outsiders, although the preference is to avoid outside hire where qualified local residents are available.

Currently, the major economic sector subject to outside influence in Unalaska, is fisheries. Several outside corporations are represented in the processing industry and most of the fishing fleet is from outside the community as well. Just as with the economy in general, fisheries-related economic activity in Unalaska is closely tied to the economic health of the rest of the country and world. Prices for fish products can produce prosperity or depression in Unalaska. One example of the influence of external forces on the economy of the city is the recent botulism scare which has plagued the salmon industry. When botulism was

discovered in a small sample of canned salmon approximately two years ago, it depressed the world market for that product. The result has been the forced switch of most processors who process salmon from canning salmon, if this was their standard practice, to producing frozen salmon. The effects of this botulism scare can still be seen in Unalaska where the processors are still producing mostly frozen salmon and only slowly switching back to canned product. By the same token the reverse can also occur. Conditions in Unalaska may constrain economic activity even when outside demand remains high, as in the contraction of the crab industry as a result of a reduction in crab stocks in the Bering Sea.

Several major processing companies which operate throughout coastal Alaska have plants in Unalaska. Universal Seafoods is an important force in the economy of Unalaska. Universal was incorporated in 1974. The first crab went down the line on September 16, 1975. At that time Universal was involved in processing only. In 1977 they purchased Vita Seafoods, and its floating processor the Vita, which they have operated since.

The Unalaska plant is one of several Universal plants throughout Alaska, and the corporation is presently in the process of diversification. They have just purchased a salmon cannery in Kodiak, and are in the process of refurbishing it and setting up operations. In addition they will probably attempt to provide housing and services for the oil companies, along with other commercial concerns in the area. Universal also owns the Unisea Mall, the Inn, restaurant, bakery, and bar, Stormy's Restaurant on Unalaska Island, and the restaurant located at the Unalaska Airport. Universal has also recently expanded into storage and repackaging operations in Washington State, which is the destination for the bulk of its product. Universal appears to be attempting a vertical integration of its operations, thereby eliminating the costs accruing until now as a result of middlemen.

Pan Alaska was the first major outside processor to come into town. They arrived in town in the early 1960s and established the first shore-based processor in the city proper. At first they were independent, and they bought some land at the head of the Unalaska spit from the owner of Carl's Commercial Company to start their plant which was the first of the present generation of commercial development in town. This was in 1962. In 1975 they were taken over by Castle-Cook, a major American processor.

Sea Alaska has been in town for eight years. They are owned by Consolidated Agriculture which also owns Alaska Packers, the largest salmon packer in Alaska. Consolidated Agriculture has also recently taken over many of the holdings of Castle-Cook in Alaska, and according to local rumor in the summer of 1982 this was to include Pan Alaska as well, although we cannot yet confirm this. Castle-Cook has suffered from the depressed runs market, as they own Bumblebee and several other tuna processors. Sea Alaska normally has two floaters in this area, the Sea Alaska and the Sea Producer. During the salmon runs they send the floater Resoff, normally based in Unalaska, out with the fleet to process all species of salmon.

Like the processing industry, the Unalaskan fishing fleet is dominated by outsiders. Most fishermen who come into the community, and nearly all of the modern "highliners" capable of harvesting huge amounts of product in a very short time, are from the west coast of the United States, and in particular Seattle. Involvement of Seattle fishermen in Unalaska fisheries is, according to many locals, transforming the community into "a suburb of Seattle". From the sixties to the present the growth of the fishing fleet and the canneries, who employ mostly Seattle workers, has meant a dominant position for Seattle in the local economy and a flow of capital out of the community to Washington State. Locals estimate that over 90% of the fishing fleet is from Seattle. With the recent downturn in the economy in general, and in the crab fishery in particular, some of these Seattle-based fishermen have moved to Unalaska as it costs about \$30,000 to make a round trip to Washington. Several Seattle highliners have recently done this.

This outside control has long bothered locals. Involvement in Unalaska fisheries by those from other states, particularly Washington, has always had qualities of what residents refer to as "rape and rue". People come in to make their money, but they don't ever spend it in Unalaska, rather they take it and go to the lower forty-eight. This outside control, particularly in the use of transient processor employees and outside fishermen, has also contributed to the low employment multiplier in Unalaska's economy (Alaska Consultants 1981:216).

There is another fisheries-related development in Alaska which has a major bearing on the Unalaska fisheries industry. This is the move by Trident to establish a groundfish processing plant in Akutan, just to the east of Unalaska Island. This operation had just begun this last year (1982). Trident expected to invest six million dollars, and ended up investing over eleven million dollars in the plant. Many people in Unalaska, and throughout the region, were anxiously awaiting the results of this experiment in order to decide whether or not to invest in the groundfishery. The recent (June, 1983) fire which severely damaged the existing facility may force Trident to suspend its operations indefinitely, however. This has been a major setback for Alaska's hopes for onshore development in relation to the groundfish fishery. Though there are several pilot groundfish processors operating in the state, this is the only operation which has depended primarily on private investment and relied little on federal assistance.

The developments in Akutan are of major concern to the processors and residents of Unalaska for more reasons than the experiment with groundfish processing. Akutan has, in the last five years, become a major processing center, and has attracted several major concerns from Unalaska. The reasons for this will be discussed at length below when we discuss the economic structure of Unalaska. For now, the important point is that Akutan is emerging as a strong rival of Unalaska in the processing sector. Events in Akutan may have a significant bearing on the future economic development of Unalaska, particularly if Akutan is able to upgrade its harbor and docking facilities, which appears likely following a recommendation by the Army Corps of Engineers, in a feasibility study conducted in the summer of 1982, that such improvements are justified. Akutan is actively wooing processors to the island with various incentives.

Unalaska is also in close contact with several foreign interests, particularly Japanese. The community is a transshipment port for many foreign vessels, and foreign interests are also heavily implicated in the Unalaskan fishing sector, both processing and fishing per se. Another activity in the port, is the exchange of National Marine Fisheries Service observers, who go out on foreign vessels to monitor their fishing activity. Unalaska is the principal port for this type of activity in the North Pacific and in the Bering Sea.

There are four foreign shipping agents in town at this time, and they handle the affairs of their respective fishing and freighter ships in the area. Many of their freighters take products directly to Japan, Foreign ships come into port to pick up loads from the processors. Most of these are tramp steamers, ranging from about 350 to 5,000 tons. They pick up loads of from 2 to 500 tons. Because of their high fuel and labor costs, however, these tramp steamers will eventually give way to modern containerships. Several foreign countries have agreements with the United States to purchase part of their catch from U.S. fishermen. The Koreans purchase ten percent of their total take from the U.S. The Japanese have been known to dump inferior U.S. products in the past and consider it a cost of doing business.

Foreign fishermen utilizing the waters in the region around Unalaska, include the Japanese, Soviets, Koreans, Taiwanese, Poles, and Canadians. The Japanese concentrated originally on flounder off Bristol Bay, but have shifted to pollock since the 1960s. In the Aleutians the Japanese have concentrated on the trawl fishery for Pacific Ocean perch. The Japanese also utilize a long line fishery for sablefish. The Soviets first concentrated on flounder, in the sixties, then abandoned that fishery for a Pacific Ocean perch fishery in the Aleutians, which continues today. Finally, they have also exploited a pollock fishery between Unimak island and the Pribilofs. Korean ships concentrate on the Aleutian sablefish fishery, while Taiwan and Poland concentrate on the Bering Sea, Aleutians, and Gulf of Alaska, and catch only relatively small amounts. In all there is more pollock taken by foreigners in Alaskan waters than the total catch of all the different American fisheries combined.

Pollock is the most harvested fish by volume in the world, but the United States faces severe difficulty in entering into competition with the rest of the world in terms of processing, either of pollock or for other groundfish. Much of the problem is one of labor costs. For example, the Poles, who crew for the pollock fishery in the Aleutians, are paid about seven dollars a day, while the Koreans get only about \$3.50 per day. These countries use labor intensive methods which reduce expenses considerably. One local fisherman said that he sold fish to the Poles for 5.5 cents per pound. It then cost them approximately 20 cents a pound to process the product, which they then sold on a contract to Mrs. Paul's in Philadelphia for 60 cents a pound, for a profit of over 100%. The Poles work on a six months on, three months off cycle, and they work twelve hour days making about 200 dollars a month.

There is also large scale foreign participation, particularly Japanese, in the processing sector of the fishing industry in Unalaska. Univer

Seafoods, which operates four processors in town (the Unisea and Vita, which stay in port at all times, and the Galaxy and the Viceroy, which operate both in port and, during certain times of the year, follow the fishing fleet out to sea), is twenty-five percent Japanese in ownership. Dutch Harbor Seafoods is owned by the same corporation and is therefore likewise twenty-five percent Japanese owned. Whitney-Fidalgo Seafoods, which until recently operated one processor locally, is 99% Japanese owned. Sea Pro, a processor which began operations in 1932, is a joint venture of Americans and Norwegians. The Norwegian company is Johanson's, which has had 107 years experience in catching and processing cod. Much of the produce of these processors with foreign involvement in ownership, goes to the countries participating in the venture. In the case of Sea Pro, for example, much of the cod which is processed is sent to Europe as salt cod.

Another area in which foreign interests are becoming increasingly involved in the Unalaska fishing economy, is in the establishment of direct contractual relations with individual fishermen. These are known as joint ventures and involve domestic harvesters supplying foreign processors, although, as indicated above, joint ventures may also exist between domestic and foreign processors as well. Joint ventures appear to be increasing as the economy worsens with the decline of the crab fishery, simply because individual fishermen cannot assume the risk alone.

Outside interests are also important in Unalaska in other sectors of the cash economy, particularly in transportation and communications. Local consumer patterns are also greatly influenced by this external orientation. Many people, particularly non-Aleuts, have much or all of their food shipped in from outside, either from Anchorage or Seattle. By doing so it is possible to save from 30 to 40% on price, and even with the 10% shipping cost it is substantially cheaper than purchasing food locally. It is usually shipped in via the Pan Alaska dock. Pan Alaska officials, however, have expressed their desire in diverting all third-party shipments to the municipal general cargo dock.

Transportation and communications are areas of major outside participation. The Chevron facility in town, the "Standard Oil Dock", has been there for at least thirty years. Chevron facilities at Dillingham, Naknek, and Bethel are resupplied by barge through the Unalaska facility. A total of about 75 million gallons a year goes through the facility, about 50% by barge and about 50% for the fishing fleet. A few Japanese vessels fuel in Unalaska, but not the larger ones, as the dock is not strong enough to withstand the battering of vessels that size. Many tugs and oil research vessels use the port as well.

Sea Land Shipping is twenty five years old, and came into Unalaska about ten years ago. Most of their shipping is domestic, with about 10% going to foreign ports after first going through Seattle. They ship exclusively fish and fish products out of Unalaska, while imports respond to supply and demand and include plastic goods, chemicals, and other cannery related materials. As the competition grows among shipping companies, Sea Land is holding onto a slightly smaller proportion of total shipping than was earlier the case.

American President Lines is a major shipping company which serves Unalaska and is primarily concerned with shipping of fish products. The APL has been working with the Ounalashka Corporation and the regional Aleut Corporation., in the construction and operation of a dock (the "APL dock"), and on- and off-loading facilities located on it. This is the most modern and largest capacity dock in town. APL is an international shipper, and since it is subsidized by the federal government, it is proscribed from undertaking in domestic shipping.

There are also other shipping companies based outside Unalaska which serve the port. The most important are Foss Alaskan Lines, which serves the major coastal ports of the state, Western Pioneer which serves the Aleutians, and the southern Alaska coast, and the BIA North Star. Foss Alaska Lines, however, recently closed its Unalaska operations due to the loss of the contract for serving the Adak Naval Air Station to Sea Land.

The community is also a center for air transport in the Aleutians. Reeve Aleutian Airlines provides the bulk of the air carrier service to Unalaska. Air Pac has provided service since the fall of 1978, and is in competition with Reeve. Reeve flies to the military bases on Adak, Attu and Shemya Islands, to the Pribilofs to the north, and to Cold Bay, Anchorage, and Seattle to the east, while Air Pac flies from Unalaska to Anchorage, and runs a Grumman Goose amphibious plane from Unalaska to Akutan and the outlying islands on a charter basis. Air Pac initiated an F27 service which has the capacity to carry 36 passengers in late August 1982. Northern Air Cargo flies some charters out of Unalaska and there are several passenger/freight carriers which have charters, including Peninsula Airlines, which flies weekly to Nikolski from Cold Bay, stopping in Unalaska as needed.

Even though the airport is a center for Aleutian travel, it is seen as inadequate, particularly by local commercial interests. It takes from six to eight weeks to get product from Unalaska to market, and in that time much more investment is necessary in Unalaska, if the enterprise is to continue operating. Any means by which this turnaround time could be reduced, would mean significant savings in efficiency for most of those operating businesses in town.

Another point to be made about commercial transportation concerns the possibility of the establishment of Unalaska as a Foreign Trade Zone. Much of the inspiration for this suggestion has come from the local organizer for the International Longshoremen and Warehousemen's Union. This could prove to be a major boon to Unalaska based shipping and foster the growth of new industry. It has been speculated by some in Unalaska, however, that if it came to pass it would be the foreign interests who benefited the most, since it would provide for major savings in time, money, and fuel. An alternative to the idea of a Foreign Trade Zone, is the establishment of a bonded warehouse, which would merely allow the storage of foreign merchandise in the port. A Port of Entry has also been considered, but appears unlikely.

This is the basic structure of outside influence in the Unalaskan economy, at the present time, with one exception. Potentially the most important development in this area is the intrusion of outside petroleum

companies into the Unalaskan economy. Several oil companies are represented in town already. Seventeen oil companies are operating jointly in a consortium involved in pre-exploration activities in the Bering Sea, including seismic studies and the operation of COST wells, and several of these have already established bases in town, including ARCO and, at last report, Exxon. ARCO has offices in town as the overall manager of the consortium exploring for oil in the Bering Sea.

Although oil-related activity in the community is only in the pre-exploration phase, there has already been an impact in Unalaska, with several local merchants making up for the slack in crab through supplying the seismic and other oil-development related crews. Oil-related business has been estimated to already be worth approximately a million dollars a year to one wholesale outlet alone.

Local private investment by outside firms beyond fisheries and oil-related development has been small scale thus far. Partly this is a result of the difficulties of negotiating for leases with the Ounalashka Corporation, and partly it is a result of the total domination of the local economy by the seafood processors. In addition to Japanese participation in the processing operations of Universal Seafoods, they also have a twenty-five percent share of the retail operations of Unisea. This includes the Unisea Inn, restaurant, and bar, as well as the Unisea Mall.

A geothermal project is currently being carried out with exploratory digs. The project is being financed by the Alaska Power Authority which has given a 4.7 million dollar grant for the work. Republic Geothermal is the company which has the contract to do the geophysical and geochemical analysis. The viability of this resource is also subject to the influence of outside economic forces, in particular the prevailing price of oil. As the price of oil escalates, geothermal energy is more economic, but as the price drops, it becomes less so and funding is likely to be reduced. This is shortsighted, but it is a market force which must be dealt with.

There has also been some outside participation in local construction. Most prominent here is the H.U.D. housing, a federally funded effort managed by the Aleutian Housing Authority. These homes are not liable for any property tax for 25 years.

This section has illustrated the extent to which Unalaska is deeply influenced by outside forces economically. The community is very much subject to outside pressures, both in specific industries, and in general. A final point concerns the overall structure of the Unalaskan economy and its relation to prevailing economic currents in the rest of the country. Unalaska is affected in some unique ways by the state of the economy in the rest of the United States. As recession has gripped the rest of the country, and unemployment has gone up the employment structure of Unalaska has stabilized. This is a result of the fact that it is more difficult for those from Seattle, and the lower forty-eight, to find jobs back home, so they return at a higher rate to the processors year after year. Where the rate of worker return for, e.g., Sea Alaska only two years ago was about 25%, the current superintendent estimates that worker return is now running at approximately 75%.

1.3.3 Larger Sociocultural System

Unalaska is often referred to by local residents as a "suburb of Seattle." This comment reflects not only the social and economic ties between the *two* communities, but *also* the overwhelming influence of the larger sociocultural system, in the value systems, social organizations, and economic and political activities of Unalaska. While Unalaska can be viewed as part of the larger sociocultural system of the United States, components of that system which are external to the community itself can be examined as environmental input. The larger sociocultural system has a particular impact on the community of Unalaska, which will become evident throughout this report. For our purposes, however, we will present only a brief summary of those aspects of the larger system which are relevant to the community's sociocultural system.

Perhaps the most pervasive impact of the larger sociocultural system on the community of Unalaska, is the introduction of new sets of values. With the influx of non-Native immigrants from other parts of Alaska and the continental United States, Unalaska has become exposed to a set of values that is urban-oriented and places great emphasis on professional and bureaucratic expertise, education, social status based on wealth and occupation, and the latest trends in style and taste. The rapid growth of fundamentalist Christianity is also evidence of the influence of values which originate outside the community.

Local technology is another example of the influence of the larger sociocultural system. Modern conveniences, such as hair dryers and washing machines, can be found throughout the community. The latest technology in home entertainment systems are very popular and can be found in most homes, regardless of household income. Satellite television and telephone connects the community to the outside world. Air transportation links the community to the mainland and sea transport ties Unalaska to the Far East as well as to the rest of Alaska and the United States.

The economic structure of Unalaska has been influenced by the larger sociocultural system, in ways more profound than simply the external commercial forces which affect local markets. The larger sociocultural system's presence is felt by the wage-labor capital dependent system of production and distribution, by the instrumental nature of employer-employee relations, the maximization of profit, and the deemphasis on subsistence activities.

An important element of this pervasive economic influence is the increasing trend toward modern consumer consumption. The majority of local residents may be viewed as subscribing to a Western "disposable" consumer orientation, in contrast to an older, indigenous orientation that featured conservation and maximization of resources. These attitudes are often the basis for conflict between some groups in the community. Conflicts over the short and long term use and development of land, can usefully be examined in this light. Whereas some segments of the community favor rapid and relatively unrestrained economic growth in Unalaska, others advocate slower and more controlled growth, with an eye to the long term consequences on the community.

One of the major contrasts between traditional and present-day Unalaska, is the growth of instrumental social ties, reflected in the character of social networks and associations with other residents. Up until the 1960s, and the growth of the crab fishery, Unalaska could be regarded as a small-scale community, where residents were linked by numerous "moral" ties. With the influx of "strangers," social behavior has undergone a transformation. Reciprocity has declined as a means of linking the entire community together; individual activity is often precipitated by an effort to prevent exploitation, occasionally at the expense of others. Informal mechanisms of social control have declined in favor of a growing system of law enforcement. Even crime has undergone some changes due to the influence of the larger sociocultural system. The high incidence of drug abuse, and the availability of various forms of drugs, are evidence of this change.

1.3.4 Neighboring Communities

In addition to the influence of external government agencies, business interests, and the larger sociocultural system in general, an important part of the sociocultural system of Unalaska is the network of communities in the Aleutians of which Unalaska is a part. The four most important of these communities, both from a historical as well as contemporary perspective, are the Pribilof Island communities of St. Paul and St. George, and the Aleutian communities of Akutan and Nikolski. Our discussion of these communities will include only those features of their sociocultural systems which either currently or could potentially have an impact on their involvement with Unalaska. The relations between each of these communities and Unalaska are discussed below.

1.3.4.1 The Pribilof Islands

The communities of St. Paul and St. George on the Pribilof Islands are located approximately 250 miles northwest of Unalaska. These communities were established in the 1780s by the Russian-American Company which transplanted the Aleut residents from Unalaska and Atka Islands to engage in sealing. Since that time, the communities have been continuously occupied except for a period during World War II when local residents were evacuated and resettled at Funter Bay in Southwest Alaska. Today, fur sealing is the major source of local employment and income although efforts are being made to develop the tourism and fishing industries. Government employment associated with the National Marine and Fisheries Service and the U.S. Coast Guard is also a factor in the Islands' economies but does not directly employ local residents (Alaska Consultants 1981:145).

A description of the current sociocultural systems of the Pribilof Islands are not included here as they have been provided in other reports (Alaska Consultants 1981; Dames & Moore 1982). Rather, we will discuss here only those aspects of these sociocultural systems which pertain to existing or projected links between the Pribilof Islands and Unalaska.

Historically the Pribilof Islands have had many connections with the

Eastern Aleutians. Although the earliest populations of the Pribilof Islands were brought there from the Atka area by the Russians, recruitment of workers from Unalaska and surrounding communities became the practice in the early 1800s. Though *most of the* transplanted Pribilof people were Aleut, there were a few Russians until 1867, and usually a few Eskimos, Indians, a Spaniard or two, and even some Chinese. After the sale of Alaska in 1867, the Russians were replaced by Americans.

During the Russian period and early American period there was considerable movement between the Pribilofs and the Aleutians. Travel to and from the islands, however, was prohibited during the early 1900s except by government permit. During this time, men were occasionally sent to find wives or women were induced to move to the Pribilofs since the population was not self-sustaining. It was also necessary to recruit more workers periodically. Many of the present families have names indicating their earlier family origins in some particular village in the Aleutians, including the villages on Unalaska Island, or on the Alaska Peninsula, although for *most families the direct* link is more than two generations past. At the present time there are the following number of individuals who have moved to or from the Pribilofs to form immediate kinship links:

Table 3

Kinship Connections Between the Pribilof Islands and Other Communities
in the Aleutian Islands

From Pribilofs	Male	Female	To Pribilofs	Male	Female
From St. Paul			To St. Paul		
To Unalaska	1	1	From Unalaska	1	2
Aku tan	0	0	Akutan	1	1
Atka	0	0	Atka	0	1
King Cove	0	6	King Cove	0	2
Subtotal	1	7		2	6
From St. George			To St. George		
To Unalaska	0	5	From Unalaska	0	0
Akutan	1	3	Akut an	0	0
Nikolski	1	1	Nikolski	1	0
Cold Bay	0	1	Cold Bay	0	0
Subtotal	2	10		1	0
<u>Total</u>	3	17		3	6

Travel has always been slow and difficult between the Pribilofs and other communities in the Aleutians and social visits were never frequent. When someone did go to visit relatives it meant months away from home. This was true also for the few students sent away to school, either to Unalaska or further to San Francisco or other areas. The students did not return home until their schooling was finished, if at all.

By the 1950s, when the government discontinued the practice of sending the vessel Penguin to pick up seasonal workers from villages as far west as Atka, travel came to depend increasingly on the expensive airline. Movement between the Pribilofs and the Aleutians, including Unalaska, practically ceased. In 1980, several people commented that they had visited Unalaska once, "in the 1950s." The few visits that do take place may be as rare as once in two to five years or even less frequently. The same is true for the few people who visit from Unalaska to the Pribilofs. There are very few who travel back and forth frequently or regularly whether for work or pleasure. Since restrictions on travel have been lifted and the islanders control their own lives, the expense of air travel have been prohibitive for most.

Relatives and friends maintain contact by mail and to some extent by radio, though for the older residents even that is limited, and some of the older people may not have heard from a sister or brother in Unalaska for some years. There is occasional gift giving, but there does not appear to be anything resembling the trade network of former times (seals from the Pribilofs in exchange for salmon from Unalaska). Again, this has much to do with the pattern of available transportation. There is no convenient or direct link between Unalaska and the Pribilofs. All

passengers and mail must transfer through Cold Bay or more often through Anchorage, depending on schedules and weather, both of which involve considerable time and expense for housing and food. For any purpose, such as shopping, medical care, business or vacations, except that of visiting particular relatives at a particular location, it is faster, cheaper, and more convenient to fly to Anchorage or even Seattle. At the present time, people from both islands have far more relatives and connections in Anchorage or on the West Coast than they do in the Unalaska area. For example, from the 30 families comprising the 525 Aleut residents of St. Paul, there are at least 113 relatives living in Anchorage or the lower forty-eight states compared with seven or eight living in the Aleutian/Peninsula area. Thus, travel to the Aleutians is limited not only because of little interest in visiting or the lack of acceptable jobs, expense or inconvenience, but because kinship and social connections are chiefly focussed in other areas.

Since there is presently little interaction and intermarriage between people in the Pribilofs and Unalaska there is little reason to think that there will be any particular increase in Unalaska's population due to family or social relationships during the next few years. Any movement away from the Islands is much more apt to be in the directions of Anchorage or the "lower 48."

Associations between the Russian Orthodox churches of Unalaska and the Pribilofs are linked with the Church in Anchorage, Kodiak and Sitka, since the Bishop, diocese activities and meetings, and the seminary are in those communities. The Unalaska Church and those in the Pribilofs are branch churches, smaller in size and congregation with less influence than those in the larger centers. Though the priests in Unalaska and on the Pribilofs share similar problems and are friends, most of their interaction takes place in Anchorage, Kodiak or Sitka.

A very similar situation exists regarding the schools, although in the last few years a program of inter-island basketball game exchanges has been arranged between Unalaska and the Pribilofs. For many years there has been only one or two individual students from the Pribilofs attending school in Unalaska, though during the period of operation of the Methodist mission school in Unalaska, there were a few more. In recent years high school students from the Pribilof Islands have gone to schools in the Anchorage-Wasilla-Palmer area, living in private homes under a foster student-parent program. Some few continued to attend Mt. Edgecombe at Sitka. Previously, many students had attended the BIA school at Chemawa, Oregon or in Oklahoma. In the meantime, St. Paul's school has provided classes through the tenth grade and St. George's school through the eighth grade.

Beginning in the fall of 1983, St. Paul's school will provide classes through the eleventh grade, enabling more students to remain at home rather than travel outside to attend school. Some of the students from St. George may also attend this school. The relative advantages and disadvantages of this program remain to be seen, however. It has been felt that one reason the St. George students did so well in outside schools was because they were able to spend the entire four years of high school with the same group of classmates and participate in activities with a feeling of belonging. The residents of St. Paul, at least

some of them, are pleased to be providing more classes and keeping more young people at home. The school is well-equipped, has a good program and most of the teachers are quite capable, but some argue that this "keep-them-at-home" approach does not provide the experience and associations of living and working in a larger social context which could have future benefits.

An important and exciting event in St. Paul this past year has been the basketball "tournament" between the community teams of St. Paul, St. George and Unalaska, when the teams travelled by charter plane to the other communities. Participation and competition were keen but the expense of the charter flights may not allow a regular exchange to continue. However, this has been one of the few direct links between Unalaska and the Pribilof communities.

In addition to the existing network of social and economic ties between Unalaska and the Pribilof Islands, it is conceivable that additional ties may develop as a consequence of the projected social and economic changes in the Pribilofs. Political and economic activity in the Pribilofs are intertwined elements in the fabric of change. Development of fisheries, harbor construction, local resources, or joint foreign projects all depend on the success of foreign negotiations. The feeling of change is most noticeable in current possibilities and beginnings of harbor development, the small boat long-line halibut fisheries, joint ventures with Japanese firms, the withdrawal of the NMFS and development of local public and private resources such as tourism, Fish and Game bird watch program, enterprises such as repair shops, small stores, service and supply businesses, arts and crafts centers, and increased local responsibility for the seal harvest. Some of these are actually under way; others are still in the planning stages, but there seems to be a stirring of interest and increasing awareness of possibilities among individuals as well as agencies.

The greatest and most immediate effects will result from the withdrawal of NMFS from active management of the annual seal harvest. Whether the NMFS pulls out immediately with a payment of some \$20 million to provide for adjustment and operation of the harvest while local agencies arrange alternate procedures and funding for continued operation, or whether the pullout is a more gradual process occurring over the next few years, this change will strain local resources, particularly the effort to fund the operation and to carry on local maintenance.

Harbor development, with a promise of \$12.1 million to begin construction during the summer of 1983, will have both good and bad effects according to local residents. It should provide some immediate jobs and the possibility of others in the future when local maintenance, service and supply for harbor facilities will be necessary. It will also create both physical and social change in St. Paul, and in St. George if there should be construction there. Included in this development is the construction of additional housing for immediate workers brought in by contractors and for eventual use by fishing industry personnel. Associated with this increase in workers will be a greater demand for goods and services from local stores, restaurants, storage facilities, fuel supplies, transportation and housing, which are already hard-pressed to supply the present demand.

These projects are expected to result in an increase in the local population, principally in the form of transients working on planning and construction and, *eventually*, fishing and seafood processing. The effects of these changes and the increase in population, even if they fail to reach the levels forecast by Dames & Moore, are viewed with some trepidation and ambivalence locally. While economic improvements such as the construction jobs, operating facilities and processors, and increased local business income, will have obvious advantages for local residents, they may also be disruptive to the present lifestyle. In *general, the influx of people (of whatever amount) tend to be* viewed mostly from a negative standpoint.

One other effect of harbor development is the possibility of drawing local labor away from current jobs and resources that are vital to community operation and maintenance. If enough construction jobs are available, the prospect of higher wages may draw local residents away from existing government and business jobs in both communities. Though this is not considered a serious risk.

There is considerable interest in the development of a local fishing industry beginning with the long-line halibut program. This program has expanded and formed the Middle Bering Sea Fishermen's Association and has negotiated with state and federal agencies for quotas, areas and cooperative and training ventures including joint venture fishing with Taiwan and joint venture bottomfishing with Japan. Many local residents see very attractive possibilities in the development of fishing programs for both islands in other areas, particularly in the Aleutians, as being less attractive. It would appear that only in two extremes would workers be drawn to the Unalaska area. First, if the Pribilof Islands venture is so successful as to outgrow local facilities then the overflow would probably go to Unalaska or Chernofski, if and when development of groundfish processing facilities there is possible. Second, if the Pribilof Islands program is so unsuccessful that those really interested in fishing might choose to or be forced to move to the Aleutian area to work, many fishermen might move to Unalaska. However, given the shortage of housing in Unalaska and the highly variable nature of the fishing industry, this second alternative seems improbable.

Other changes in the Pribilof communities which may have a potential impact on future relations with Unalaska are political in nature. These include local control of city government with a city council and city manager on St. Paul in cooperation with an older IRA Community Council, and an IRA Community Council on St. George Island. The Tanadgusix Corporation on St. Paul Island and St. George Tanaq Corporation, formed under the Aleut Corporation under ANCSA in 1971, have *become active and influential in negotiating and working with outside agencies to obtain funding and create investment and development opportunities for the Corporations as profit-making bodies. The operations of these Native Corporations and their effects on the communities have created substantial change in such areas as tourism and attendant hotel/restaurant facilities and short-term increases of people on the islands, increases in local and airline transportation, provision of some jobs, beginnings of fishing programs, and an increase in the numbers of representatives and "experts" from a variety of outside agencies coming to the islands*

for surveys, inspections, and conferences.

A development by the Tanadgusix Corporation of St. Paul which could have a potentially significant impact in the relationship between the Pribilof Islands and Unalaska is a scheme to develop corporation-owned property at Chernofski on Unalaska Island as a groundfish processing and ranching center. Approximately 70 air miles from Unalaska, Chernofski possesses a sheltered, natural deepwater harbor. Currently, the only commercial activities at Chernofski are a sheep ranch and crab pot storage (Dames & Moore 1981:2). In 1971, after being unable to obtain a full village entitlement on St. Paul Island, the Tanadgusix Corporation selected certain lands at Chernofski as part of their reconveyed property entitlement. The Corporation is interested in developing the harbor for seafood processing and cold storage facilities. This development would occur in five stages, beginning with a floating processor during the king crab season and culminating in a year-round, shore-based fishing port for processing and transshipment of frozen fish products (Dames & Moore 1981:6). It is envisioned that Chernofski will evolve into a small year-round residential community of Aleuts and a transient population of processor employees (Dames & Moore 1981:7).

Should this development proceed, the ties between the Pribilof Islands and Unalaska would undoubtedly become more profound. With the proximity of Unalaska to Chernofski, any development there would undoubtedly redound to the benefit of Unalaska businesses, especially wholesale suppliers and transport and shipping firms. However, the development of groundfish processing facilities at Chernofski might also create competition for Unalaska-based processors and cut into their profit margin accordingly.

The obverse side of the coin is that projected developments in Unalaska could have a negative impact on the development of Chernofski Harbor. A 1982 study conducted by Dames & Moore concluded that Unalaska would compete directly with Chernofski for fisheries products and ship support services (p. 16). The report further states:

Clearly, the dominant influence of other ports and harbors in the region on any development plans for Chernofski will come from Unalaska/Dutch Harbor and Akutan as competitive fish buyers and Unalaska as a competitive central processing, cold storage and transportation center. The most obvious question is, 'To what extent will Unalaska positively or negatively impact the various development scenarios for Chernofski?' (Dames & Moore 1982:16).

The answer to this question will be addressed in the primary forecast scenario for Unalaska.

It appears, therefore, that current relations between Unalaska and the Pribilof Islands are limited to a few social ties and involvement in the regional Native corporations. This situation is expected to change in the future, but exactly how it will change largely depends on the success or failure of current development plans on the Pribilofs and at Chernofski Harbor.

1.3.4.2 Akutan

The city of Akutan is located approximately 25 miles from Unalaska on the north shoreline of Akutan Harbor on Akutan Island. The community lies close to the rich fishing grounds of the eastern Bering Sea and the north Pacific Ocean. Because of its location and involvement with the region's commercial fishery, the relations between Akutan and Unalaska are potentially of great importance for both communities. The character of these relations will undoubtedly be determined by the course of sociocultural change in Akutan throughout the next twenty years.

A Department of Community and Regional Affairs census of the community in June, 1977 showed a Native population of 69 (41 males and 28 females). A local census in 1978 showed a total of 80 residents. The 1980 official census lists Akutan with 126 permanent residents a 140 percent increase in only five years, although the actual number is believed to be closer to 85-90. During this time, it also appears that the population ratio of elderly residents to middle and younger generation individuals has changed considerably. It now appears to be the case that the middle generation is over-represented.

The last few years have also seen a tremendous growth in the non-resident population associated with the off-shore processors with as many as 1,500 transient workers during the height of the season. Local residents recall the feeling of alienation brought about by this abrupt increase in transient processing employees, commenting that "they never even asked to come into our village, they just come;" "all of a sudden there were hundreds of outsiders here, you could hardly get into the bar there were so many;" and "lots of the girls from the village married these guys and just left, that hurt the community." On the other hand, there seems to have been a very rapid adaptation to this process.

Akutan was officially incorporated as a second class city in 1979. It has a seven person city council, one of whom is selected to serve as mayor. Prior to 1979, Akutan was governed by a village council elected in staggered four-year terms, with a traditional village chief, the last one on the Aleutian chain. This individual died in 1980 after having held the position for fifty years. Local government revenues come from the State Community and Regional Affairs Office, other state and federal grants, and a .5% fish tax imposed on processors for fish landed in the community. Public services provided by the city include police and fire protection, water, electricity, and education facilities.

The local school has approximately 16 children enrolled in kindergarten through twelfth grade. The Akutan school is part of the Aleutian REAA and has two teachers and one teacher's aide. Three or four local children attended school in Unalaska in past years because of the perceived advantages of that school system. With recent improvements in the local school, however, this pattern seems to be on the decline.

Akutan has a community health aide who responds to minor injuries and serves as a link, via the PHS direct telephone, to the Anchorage Native Medical Center for major medical problems and for medical evacuation. Occasionally, individuals with medical problems are sent to the Iliuliuk Health Clinic in Unalaska for treatment. The community is also served

by the State Department of Health and Social Services representative in the Aleutians and the APIA-sponsored clinical psychologist, both of whom are based in Unalaska.

Law enforcement is handled by a public safety officer, employed by the City. When in need of assistance, the state trooper in Unalaska is called upon. The trooper visits Akutan every few weeks and maintains a good working relationship with the public safety officer. The Unalaska Department of Public Safety also provides emergency assistance, as in the case of the recent fire at the Trident Seafoods processing complex.

The community is nominally Russian Orthodox with a priest visiting the community several times a year. The Church, however, owns a significant portion of land in and around the city. Several local residents have noted the potential for conflict over this land at some time in the future.

Among the most recent developments in community infrastructure have been the construction of 16 HUD homes funded through the Aleutian Housing Authority which has effectively doubled the size of the community, constructions of a new sewage system funded by the Public Health Service, a new electrical generating plant, new health clinic, city offices and rental apartments, a cement pull-out pad for the Air-Pat Grumman Goose, a hanger for this aircraft, and the installation of a telephone system for local residences. Planned developments include excavation of a land fill area to the west of the city and construction of an access road to this fill. Much of this development involves increased contact with businesses in Unalaska, such as construction companies and the Interior Telephone Company.

The mainstay of Akutan's economy is commercial fishing and fish processing. In 1981, 11 floating processors operated out of Akutan during the fishing season, with crab being the primary species processed. Total employment by these processors ranged from 1,000 to 1,500 during peak processing periods (Army Corps of Engineers 1982:37), but the large majority of these workers are transients from Seattle or other parts of Alaska. Processing work in the area is very seasonal, beginning in October and ending in May. By 1982, however, there were only six processors operating in Akutan, employing some 800 workers.

Many of the local processors actually moved to Akutan from Unalaska within the last four years. Processor managers cite four specific reasons for the move: 1) the inability to obtain discharge permits in Unalaska because of overcrowding, 2) intense competition to purchase a fishermen's catch, 3) a higher fish tax in Unalaska than in Akutan, and 4) the potential for expansion in Akutan.

Other local employment includes a post-office attendant, two part-time telephone attendants, a police officer, a teacher, a part-time teacher's aide, a school custodian, the manager of a store operated by the Akutan Native Corporation, the president of the Akutan Native Corporation, two bar employees, and a health aide. Other residents have found employment through recent construction activity in the community. Currently, no local residents own their own fishing vessels.

The recent construction and incipient operation of the Trident Seafoods shore-based groundfish processing facility half a mile to the west of Akutan will ultimately generate both direct and indirect income to the community, and its operation is likely to affect the political and social organization of the community as well. The seasonal work for local residents could stabilize once the plant begins full operation, although it currently employs only three local residents. In addition to processing traditional crab species, the plant will also process various groundfish species harvested on a year-round basis. The plant has a 300,000 cubic-foot capacity freezer and a processing capacity of about 1 million pounds of groundfish daily. The plant expects to initially process up to 300,000 pounds per day and gradually work to the 1 million pound production level (U.S. Army Corps of Engineers 1982:37). Trident Seafoods expects to employ about 165 persons on a year-round basis when it operates at capacity. As noted above, however, the recent fire at the Trident complex severely damaged existing facilities and forced an indefinite suspension of operations. It is unknown at this time whether or not the company will be able to recover from this loss.

The connections between the city of Akutan and Unalaska are both historical and contemporary, Aleut and non-Aleut, and social and economic in character. Historically, the two communities have been tied together by the kinship links among Aleut residents. Recently, additional links have been formed between the Non-Natives in both communities who worked for seafood processors in Unalaska.

The network of traditional kin-related ties between Unalaska and Akutan today is insignificant. Residents of Akutan do not perceive the existence of any strong ties between the two communities. In the past, a few Akutan residents would come to Unalaska to work on a seasonal basis, but with the recent increase in employment opportunities locally, this has been discontinued. Direct kinship ties between two or three families in Akutan with families in Unalaska exist and in the past these ties have served as a basis for the attendance of some Akutan children at the Unalaska school. However, these links are not active and do not appear to provide improved access to economic opportunities in the foreseeable future.

In place of the traditional social links between the two communities, a new set of links have been established which are more economic in nature. The managers of both of the shore-based processors in Akutan and many of the administrative personnel are former employees of processors based in Unalaska.

The level and intensity of Akutan's isolation from Unalaska in particular and the outside world in general has declined significantly over the last three years. In 1979 only a single flight in and out of Akutan could be expected each week. Now, even outside the main fishing season, flights are more frequent with one flight a day arriving from Unalaska and two flights a week from Cold Bay. Most of the local residents interviewed, however, expressed a preference to fly out of the region via Cold Bay than make the trip to Unalaska because of the typical delays in travel resulting from the limitations in Unalaska's existing airport facility.

The character of social and economic relations between Akutan and Unalaska could be significantly altered by the prospect of groundfish industry development throughout the region. The nature of these changes will be outlined in the discussion of change scenarios. It should be noted here, however, that development in Unalaska has already had an impact on Akutan, by encouraging Unalaska-based processors to move to Akutan, and by serving as a negative model for development which Akutan residents hope to avoid. Throughout the community, there is serious concern that Akutan will not become "another Dutch Harbor," and that development can occur without incurring the negative effects associated with such development in Unalaska.

1.3.4.3 Nikolski

The village of Nikolski is located on Nikolski Bay on the southwest end of Umnak Island, some 116 miles from Unalaska. It is near the site of one of earliest Aleut communities in the Aleutian Islands.

In 1980, Nikolski had a population of 50. This represents a decline from the 1970 population of 57 and 92 in 1960. In 1982, 49 local residents were counted in the field census for this research project. Almost all of the 39 adults are over thirty years of age. The virtual absence of younger adults (18-29) has been the result of permanent outmigration, usually inspired by educational or employment opportunities. Without a significant change in employment opportunities, this situation is expected to remain constant in the near future.

Nikolski is incorporated as an IRA (Indian Reorganization Act) village. The community is governed by a traditional IRA five-member council, elected for two year terms, which exercises legal authority over community affairs (U. of Alaska AEIDC 1978).

Nikolski has a small school which is part of the Aleutian REAA. In 1982, there were ten students enrolled in kindergarten through grade ten. Traditionally, local residents have gone outside the community for educational opportunities, usually attending Mt. Edgecomb in Sitka. Although the BIA school is expected to close soon, Mt. Edgecomb has been a preferred location because of the social network of former Nikolski residents who attended school and decided to relocate there.

Community facilities are limited to an electrical system owned and operated by the Nikolski Light and Power Company and the Nikolski Community Water System which provides water from a 24-foot well. There is no community sewer system. The community lacks firefighting equipment and law enforcement depends on the state trooper detachment in Sand Point. Health care is provided by a PHS community health aide who is in contact via the PHS direct telephone with the Native Medical Center in Anchorage or the physician in Unalaska.

In the past two years, 17 HUD homes have been constructed in Nikolski. These houses were filled, on a lottery basis, with nuclear families drawn from the 'overcrowded' traditional homes. This resulted in an abrupt fragmentation not only of the community but of individual families as well.

Employment opportunities in Nikolski are quite limited. Because of its poor, exposed harbor, the community has been unable to attract seafood processors. In the past, local residents have supported themselves by working for processors in other communities during the fall and at processing in St. Paul, warehousing in Cold Bay, or fishing during summer (U. of Alaska AEIDC 1978). The major source of employment in the community is the sheep ranch owned and operated by the local Native corporation, the Chaluka Corporation. Approximately 4,000 to 7,000 sheep, as well as 300 head of cattle and approximately 30 horses, graze over much of the island. The ranch employs two individuals during the winter and nine for summer roundup and shearing. Other jobs include two teachers, one store manager, one power company employee, and one health aide.

By far the greatest problem facing this community is the prospect of continued under- and unemployment. Employment at the sheep ranch is not viewed as desirable even though the pay is considered adequate. Another irony is that the construction phase for the HUD housing, during which local residents were paid about \$8.00 an hour to help build their own homes, has made these individuals reluctant to work for the \$4.00 to \$5.00 hourly wage they previously received for working at the sheep ranch of in the village. The remaining sources of income for the community are AFDC payments, Social Security benefits, food stamps, and periodic stipends received from offspring working outside the community.

The general sentiment among Nikolski residents regarding Unalaska is that "that place could fall in the ocean and we'd never know about it." By this is meant that there are few cultural, social, or economic ties between the two communities. Minor kinship ties exist but they appear to be remote and definitely inactive. Nikolski residents view their ties to the outside world more in terms of Cold Bay (and more recently, with Sand Point, where one major family has established a strong kinship link) than with Unalaska, which demonstrates the obsolescence of significant genealogical ties with that community. The physical umbilical cord linking Nikolski to the outside world has been air connections via Cold Bay. This link, however, is far from regular or frequent. There is only one flight scheduled into and out of Nikolski per week and the irregularity of this schedule does not appear to be a significant issue among local residents or one requiring change. The sporadic air transport is a subject of concern more in terms of mail and curiosity than from a need to get out of the village on a more frequent basis.

1.4 Intrasocietal Forces

1.4.1 Community Facilities

1.4.1.1 Electrical Power

Electricity is supplied in the community of Unalaska from two primary sources. One is the city-owned electrical utility, which supplies power to approximately 142 residential and small commercial consumers located on Unalaska Island, and the other source consists of numerous individual power generation facilities at each of the individual seafood processors

and other installations on Amaknak Island, supplying their own specific needs (Rutherford Associates 1979:27). The Unalaska Electric Utility has recently acquired a small distribution system owned by the Ounalashka Corporation which supplies power to its rental units and facilities on Amaknak Island. The Unalaska Electric Utility plans to lease these power production facilities until a permanent City-owned facility can be constructed.

The sum total of these facilities results in a total installed generation capacity of 13,530 kW (as of March 1979) with a non-coincidental kW demand of approximately 7,780 kW. Generation of electrical power is accomplished in each case through the use of diesel driven generator sets of 900 kW or less capacity. The city owned electric utility has two (2) 300 kW diesel electric generators and two (2) 600 kW diesel electric generators. The two 300 kW units have the capability of synchronized operation. At present, only one of the 600 kW units is in operation and it cannot be operated in synchronization with the 300 kW units. This does not, however, create any major difficulty, as the current average demand is between 220-240 kW, with a peak system demand of 320kW (Rutherford Associates 1979:27).

The seafood processing industry, however, generates and consumes the vast majority of the power on Unalaska and Amaknak Islands. In 1978, the processors accounted for 12,250 kW of installed generation capacity with a peak non-coincidental demand of 7460 kW (Rutherford Associates 1979:28). Each processor individually generates electricity to satisfy their own specific load requirements, which generally consist of the processing plant and housing facilities. Universal Sea Foods also provides power to the Unisea Inn and Unisea Mall. Installed capacity of the individual processors vary in size from 850 kW to 2200 kW; generation units range in size from 50 kW to 900 kW (Rutherford Associates 1979:28).

A 4160/208 volt city owned distribution system is limited to the Unalaska Island side and is mainly composed of overhead distribution facilities, most of which are of World War 11 vintage, and approximately three miles of recently installed underground distribution feeders. The overhead distribution facilities service the majority of the consumers and are, unfortunately, in a state of major decay (Rutherford Associates 1979:28).

Two additional generation installations are located on Amaknak Island. One supplies power to the Chevron USA docks, Chevron personnel, and airport, while the second, currently being leased by the Unalaska Electric Utility, supplies power to Ounalashka Corporation housing. Each installation consists of two 100 kW generation units.

Amaknak Island currently has no area-wide distribution system. "Each generation facility provides only the distribution required to meet their own specific needs and requirements" (Rutherford Associates 1979:28). The city has made plans, however, to establish a grid system which would provide power to the entire community, including the processors. Under this plan, the city would normally provide power but if, for some reason, the power station was unable to supply enough electricity to its customers, the processors would use their generators to

provide electricity to the city.

A high distribution (34.5 kV) distribution line connecting the boat harbor with the U.S. 310 bridge, energized by a new 2,500 kW generator, is scheduled for construction in 1983. This system would serve the existing residential and small commercial load, provide power to various public facilities, and have sufficient power to meet a portion of the industrial load. The city may also assume operation of the Ounalashka Corporation's distribution system if the corporation can solve its current problems with the Alaska Public Utilities Commission.

The current cost of producing energy for Unalaska is 34 cents per kilowatt hour. However, because of a state subsidy on the first 600 kw of electricity for local consumers, the cost is reduced to 22 cents per kilowatt hour to all city customers.

1.4.1.2 Sanitation

Unalaska's sewage system consists of three principal wastewater collector-outfall lines, and numerous individual systems. The sewage lines were built by the Navy during the early '40's, of wood stave pipe. Two lines, one serving a few people along Unalaska Creek Road and one serving the old officer's duplex housing on Amaknak Island, both discharge to Iliuliuk Bay. The third line serves housing and bunkhouses on Amaknak Island. Sewage from this line is treated in a plant operated by one of the seafood processors and then discharged to Captain's Bay. This military sewer system, however, is not owned or operated by the city, which operates only the sewer system serving the "HUD housing complex on Unalaska Island. The city, however, has designed a public wastewater collection and treatment system slated for construction in the next two years.

In downtown Unalaska and up Unalaska Creek Valley, treatment and disposal of wastewater is by cesspools and outhouses. Generally, they are effective, although in some instances along Unalaska Creek, cesspools have failed. There has also been a problem in Unalaska Valley where broken pipe has resulted in contamination of Unalaska Creek.

Another area of authority for the city, is waste disposal. The city is responsible for garbage collection within its corporate limits, but currently subcontracts the service to Williwaw Services, Inc., which provides removal service twice-weekly to residents and small businesses. A barrel compactor mounted on a truck chassis is used for this purpose. Customers are charged monthly, whether or not service is utilized. Most of the fish processors make their own arrangements for waste disposal.

The city also operates a 10 acre landfill located on the southeast shore of Iliuliuk Bay. Although the sanitary landfill appears adequate for existing needs, local officials maintain that it will soon become obsolete. The landfill has been plagued with numerous problems in the past, including uncontrolled dumping, open burning and capacity limitations (Alaska Consultants 1981:84-85). The Alaska Department of Environmental Conservation has informed the City that it is unlikely a permit for a landfill operation in the present location will be reissued. Given the shortage of available land, however, an alternative site has not been

selected.

1.4.1.3 Water

The city's water needs are met primarily by surface water from Unalaska and Pyramid Creeks. The existing system is believed to be inadequate, however, for several reasons. First, available water supply drops during periods of cold weather because the surface water sources freeze over. During these periods, supply is unable to meet local demands for water (Beyer 1981:1).

Second, the existing supply system consists primarily of old wood stave pipe constructed, then abandoned, by the military during the Second World War. The distribution lines are badly in need of replacement, wasting an estimated one- to two-thirds of the existing water supply through leakage (Ibid p. 2).

Third, existing treatment facilities are inadequate. During periods of heavy usage, Chlorine detection time is inadequate, possibly resulting in the survival of pathogenic microorganisms. Additionally, residents who live upstream of the treatment facility on Unalaska Creek, must utilize untreated water.

Finally, one of the major deficiencies of the existing water supply is the lack of adequate storage facilities. During periods of low stream flow and high demand, little water is available for firefighting purposes. Inadequate storage also contributes to treatment difficulties (Beyer 1981:2).

The City of Unalaska, since assuming control of the existing military water supply system after the Second World War, has since expended funds for operation and maintenance, minor repair, and some capital improvements such as the installation of culverts to replace timber tressles, some replacement piping, reconstruction of the Pyramid Creek diversion dam, and certain other improvements (Beyer 1981:28). In 1976, a 12 inch iron ductile pipe was installed between Unalaska and Amaknak Island, connecting the terminus of the Unalaska Creek Supply line with the distribution system on Amaknak Island. Amaknak Island is also served by a 10 inch steel pipe installed by one of the processors and connected to the Pyramid Creek Supply line. Last year, the City installed 1,000 feet of ductile iron pipeline from the Pyramid Valley Dam. The city has recently expanded its service to include residents of the Haystack Hill area. A four inch water main to this neighborhood, is connected to the Pyramid Creek line. In 1977, water meters were installed but have been rendered inoperative by the long-term accumulation of dirt and debris in water mains and service lines. Despite the difficulty in obtaining reliable readings, it was estimated in 1981 that the peak demand on the combined Pyramid Creek and Unalaska Creek sub-systems was between 17,200-19,200 gallons per minute (Beyer 1981:22).

1.4.1.4 Communications

The Interior Telephone Company has provided local telephone service since 1972, from an exchange located on the spit, in downtown Unalaska. As of September, 1982, the system included 450 separate numbers, not

including extensions. Special services include a fire reporting system, 911 emergency service, and a supply of cable to computer terminals. Other services include a key system (business multi-phone lines) and PBX services (another phone system). The company provides service to all of Unalaska and Amaknak Island, with the exception of Nirvana Hill, where some residents have service and some do not, and Ski Bowl, which is without any service. Most unmet service needs are on Amaknak Island, and the current waiting list ranges from 20-30 individuals.

Long distance telephone communications in Unalaska are provided by Alascom, through its geosynchronous earth satellite system. The system was upgraded by Alascom in 1980 from 15 channels to 26 channels (Alaska Consultants 1981:85).

Television first arrived in Unalaska in the early 1970s. At that time, the school had a broadcast system and programming was handled by the school board. Satellite programming arrived in April of 1979. The local Alascom Earth Station was originally constructed as a "White Alice" facility in the early 1960s and then taken over by RCA. Alascom eventually assumed control of RCA facilities in the region, providing satellite communications service throughout the state of Alaska. The Unalaska station was included in the Alascom system and fully operational by July of 1978. It currently provides two television channels, one educational and one entertainment, to local residents. In addition, the community has its own television station which provides limited service on weekday evenings and weekends.

Recently, there have been efforts to establish a cable television service in Unalaska. Aleutian Cablevision, a subsidiary of the Ounalashka Corporation, and Eyecomm, a subsidiary of the Interior Telephone Company, have competing applications before the Alaska Public Utilities Commission for a certificate of public necessity and convenience to provide the service to individual customers. The Interior Telephone Company has already begun to lay cable for this purpose. As with other rural communities, the television plays a significant role in bringing Unalaska in touch with the outside world, exposing them to the larger sociocultural system.

Until November of 1982, Unalaska was served by the Armed Forces Radio Network which was transmitted to the Alascom Station and then rebroadcast to the city. Recently, however, local residents arranged to have a Dillingham station, KDLG, provide service instead. Given that Unalaska and Dillingham belong to the same state legislative district and share several economic, political and social ties, it was believed that such a switch would be in the best interests of the community, providing information and entertainment more relevant to local needs. The switch is on a trial basis.

The city is served by one biweekly newspaper, the Aleutian Eagle, written and published in Unalaska. Community bulletin boards are located throughout the city where notices of meetings and activities are placed.

1.4.1.5 Transportation

Unalaska Airport is the major air transportation facility of the Aleu-

tian chain (as Cold Bay is correctly assigned to the Alaska peninsula). With the exception of water-borne transport, this airport serves as the major link between the Aleutians and the outside world. Nevertheless, the Aleutians is the only geographic area in the state of Alaska without modern jet service (Dames & Moore 1982:2).

The present configuration of the Unalaska airport consists of a single runway which is approximately 4,000 feet long by 100 feet wide. Originally certified by FAA with a length of 4,300 feet, it has been reduced in certified length to 3,900 feet. (Unwin, Scheben, Korynta, and Huettl 1982:2-5).

The existing length of 4,010 feet, is virtually the entire area from the Dutch Harbor beach to the Unalaska Bay shore. There are currently no safety areas beyond either threshold as the ground drops rapidly to the water (Unwin, Scheben, Korynta, and Huettl 1982:2-5).

The elevation of the runway varies from 13.0 feet on the southeast end, to 13.6 feet on the northwest end. On the northwest end of the runway a large bluff, 80 to 90 feet high, is located approximately 100 to 150 feet from the runway centerline for the first 1,000 feet of the runway. This bluff causes extremely hazardous wind conditions and is an obstruction within the required primary surface area.

Approximately 3,500 feet of the runway has a gravel surface. There are no designated taxiways and the one apron area is divided in half by the runway. An amphibious aircraft ramp is located to the southeast end of the runway. The runway has no existing lighting system and all operations are conducted under VFR conditions.

The passenger terminal at Unalaska Airport, currently consists of the Reeve Aleutian Airways Building, which is the former Naval Air Administration Building which is a tri-wing building containing a restaurant, ticket counter, administrative offices, communications, security check-in and passenger loading area. In addition to serving as the facilities for Reeve Aleutian Airlines, it also houses the RAA Station Manager with some space for transient lodging of air crews. RAA also uses the former Naval Air Transport Warehouse for air cargo and freight storage (Unwin, Scheben, Korynta, and Huettl 1982:2-7). Recently, the City of Unalaska issued a notice of award for the construction of a new terminal

The Naval Air Transport Terminal is used by Air Pac for its base of operations. This building is similar in size to the adjacent RAA terminal. In addition, Air Pac and Peninsula Airways share the east half of a large World War II hanger as a maintenance facility. This hanger is located on the north side of the runway with the west half of the hanger in a state of disrepair.

The airport fueling facility is composed of a system of underground tanks operated by Chevron which are served by their primary storage depot located on Amaknak Island.

There are currently two access routes linking the airport with the community, the Airport Highway and the Dutch Harbor Road. Both roads are currently gravel surfaced and the former is designated as U.S.

Highway 310.

Instrument and visual approaches to the airport runway are limited by the runway location and alignment in relationship to the surrounding terrain. It is obstructed, in particular, by Mt. Ballyhoo. This abrupt hill, with a height of 1,634 feet is located approximately 1/2 mile northeast of the runway, with cliffs almost abutting on the airstrip itself. Straight-in approaches are constrained by Mt. Newhall and Mt. Coxcomb to the southeast and Hog Island to the northwest.

There are currently two published instrument approach procedures to Unalaska, an NDB-A and an NDB/DME-B approach. However, neither approach provides vertical guidance and are therefore not classified as precision approaches. Neither procedure is authorized at night. Because of the navigation hazards in the immediate vicinity of the airport, the restricted length of the runway, and the lack of modern equipment, all landings must be made by VFR. Visibility of at least three miles is essential.

At present, there are two regularly scheduled air carriers which provide service to Unalaska. Reeve Aleutian Airlines has been the principal air carrier to Unalaska for many years. Although current activity varies seasonally, normal flights consist of one passenger flight daily except Sunday, from Anchorage by way of Cold Bay and one air cargo flight weekly from Anchorage by way of Port Heiden. Most flights are combination passenger and cargo. During the peak season, RAA increases its passenger flights to two daily as well as charters on demand. Air cargo increases as need dictates.

The principal aircraft serving Unalaska is the Japanese Nihon YS-11, a high performance twin engine turbo-prop aircraft capable of carrying six tons of cargo and/or up to 60 passengers. Occasionally, Reeve operates a Lockheed L-188 Electra to Unalaska. The Electra is capable of carrying nearly 13 tons of cargo and 74 to 90 passengers. However, given the limited runway of the Unalaska airport, these flights are limited and when they do occur, are not filled to capacity, thus making it unprofitable to fly such an aircraft (Unwin, Scheben, Korynta, and Huettl 1982:2-17).

The other scheduled air carrier providing service to Unalaska, is Air Pac. It recently increased its flight to two daily non-stop, between Unalaska and Anchorage, utilizing a Cessna Conquest (nine passengers) and a Merlin Metroliner (an 18-passengers aircraft limited to 12 by fueling requirements), Air Pac also utilizes a Grumman Goose Amphibious aircraft for local flights to surrounding islands. Recently, however, Air Pac has begun to serve the community with the F 27, a larger turbo-prop that seats 40 passengers.

In addition to the two regularly scheduled carriers, Unalaska is served by Peninsula Airways, a small charter service which flies from Cold Bay to Nikol'ski but may be flagged to Unalaska, or from Unalaska to Akutan, False Pass or Cold Bay.

General aviation at Unalaska is quite minimal due to its remote location and extremely hazardous flying conditions. Somewhere between three and

five general aviation aircraft are based, at least part-time, in Unalaska. Military aircraft occasionally use the Unalaska airport and are usually associated with search and rescue or medical evacuation activities.

At present, the airport is incapable of handling modern jet aircraft such as the Boeing 737s which service other regions of the state. This limitation has the effect of making air travel to Unalaska an expensive proposition. According to Dames & Moore (1982:2), "compared to 737 service, the YS-11 (the turboprop aircraft flown by Reeves) costs nearly three times as much per passenger mile." Travel time between Unalaska and Anchorage is also increased by as much as 2.5 times using the YS-11. A jet needs 6,000 feet of paved runway and greater airspace clearance. In order for the existing airport to accommodate such aircraft, the runway would need to be extended over 2,000 feet and an estimated 1.5 million cubic yards of the adjacent bluff carved away to provide greater clearance (Dames & Moore 1982:4). The runway would also need to be raised 30 feet to protect against high waves.

Until recently, the principal land owner at the Airport and within the surrounding areas has been the Ounalashka Corporation. The conveyance of the properties at the Airport to the State of Alaska, after the Native Land Claims Settlement Act of 1971, was with the stipulation that management of the Airport buildings would be retained by the Corporation. However, in the past few months the existing air terminal and Air Pac building, as well as other airport property, have been acquired by the City of Unalaska. The Ounalashka corporation retains ownership of the hanger building and is expected to make leasehold applications for an expansion of sites of either side of the new terminal buildings.

City officials and local residents almost unanimously agree that the suggested improvements to the airport are vital if the community is to grow and prosper. In the last local election, the community acknowledged this need by voting in favor of a bond measure that would enable the city council to take out \$3 million in loans for a new airport terminal. The Alaska Municipal Bond Bank was only able to buy \$2,015,000 of this, however, because of existing debt limits. In the last state legislature, the \$11 million dollars needed to expand the runway, build an additional apron and remove the bluff from adjacent Mt. Ballyhoo was eliminated from the state budget. Part of this funding was restored by the Sheffield Administration and included in the FY84 budget awaiting signature. As part of the supplemental FY83 budget there was an appropriation of \$700,000 to the city for construction of a new airport terminal.

The existing system of roads in Unalaska was constructed by the military during the Second World War. The system is 42 miles long and the city maintains all but 6 miles of it (the overland route to Summer's Bay is not maintained by the city). There is one state highway which runs from the airport to the bridge connecting Unalaska and Amaknak Islands at Iliuliuk Harbor. None of the roads are paved. The city has placed road construction as a high priority but has also encountered resistance from some residents who feel that existing roads are adequate to meet current needs.

The bridge connecting Unalaska with Amaknak Island was constructed in 1979 and is known simply as "the bridge to the other side." Prior to its construction, the primary means of transport between Unalaska and Amaknak Islands was by skiff. In inclement weather, this was inconvenient and often hazardous. The construction of the bridge, however, has had a tremendous social and economic impact on the community. Small businesses on both sides of the city have prospered with the increased number of available customers and the social interaction between residents of Unalaska and Amaknak Islands has been affected in both frequency as well as quality according to local residents. Perhaps more than any other form of local development in the area in the past forty years, the bridge has united the two population centers of Dutch Harbor and Unalaska into one integrated community. The opening of the bridge serves as a common chronological reference for local residents.

The foundation for the bridge, however, appears to be unstable. Since its construction, there has been some settling and compaction of the bridge abutment fills, leading to a sharp discontinuity between the bridge and road surface of up to a half-foot which requires periodic grading. In the absence of a batch plant for paving, the use of wooden planks is a cost-effective travel wear surface intended to be replaced periodically. The bridge is the responsibility of the Alaska Department of Transportation and Public Facilities and is part of the Federal Aid Secondary Highway System (designated as U.S. Highway 310, "the Trans-Aleutian Highway"). Recently, repairs on the bridge were completed by the State.

Within the vicinity of Unalaska are several docks. The docks in the inner harbor are owned by the canneries and the Ounalashka and Aleut Corporation. The city purchased a dock in Dutch Harbor from Sea Land in 1981 and recently awarded a contract for the construction of a 5,000 square foot warehouse. Funding for the project has come from state and federal agencies. The dock is used by the transfer companies who operate in the region and is available for use by anyone. A new boat harbor has recently been constructed at the head of Dutch Harbor with state funds. In June of this year, 25 vessels were moored there. In combination with the new ship repair and supply facility, it is hoped that such a complex will encourage more outside fishermen to utilize local facilities and perhaps even reside here for longer periods of time. Local fishermen and businessmen, however, are not optimistic because the facility is incapable of handling all but small vessels and has suffered significant damage from heavy winds during construction.

There are also two large docks on Captains Bay. One is owned by Crowley Marine and the other is used by Pan Alaska as a pot dock. A new dock and storage facility has recently been completed in Captains Bay, built by Off-Shore Systems, Inc at a projected cost of \$3 million. There is also a small, privately-owned dock complex on Agnes Beach in Captains Bay.

1.4.1.6 Community Buildings

The City of Unalaska owns and operates the following buildings within the townsite (Tryck, Nyman & Hayes 1973:7):

- 1. the power plant.*
- 2. the Community Center and recreational building.*
- 3. the City shops.*
- 4. the City Hall with attached meeting rooms.*
- 5. Public Safety Building and jail.*
- 6. Amaknak Island power plant.*
- 7. school buildings, including fish hatchery and shop, and pool facility.*
- 8. two duplexes in Unalaska Valley.*
- 9. two fire halls, one each on Unalaska and Amaknak Islands.*

1.4.2 Housing and Real Estate Development

There are three major groups represented in the private sector of community development in Unalaska. The largest group, by virtue of its membership and ownership of the majority of land in the area is the Ounalashka Corporation. The second group consists of the local commercial interests in the community, a variety of businesses ranging from the seafood processors to small businesses. The third group consists of small landowners who have been involved in developing their properties for residential and commercial purposes. Each of these three groups is involved in three separate development activities: real estate, housing, and commerce. This section will examine the private real estate and housing development in Unalaska. Commercial development will be discussed in the section on economic structure.

A 1977 survey of local housing conducted by the firm of Tryck, Nyman and Hayes found 213 conventional housing units in Unalaska with a vacancy rate of 1.9% (1977:116). Alaska Consultants reported 393 conventional housing units with a 9% vacancy rate in 1980. However, their report also stated:

...City officials indicate that there are essentially no vacant units in town, a contention supported by August 1980 field observations of Alaska Consultants, Inc. At that time, City, school, and health officials were unable to locate housing for anticipated new employees, and officials and local residents alike were unanimous in identifying the shortage of housing as the most serious problem facing the community (1981:56).

Of the housing available in Unalaska in 1977, at least half were reportedly in need of some repair and 14% of the units had major structural deficiencies. The high proportion of substandard housing was attributable to the lack of local construction prior to the recent economic boom, the high cost of building materials and the difficulty of obtaining loans for construction or repairs.

Since that time, new housing has been made available, particularly in the form of duplexes, new homes, and apartments. Nevertheless, there is still a shortage of available housing in the community. At the time of the field data collection, local residents reiterated that the lack of adequate housing was one of the major constraints to development in Unalaska.

Inventories of available housing in Unalaska taken in 1970, 1977, and 1981 indicate that there are three major types of conventional housing units in the community: one and two family units (either single family homes or duplexes), multi-family residences and mobile homes. The growth in the number of these units can be seen in Table 4.

Table 4

**Unalaska Housing Inventory
1970-1981**

Housing Type	1970 (a)		1977 (b)		1981 (C)	
	N	z	N	%	N	%
One & Two Family (Single Family) (Duplex)	60	83	136 (110) (26)	63.8 (51.6) (1.2)	347 245 102	74.0 (52.2) (21.7)
Multi-family	7	10	32	15.0	55	11.7
Trailers	5	7	45	21.1	67	14.3
Total	72	100	213	100.0	469	100.0

Sources: a. Bureau of the Census, 1970.

b. Tryck, Nyman and Hayes, 1977.

c. Department of Labor, State Demographer, State of Alaska, 1981.

The number of residents per unit varies widely in Unalaska. Virtually all of the permanent residents live in single homes, while virtually all of the transients live in group quarters owned by the various seafood companies. With the exception of Pan Alaska, these group quarters are located adjacent to the processors themselves and are effectively isolated from the rest of the community. Extreme examples of this isolation are the quarters of Sea Alaska at the northern most end of Dutch Harbor itself, and Sea Pro, located on Captains Bay more than two miles from downtown Unalaska.

The quality of housing in Unalaska can be divided into three distinct grades: The highest grade includes new, modern woodframe homes. The second grade consists primarily of renovated World War II buildings converted into duplexes or single family homes. The third grade consists of older homes or shacks which were hastily constructed and lack essential services or utilities.

The majority of houses in Unalaska are from the World War II era (the few remaining from the 1930's and earlier have been renovated), and there are several distinct residential areas with different styles of housing. The houses in the downtown Unalaska area are typically wood frame buildings built during the war years. Many are converted "cabanas" which were originally designed to house 4 soldiers during the war, without plumbing or cooking facilities. Several houses are composed of two or more cabanas attached together. There are a few pre-war era buildings that have survived, some of which are private homes. Additionally, there are individuals living in house trailers in this area, and Pan Alaska owns several trailers that house some employees in the downtown area and across the river from the main downtown area. In 1981 the Aleutian Housing Authority provided 20 "HUD homes" to some of

the low income Aleut families, five of which are scattered in the downtown area.

Adjacent to the downtown area, but physically separated from it by the school grounds and land owned by the Methodist Church, is a new neighborhood cluster of homes composed primarily of 15 of the new HUD homes. These wood frame homes were prefabricated and shipped to Unalaska by barge.

Carl's Commercial Company operates a hotel for transients adjacent to their store. Carl's is located in downtown Unalaska adjacent to the western end of the Russian Orthodox Church property. The hotel has 13 units. There is also an apartment above the store where the store manager resides.

Nirvana Hill, named after a fishing boat operated by the present owners of most of the hill, was previously known as "tidal wave" because it was the destination of the residents of the downtown area during tidal wave disaster drills. Located to the east of the downtown area, most of the homes on the hill are converted cabanas, though during this past year several new homes were started.

Several converted cabanas are also located at Ski Bowl, so named because of the location of a ski tow rope during the war years. Located to the east of the downtown area, on the north slope of Unalaska valley, the area is not serviced by city water or electricity. The first semi-permanent occupants of the area were city workers hired from the outside who were unable to find other housing and chose the area because of its location near the city shop. In recent years some of the residents have invested time and effort into the renovation of their cabanas and have made extensive improvements on them.

Unalaska valley, running east of the downtown area and Unalaska Lake, is the site of the first major new construction housing development since the war years. Scattered throughout the valley are military buildings that have been converted for use as homes. There are also 3 privately owned small apartment buildings, and two city-owned duplexes. On the south side of the valley, not far from the lake, is a new neighborhood, comprised of ten homes built recently, the majority of them in the past year. As the first major private housing construction since the war, it is seen as a milestone in the growth of the community. The homes are of various woodframe designs, and are relatively expensive. The shortage of available land for housing is underscored by the fact that though the countryside around the development is open, these expensive new homes are tightly clustered together, and every lot in the development has been sold and being built on.

Haystack Hill, located across the Iliuliuk river south of the downtown area, is the site of several recently built homes, some of which are quite expensive. The ownership of the land on Haystack is currently in dispute. The area has been the site of homesteading attempts, some of which have featured homes of quite poor construction.

A handful of families live along the east shore of Captains Bay. A privately owned cluster of trailers that was formerly a construction

camp also here is now used as an apartment complex by transients.

In Unalaska all of the seafood companies have group housing for their employees. The housing is located at the various processing facilities themselves, with the notable exception of Pan Alaska, which, as mentioned above, owns housing units in downtown Unalaska proper, in addition to those units at the physical plant. The employees at the various companies are housed in bunkhouses, trailers, and aboard ships. Management personnel, for some of the companies on Amaknak Island, are provided with company owned homes or rental units on Standard Oil Hill. Few individuals choose to live in other than company housing because it is provided free of charge or at a nominal rate. The Pan Alaska complex is located adjacent to the downtown area, though separated from private housing by land owned by the Russian Orthodox Church and Carl's Commercial Company. The other cannery on the Unalaska side, Sea Pro, is in an isolated location on Captains Bay more than two miles out of town. Located at this same site are Crowley Marine, which has a single employee living there, and Arco, which at this stage has three individuals living on the premises.

Until the mid 1970's there were only a handful of families living on Amaknak Island, and these families lived in company-provided housing at the airport, near the Standard Oil dock, and near the one operating processor. With the fisheries boom-related population increase the number of residents on Amaknak Island increased at an even faster rate than on the Unalaska side.

Standard Oil Hill on Amaknak Island is the site of the rental duplexes owned by the Ounalashka Corporation. These duplexes are converted World War II era military duplexes which were unoccupied until the Corporation began to renovate them in 1979. There are now 47 units and all but a few of them are occupied with an estimated 10% turnover rate per month. These duplexes effectively form a neighborhood of their own, and are located contiguously on a hill overlooking Dutch Harbor, not far from the airport. Power to the neighborhood is provided by the Unalaska Electric Utility.

There are no individually owned private plots of land on Amaknak Island. Most of Amaknak Island is owned by the Ounalashka Corporation, with the exception of some parcels owned by Universal Seafoods, Sea Alaska Seafoods, and East Point Seafoods, located adjacent to the respective processing operations, and the State of Alaska, which owns the airstrip. city property interests on Amaknak Island include three small upland lease parcels at the boat harbor, the general cargo dock site, a two-acre waterfront tract near the Unalaska Airport, a 10-foot reserve strip around a lake which is a water supply source for the Ounalashka Corporation's private water supply system serving its Standard Oil Hill housing, and a site for the proposed wastewater treatment plant near the Universal Seafood Complex.

Strawberry Hill is a small neighborhood composed of renovated World War II era buildings, located adjacent to the East Point Seafood processing facility on the point that separates Iliuliuk Harbor from Iliuliuk Bay. The buildings have been purchased from the Ounalashka Corporation, and the land that they are on is rented to the occupants on a month to month

basis. The city does **not** provide electricity to any housing on the Amaknak Island.

Universal Seafoods owns a parcel of land, obtained as the other private land not owned by the Ounalashka Corporation on Amaknak Island, through a Government Services Administration land sale prior to the passage of ANCSA. On this land is located the Unisea Inn building, the Unisea Mall, an apartment building for Universal employees, group quarters for processing workers, homes for Universal management personnel, and some processing-related buildings. All of the buildings in this area are relatively **new**, having been built since 1978. The Unisea Inn is a 48 room inn for short-term transients. The apartment building was originally intended to be a rental building, but the demand was **such** that it is now used exclusively by Universal employees. A second apartment building is in the construction phase, which is designed to be rented to the public. On the hill behind the Unisea Mall are located homes of the upper level Universal Seafoods management.

Other housing on Amaknak Island includes an apartment within the airport terminal occupied by the airport manager and several converted World War II era buildings now used as homes. In addition, all of the seafood processors on Amaknak Island provide dormitory facilities for transient employees.

One of the major complaints of individuals who have moved to the community in recent years is the shortage of available housing of a style that they wish to rent or own. Rental rates are high when units are available: the units in the duplexes on Standard Oil Hill rent for close to \$1,000 per month. All of these units are occupied, and there is a waiting list to get in. As of the summer of 1982, the average wait was approximately 4 months. All of the housing units in town are now occupied, so that when an individual comes to town, the housing options are few. Workers with the seafood companies are provided housing, and others typically stay with friends or occupational acquaintances until they are able to locate housing of their own. The expense of the rental units in town is partially responsible for the recent increase in the construction of new-homes, in conjunction with a State of Alaska loan program that offered construction loans at 8.75% interest for rural housing. According to the leading developer in town, these loan rates were primarily responsible for the recent housing boom in the face of declining economic conditions. The new houses however, range in price from \$100,000 to \$120,000. There is an acute need for reasonably priced housing for individuals not employed by the processors, but it is expected that this will change as the decline of the economy continues and the demand drops. Even now, the Ounalashka Corporation is beginning to experience a positive vacancy rate for their duplexes on Standard Oil Hill. The housing market is far enough behind the demand however that most individuals feel that this will take some time.

There is a wide range of private investment in Unalaska. The seafood companies of Sea Pro, Pan Alaska, Pacific Pearl, Universal, Whitney Fidalgo, East Point, and Sea Alaska, have all invested to some extent in the community, though one of them, Universal, has made investments removed from the seafood operation, far in excess of the others. Universal owns the Unisea complex, which includes the Unisea Inn and Unisea

Mall. Less conspicuous, but equally important in terms of private investment, are the small businesses in the community, including markets, hardware stores, cab companies, engineering firms, bars and restaurants, and service industries. Shipping lines also represent a source of private development in the community.

Private investment in Unalaska is unusually visible in three particular forms: capital improvements of facilities and equipment, provision of goods and services for local residents, and housing construction. More will be said about each of these forms of private investment in the discussion of local economic structure.

The land available for development in Unalaska may be summarized as follows:

Table 5

Land Use and Development Potential
City of Unalaska

Area Encompassed by City Boundary	16,300 ac.
Total Water Area With City Boundary (37%)	6,000 ac.
Total Land Area Within City Boundary (63%)	10,300 ac.
Land Area - Unalaska Island Portion	8,100 ac.
Land Area - Amaknak Island Portion	2,200 ac.
Undevelopable Land	
Slopes Greater than 25% or otherwise inaccessible:	7,244 ac.
Unalaska Creek Water Supply Preserve (within City):	1,160 ac.
Total Undevelopable Lands	8,404 ac.
Developable Lands	1,896 ac.

Source: Tryck, Nyman and Hayes, Land Use Survey, June 1977.

As Table 5 indicates, only 1,896 acres or 11.6% of the acreage within the city limits is available for development, either because of the topographic limitations or because of the need to preserve the local water supply. Of the land that is available for development, there are three major groups of property owners. The group owning the largest amount of land, both within city limits and surrounding environs, is the Unalashka Corporation. "Under the terms of Section 12(a) of the Alaska Native Claims Settlement Act, the Corporations enrollment of 266 persons entitled it to select five townships or 115,200 acres of land in the Unalaska area" (Alaska Consultants 1981:53). The land currently owned by the Corporation includes 9,400 acres within the City limits

(about 90% of the City's total land area), most of Amaknak Island, and contiguous coastal lands on Unalaska Bay, Beaver Inlet and Makushin Bay.

The city is the second largest landholder in Unalaska. It is responsible for 1,280 acres scattered throughout the community, most of which is currently used for public services and facilities or intended for such use. Included in this property are the city hall and Public Safety offices, the Standard Oil Hill reservoir and surrounding land, city shop, city dock and surrounding land, land designated for a city park, town cemetery, school, town landfill, land designated for a proposed sewage treatment plant, and Unalaska Creek watershed land.

Private landowners constitute the third group possessing property in Unalaska and surrounding areas. There is an estimated 400 acres of private property in the area, most all of which was formerly owned by the federal government. This land was sold by the General Services Administration in the 1960s to private individuals. Included in this sale were 109 acres of waterfront property in Iliuliuk and Dutch Harbors and Captains Bay and 200 acres in Unalaska Valley. Most of the waterfront property is currently being used by the seafood processors and other commercial industries while some privately owned property has been sold for residential development.

At this time there is no land available for purchase in Unalaska. In fact, it could be said that there is no real estate market at all in Unalaska. Industrial, commercial and residential property can be had, at a price, if the buyer is persistent. However, few private individuals or corporations own tracts of land of any appreciable size that are not currently being used, other than the Ounalashka Corporation. As noted above, virtually all of Amaknak Island is owned by the Ounalashka Corporation, with the exception of plots owned by some of the seafood companies immediately around their operations. The Corporation has no plans to make this land available for sale in the near future.

On the Unalaska side, there are areas owned by private individuals that have seen development in the recent past. Nirvana Hill is privately owned and has seen recent construction. However, the amount of remaining land is limited, and it is not the wish of the owners to develop the land to its maximum potential. The headlands of Unalaska valley are privately owned, and there are no plans for the immediate future to sell this area. A large portion of Unalaska valley itself is also privately owned, and the owner of this area is proceeding with subdividing and selling the property, though not at as fast a rate as the market would bear. It is upon this land that the new private housing development has been constructed. The owner/developer has a personal long-term commitment to the community, and has a value and goal orientation such that short-term maximization of profits is not a motivation in the development plans. In the downtown area, plots of land are quite small and a portion of the plots owned by Aleut families have restricted deeds, which confer a special tax status. The land on which the new HUD housing is located also has a special, though finite, tax status granted by the city.

The Ounalashka Corporation owns most of the land on the Unalaska side,

and there are long range plans to subdivide and sell a portion of this land for private housing. These plans have been pushed further into the future however by the rising costs of surveying and developing the land. As mentioned above, some of the land around Captains Bay is privately owned, the land having been granted to Aleut families through a Native Allotment program run by the Bureau of Land Management. There are no plans to sell this land, however there is a strong possibility that some of this land will be leased for development in the near future to some of the oil companies, or oil-support companies, interested in doing business in the area.

Construction has grown in the past several years after an almost 30 year slack period. After World War II, no new homes were built in Unalaska until the early 1970s. The summer of 1982 saw construction of new homes on Nirvana Hill, a new apartment building near the valley road, and the growth of a new neighborhood in Unalaska valley.

Although the community has experienced an impressive rate of growth in the past few years, the downturn in the local economy combined with the increase in interest rates for housing loans from 8.75% to 10% in September of 1982 is expected to result in fewer new housing starts in the coming years.

Commercial construction continues, but has slowed after several years of impressive growth. During the summer of 1982, the ship repair facility on Amaknak Island was built out of an old military building, but an apartment building being built by the Universal Seafoods Corporation was halted during the construction phase. The Ounalashka Corporation during the summer was in the process of building a new gasoline service station on Amaknak Island. Since the Unisea Inn was built there has been remodeling done every year, but no new buildings went up in that complex this past year. Duplex conversions are complete on Standard Oil Hill. Airport terminal construction is planned for the near future.

1.4.5.3 Demographic Structure

As noted in the review of the history of Unalaska, the population prior to 1940 was characterized as relatively stable with a moderate growth rate. With the construction of the military bases and fortifications on Unalaska and Amaknak Islands, the population grew rapidly. During World War II, there were an estimated 65,000 military personnel stationed in the area. Prior to the outbreak of war, the community experienced a sizeable influx of non-Aleuts who arrived to work in construction or to otherwise profit from the military presence. The population structure was also affected during the war by the forced evacuation of the Aleut residents to camps in southeastern Alaska. During the post-war period, the population of Unalaska declined as economic opportunities were minimal. It was not until the late 1950s and early 1960s that the population began to display any noticeable increase. The community "experienced another dramatic influx of outsiders in the early 1970s with the economic boom created by the crab fishery. The population increased almost fourfold in less than 10 years. With the recent economic downturn, the population has begun to level off.

Population statistics for Unalaska from 1939 to the present are available from several published and unpublished sources. However, great caution must be taken when examining these statistics. Given the often times haphazard nature with which population surveys have been obtained in Unalaska in the past, none of these figures, with the exception of the most recent population surveys, can be relied upon with any definite certainty. The City Council census figures, for example, were often obtained in informal "head counts" at different times of the year when different segments were unavailable for enumeration. Different methods have also been employed in the enumeration of processor personnel, resulting in conflicting figures. In 1980, for instance, only 237 persons living in group quarters were included in the total population count of 1,322, despite a combined total of 1,582 units in group quarters which are fully utilized during the peak season (Alaska Consultants 1981:6). Similarly, in the special census conducted by a consultant under contract to the City in 1981, the field representative counted 2,625 individuals, both residents and non-residents, in the community. Under a special formula, however, only a certain percentage of the non-residents were included in the official population figures, giving the community an official population of 1,944. Finally, it is impossible to obtain accurate fertility and mortality rates because most local women give birth and many seriously ill residents are hospitalized and eventually die outside the community.

With these limitations in mind, the population structure of Unalaska is revealed in the following four tables. Table 6 provides an index of the total population in Unalaska from 1939 to 1981. It can be seen from these figures that the greatest period of growth occurred between 1973 and 1977 and that the population has begun to level off in the past few years, largely as a result of the decline in the crab fishery and concomitant decline in the rate of in-migration.

Table 6

Population of Unalaska
1939-1981

Year	Number of Residents	Data Source
1939	298	Alaska Consultants 1981
1950	173	U.S. Bureau of Census
1960	218	U.S. Bureau of Census
1967	254	Unalaska City Council Files
1970	342	U.S. Bureau of Census
1972	548	Unalaska City Council Census
1973	510	Unalaska City Council Census
1977	1,971	Tryck, Nyman and Hayes, 1977
1980	1,322	U.S. Bureau of Census
1981	1,944	Department of Labor, Alaska

Much of the increase in population in the past ten years has been due to the dramatic influx of temporary residents hired by the processors on six month contracts. As Table 7 indicates, non-residents represent a significant portion of the population of Unalaska in terms of both population size and proportion of the total population. This figure has begun to level off, however, as the demand for processing workers declines.

Table 7

Unalaska: Residents and Non-Residents
1970-1981

Census Year	Residents		Non-Residents		Total	
	N	%	N	%	N	%
1970 (a)	178	52.0	164	48.0	342	100
1972 (b)	430	78.5	118	21.5	548	100
1977 (c)	615	31.2	1256	68.8	1971	100
1981 (d)	1054	54.2	890	45.8	1944	100

Sources: a. U.S. Bureau of Census, 1970.
b. City Council Census, 1972.
c. Tryck, Nyman and Hayes, 1977.
d. Department of Labor, State Demographer, State of Alaska: Special Census of Unalaska, 1981.

Table 8 provides a representation of the age and sex distribution of the residents of Unalaska in 1977. In that year, 42% of the resident population was between the ages of 18 and 34. Moreover, the median age decreased during the 1970s, largely due to the influx of young immi-

grants in their mid-twenties. Whites represent the bulk of this age group; 72% of the 25 - 34 age group in 1977 are white while only 17% of the Aleuts in Unalaska are within this age group. Non-residents are also heavily represented in this age group. Thus, the trend in Unalaska has been towards a younger population. The age-gradient for both residents and non-residents may undergo a shift in the next ten years, however, as the rate of immigration slows and the rate of processor personnel turnover begins to stabilize.

Table 8

City of Unalaska, Alaska
Age and Sex of Unalaska Residents

1977

Age	Sex		Total	Percent
	Male	Female		
0- 4	23	18	41	7
5 - 12	28	40	68	11
13 - 17	28	19	47	8
18 - 24	46	46	92	15
25 - 34	107	56	163	27
35 - 44	42	23	65	11
45 - 54	40	22	62	10
55 - 64	19	14	33	5
65 - 74	4	2	6	1
75 and over	1	-	1	0
Unknown	22	15	37	6
TOTAL	360	255	615	100
Percent				
1977	59	41	100	
1970	55	45	100	

Source: Census of Population, September 26 - October 8, 1977
 Tryck, Nyman and Hayes and City of Unalaska.

The proportion of males in the total population or the ratio of males to females experienced an increase in the 1970s. As Table 8 demonstrates, the proportion of resident males increased from 55% in 1970 to 59% in 1977, altering the ratio of males to females from 1.2:1 to 1.4:1. The consistency of this imbalance is in contrast to a statewide trend towards more equal distribution of the sexes (Tryck, Nyman and Hayes 1977:16). Moreover, this imbalance in the sex ratio would be even greater if non-resident personnel were included in the estimate; in 1977, 72% of the non-resident population of Unalaska was male.

In the 18 and over category, there were 59% more males than females in 1977. This, according to Tryck, Nyman and Hayes (1977:16), is indicative of the "frontier" nature of Unalaska, especially during the height of the crab fishery boom, when there were greater job opportunities, other than cannery positions, for males than for females.

Although no exact figures are available, it is the perception of local residents that the sex ratio has begun to balance in the past few years, except, perhaps, among short-term, transient workers. This is largely due to the arrival of new male and female residents who are either married or living with someone of the opposite sex.

Table 9 provides an idea of the changes in the ethnic or racial balance of the community in the past ten years. In 1970, Unalaska was still principally an Aleut community with Native Alaskans (predominately Aleuts) comprising 63 percent of the resident population. By 1977, the ethnic balance between Caucasians and Native Alaskans had almost completely reversed itself. Unalaska has now become a primarily non-Native community.

Table 9

**Ethnic Composition of Population of Unalaska
1970-1980**

Ethnic Group	Year					
	1970 (a)		1977 (b)		1980 (c)	
	N	%	N	%	N	%
Caucasian	56	31.0	387	62.9	848	64.1
Black	0	0	7	1.1	19	1.5
Native Alaskan	113	63.4	178	28.9	200	15.1
Aleut	107	60.1	166	27.0	-	-
Eskimo	5	2.8	8	1.3	-	-
Indian	1	0.5	4	0.6	-	-
Other	9	5.6	35	5.7	255	19.3
Unknown			8	1.3	-	-
TOTAL	178	100.0	615	99.9	1322	100.0

Sources: a. University of Alaska, 1973.
b. Tryck, Nyman and Hayes, 1977.
c. U.S. Bureau of Census, 1980.

Another interesting finding is the increase in the number of residents classified as "Other." These consist largely of processor personnel, some of whom have become residents of the community. In 1977, 5.7% of the residents and 38% of the non-residents in Unalaska were classified as "Other." Most of the non-residents were Filipinos who worked for the processors. In 1980, 220 of the 1,322 residents in Unalaska were classified as Asian and Pacific Islander, reflecting the large percentage of Vietnamese and Filipinos who worked for the processors. Forty-two of the non-residents in 1980 were of Mexican descent (U.S. Bureau of the Census 1980).

In their 1977 survey, Tryck, Nyman and Hayes also examined length of residence of the population of Unalaska in terms of age, sex, and race. With respect to race, they found that most of the recent residents in Unalaska were Caucasian. Eighty-three percent of the population residing in Unalaska in 1977 for less than one year were white while 82% of the population residing in the community for greater than 10 years were Aleut. Moreover, 74% of the whites in the community, compared with 14% of the Aleuts, had lived in Unalaska for less than four years (Tryck, Nyman and Hayes 1977:7).

The study also found that, on the average, new female residents tended to be younger upon arrival to Unalaska than new male residents (Tryck, Nyman and Hayes 1977:16). The average new female was in her early twenties at her arrival while her male counterpart was in his late twenties.

Finally, slightly over one-half of the adult residents of Unalaska arrived between the ages of 18 and 34, regardless of their current length of residence. This was true of all ethnic groups except the Aleuts, who had a large proportion of their numbers born in Unalaska. Nevertheless, a significant number of Aleut families in Unalaska had not lived in the community for several generations, many of them having lived on the Pribilofs or neighboring communities in the Aleutians, urban centers in Alaska, or other parts of the United States.

As is evident from the discussion of length of residence, the major factor behind the recent increase in Unalaska's population has been the influx of new residents and non-residents. The majority of these immigrants are non-Aleut, young, and male. For the past ten years, every fishing season brought with it newcomers, many of whom decided to live in Unalaska on a permanent or semi-permanent basis.

There has also been a small but noticeable influx of Aleuts who have ties to Unalaska but have resided elsewhere, often times for several years. The motives behind this return vary from individual to individual, but it is noteworthy that this trend is contrary to the experience of other Native communities throughout Alaska where migration to larger urban areas such as Anchorage or Fairbanks has become commonplace. Expanded educational and employment opportunities, along with a desire to renew family and ethnic ties, appear to be behind much of the Aleut immigration. The improved political and economic position of the Aleuts as a result of the Alaska Native Claims Settlement Act has also contributed to improved living conditions for Aleuts in Unalaska, making the

community more attractive than it was in the past.

Until recently, the rate of emigration from Unalaska was negligible, largely because of the increased economic opportunities in the community. There are three exceptions to this rule. First, very few individuals who are not permanent residents choose to spend their older years in Unalaska. With the exception of the Aleut residents, there are only a few permanent or semi-permanent residents in the community age 65 or older. Unalaska is not particularly conducive to retirement unless one has an extensive support network; the climate is harsh and cost of living so high that living on a fixed income is extremely difficult. Semi-permanent residents typically leave the community as they grow older and retire elsewhere.

The second group to leave the community includes semi-permanent residents who come to Unalaska with short-term goals. During the height of the boom in the crab fishery, several individuals came to Unalaska with the object of making enough money to fulfill goals such as pursuing a college education or starting a business elsewhere in Alaska or another state. Others, such as some police officers, come to acquire job experience in order to apply for more attractive positions elsewhere.

The third group to leave the community are the transients or non-residents. These include fishermen and processor personnel. Most processor workers are hired on six month contracts. Air fare to Unalaska is usually paid by the processor and return fare is also provided if the worker stays for a minimum period of time. Although the rate of return appears to be increasing, by some estimates as high as 75%, the rate of emigration for this segment of the population is roughly equal to the rate of immigration. Given the downturn in the economy, it is expected that the rate of emigration from Unalaska will increase in the next few years. This trend is already evident as many of the semi-permanent residents begin to leave the community.

The only seasonal migrants in Unalaska are the non-resident processing workers and fishermen. Prior to the recent boom in the crab fishery, most of the males in the community over the age of 18 were seasonal migrants. The usual pattern of migration would be to travel to the Pribilof Islands to work on the seal harvests and, later, to work at a cannery in King Cove. There are a few residents in Unalaska who still travel outside the community to either work or live elsewhere for part of the year, either in Akutan during the fishing season, the Bristol Bay area, Anchorage or Seattle. Some residents own property in other parts of Alaska while others maintain campsites on Unalaska Island, but, for the most part, dual residence is negligible. The only exception to this, other than the non-resident processing workers and fishermen, are some processor management personnel who maintain homes elsewhere, usually in the Pacific Northwest.

Unalaska is the only community on Unalaska Island and most residents live either within city boundaries or close by. A few individuals live on a sheep ranch by Chernofski Harbor on the southwest shore of the island and a few individuals live in the countryside on the outskirts of the city.

The other communities in the region with ties, either historical, contemporary, or both, to Unalaska are Nikolski and Akutan on neighboring Aleutian Islands, St. Paul and St. George on the Pribilof Islands, and Cold Bay on the Alaskan Peninsula. Less extensive ties exist between Unalaska and King Cove and Sand Point, both of which are also located on the Alaskan Peninsula. The 1980 population figures for these communities are given in the Table 10.

Table 10

1980 Population
Aleutian Islands Census Subarea

Community	Population
Akutan	169
Cold Bay	148
Nikolski	50
King Cove	460
Sand Point	625
St. George	158
St. Paul	551
Unalaska	1,322
Total Aleutian Islands	
Census Subarea	7,768

Source: U.S. Bureau of Census, 1980.

The fertility rate for Unalaska is difficult to ascertain due to the lack of centralized records in the community. The clinic does not have birth records for most of the new children in town because virtually all local women leave the community to give birth in more adequate medical facilities elsewhere. School officials and the organizers of the new pre-school program, however, have noted that there is an unusual number of small children in the community.

The mortality rate in Unalaska is atypical because of the small proportion of the population age 65 and above. As residents in the community grow old, they tend to go elsewhere to retire; the Aleuts are an exception to this. What deaths do occur in the community are usually the result of accident, illness, or violence. The available figures for deaths in the community for the past five years are as follows:

Table 11

City of Unalaska: Number of Deaths
1978-1982

Year	No. of Deaths
1978	10
1979	13
1981	16
1982 (to October)	8
Total	64

2. Structure

This section contains an overview of the structure of the **sociocultural system** of Unalaska. Structure is the mediating variable in a systems framework, in that it governs the pattern of community adaptation to changes in the environment or input which has already been discussed. The structure may also be viewed as a dependent variable in that it, in turn, is influenced and occasionally altered by the pattern of adaptation of system "output." We will discuss the structure of Unalaska by distinguishing between the value system which organizes the socio-economic system and the various subsystems of organization which precede from these values. The subsystems to be examined include the economy, political organization, social organization, religious patterns, health care, social services, education, and recreation.

2.1 Value System

As discussed in the Methods, Standards, and Assumptions section of this report, an analysis of the value system of Unalaska is crucial to understanding the workings of the current **sociocultural** system as well as making projections for the **community's** future. The social, political and economic institutions, community infrastructure, and other aspects of community life are all products of behaviors based on a set or sets of values. These values constitute a paradigm or set of rules for behavior. They also determine the consequences of external environmental changes on the **community's** social structure in terms of both output or behavioral response and changing social, economic and political organization. In turn, these values are themselves affected by **local** responses to external factors.

The value system of Unalaska today may be characterized as being in a state of flux, resulting from several factors. Of particular importance are: (1) the rapid economic growth in the 1970s, (2) the large influx of outsiders attracted by this growth, and (3) the increased exposure to the wider **sociocultural** system. This flux is particularly evident in the increasing social heterogeneity of the community as well as the conflicts associated with opposing **value** systems.

There are currently three major value systems in Unalaska: traditional, "frontier," and modern. The traditional value system is largely associated with the **Aleut** population but is also possessed in varying degrees by the older **non-Aleut**, permanent residents of Unalaska. Included within this value system is a rural orientation, pattern of reciprocity based on kinship and locality, a respect for age and authority, emphasis on self-reliance in work but concern for the welfare of the community, and a preoccupation with subsistence activities.

Historically, Unalaska has been regarded by non-Natives as a frontier community because of its relative isolation from urban centers and its economic dependence on the exploitation of primary resources. Although the city today possesses the **accoutrements** of modern urban living, to many from other parts of the United States, the community still retains a frontier image. The value system characterized as "frontier," includes elements which can be characterized as traditional and elements

characterized as modern. It is rural-oriented and gives emphasis to individual initiative, acquisition, enterprise and effort. It is also male-dominated and very competitive. Within this value system, the rules pertaining to social relations in a "civilized" context are relaxed somewhat and the environment is viewed as providing a wealth of resources to be exploited.

The modern value system is that of the larger sociocultural system. It is largely urban-oriented and gives great emphasis to both individual initiative and "community spirit," relationships based on contract rather than status, economic success, and occupational expertise. Education, income, occupation, and community involvement are used as criteria for the assessment of social status. Aesthetic tastes are influenced by the latest styles in other parts of the United States. Conceptions of the "quality of life" are based on the attitudes and opinions residents bring with them from other areas of the U.S.

To varying degrees, it can be said that certain elements of each of these value systems are shared by all segments of the community of Unalaska, although these segments in themselves are identified and distinguished by their commitment to a particular value system. Nevertheless, there is in general a certain progression in the community as a whole from a traditional to a modern value system. This is reflected in the behavior, attitudes, and opinions of all residents, regardless of age, sex, or ethnic identity.

This progression does not occur without some difficulty, however. The influence of more than one value system within individuals, families, and the community as whole has resulted in numerous forms of social and psychological conflict. These conflicts are not unique to Unalaska and are inevitable when an individual or a community must choose between two or more values. These value conflicts are evident in the formation of distinct social groups, each representing their own interests in social, political and economic activities. They are evident in generational conflicts which lead to alienation of youth and domestic violence. Finally, they lead to psychological disorder, especially in the forms of identity crises, lack of self-esteem, depressions and alcoholism.

The extent to which this transition is occurring and the conflicts associated with this process will be evident throughout the report. In this section, however, we are particularly interested in the components of the value systems. These components are grouped into the categories of status, beliefs, world view, ethnicity, and reciprocity.

Social status in Unalaska is determined on the basis of several different criteria from the traditional, frontier and modern value systems. Among the permanent residents of Unalaska, especially among the Aleuts, family status is important in determining the status of the individual, although it is less true today than it was in the past. Some of the older residents, for instance, have expectations for children of the younger generations based on past achievements of the children's families. If these expectations are not realized disappointment results and the children are chastized.

There has been a renewed interest in family history with the positive

renewal of an Aleut identity in recent years, and accompanying this interest, there is for many a sense of pride where the family can be traced to a person significant in the history of Unalaska. Relationships to historical figures are not viewed with equal importance by all Aleuts, however. Naturally individuals able to trace such a relationship invest more importance in it than those who cannot, and such considerations seem of little importance to younger children, though it is possible this interest will increase as they grow older.

Recently, status among Aleuts has been measured more along the lines of Western culture than was the case in the past. With this shift has come a regard for commercially successful individuals. Wealth is associated with prestige and functional independence and this prestige has carried over to children of economically successful parents.

Among the non-Aleuts of the community, there are few families with more than one generation in Unalaska. Among these few, family status is also important for determining the status of the individual, and for a number of reasons having to do with the past activities of the family. These families have often had important roles in the economic, political, and social life of the community. The business and investments controlled by these families have come to be passed down within the family, thus several considerations are implicated in the determination of status.

The role of wealth in determining social status in Unalaska is changing. Before the boom in the fisheries there were, generally speaking, two economic classes of individuals in Unalaska: the haves and the have-nots. Within these two categories there appears to have been little differentiation. The distinctions which were made and are made today are more subtle than is the case in other parts of the United States. Little attempt was made to maintain any distinction on the basis of dress, housing, or material possessions, for example. In the case of housing and other material possessions, however, class distinctions are becoming more explicit.

Of greater importance to the determination of social status than the amount of wealth accumulated, were the factors of when and how the wealth was achieved. If the individual was perceived of as having gotten wealthy at the expense of others in the community, the person's status and prestige were gauged accordingly. On the part of the economically successful Aleuts in the community, the same behaviors that were accepted if performed by a non-Aleut, were seen as unacceptable if performed by an Aleut, and unfortunately for them, they were seen as exploiting their own people by other Aleuts.

With the recent infusion of money gained from the crab fishery into the community, perspectives on wealth changed. Expectations were raised, effecting perceptions of employment opportunities. Wages viewed as acceptable a few years ago are no longer so. Outside fishermen were flush with money in the good years, though their involvement with the community was minimal. A few local families have made a good deal of money off of the fishery but most families were not able to or chose not to do so for one reason or another.

Associated with the value placed upon wealth in the assessment of social

status is a value placed on consumer consumption. In the days when economic opportunities in **Unalaska** were few, **little** income was available for luxury items such as stereos, automobiles, vacations to **Hawaii**, and dining out. Nowadays, however, these items and activities have become commonplace. Even among local residents who are **still** unable to afford these **items**, consumer commodities play an important role in the determination of levels of status, prosperity, success and even happiness. This new set of values has important ramifications for the "have nets" in the community as being unable to afford these items sometimes results in a lack of **self** esteem, depression, or alcoholism.

Another of the criteria used in determining **social** status in **Unalaska** by permanent residents of the community is stability over time, assessed in terms of length of residence both within the community itself and within a particular location in the community. Individuals who have **left** the community and then moved back in subsequent years have most often had to start over in terms of finding a **place** in the **social** structure. Many **local** residents, particularly **Aleuts**, hold the belief that if the individual has left the community once, a certain period of time should elapse before **social** bonds are renewed.

Emotional stability is also a criterion for the assessment of social status. Those residents given to periods of personal instability, regardless of wealth, **family** status or length of residence, have a lowered social status as a result. Individuals suffering from periodic bouts of alcohol abuse are taken less seriously because of it.

Status differentiation based upon occupation also occurs in **Unalaska**. This is perhaps more common among semi-permanent residents and long-term transients than among either permanent residents or short-term transients. Among the first two groups, occupations are often accorded a status similar to that held in urban areas elsewhere. The most occupations in **Unalaska** viewed as prestigious by these groups include **professionals**, businessmen, processor managers, fishing vessel owners, and skilled technical personnel. The least prestigious occupations are fishing **crewmen**, processing line **workers**, and unskilled laborers.

Political acumen **also** is the basis for status assignment in the community. Individuals are especially **highly** rewarded socially if they are successful in making gains for the community or a special interest group in dealings with the outside world, especially the government.

There are significant differences in belief systems among the different population groups represented in **Unalaska**. Virtually all of the **Aleuts** of the community are at least nominally members of the Russian Orthodox church. Although the congregation is typically **small** on any given Sunday, the system of ethnics and morality prescribed by the Russian Orthodox faith is quite pervasive among the **Aleut** community. In addition to the Russian Orthodox belief system there is another system of beliefs held by many of the **Aleut** residents, particularly the older generations. A system of **folk** medicine is shared by a few of the older persons in the community, though the implementation of **folk** cures is becoming less common as time goes on. There is also a shared belief system that features supernatural beings known as "outside men," who are marginal beings in stature, time and place of **appearance**, and dress.

These beings present a danger to living individuals in that they take people away to an unknown fate. As is typical with so-called "animistic" belief systems, the presence of the outside man is used to account for otherwise unexplained phenomena, such as the disappearance of food or treasured possessions and the unnatural deaths and disappearances of local residents. Belief in the existence of "outside man"* is fading as reported contacts are becoming less frequent, though the belief is retained by a significant number of individuals.

Among non-Aleuts there is a diversity of belief systems. There is a strong religious component to life for many in Unalaska, as the "frontier" attitude and the isolation of the community seems to foster religious growth. Religion provides certain fundamental social and psychological needs, especially for immigrant populations (Palinkas 1981, Clinebell 1972), and particularly in contexts characterized by uncertainty and a lack of existing social networks. In the absence of other social networks for a transient population the church fills a important need for many. The strongest and most visible "non-Aleut" church in the community, the Unalaska Christian Fellowship, features the most social activity for it's members and makes the most aggressive attempts to contact a broad spectrum of the population and draw them into the church. The other churches, discussed in the section on religion, play similar roles in the lives of their members.

The system of values discussed thus far provides the foundation for the world view of Unalaska residents. A people's world view, according to Geertz (1973:127), "is their picture of the way things in sheer actuality are, their concept of nature, of self, of society. It contains their most comprehensive ideas of order". There are divergent world views represented in the population of Unalaska. For most of the long and short term transient members of the population, Unalaska is an environment to be exploited in service of other life goals. These people tend to be instrumental in their relations with other community residents and bring with them the world view dominant in their respective cultures. For most of the community's permanent residents and some of the semi-permanent residents, there is a conflict between their world view and those of the more transient members of the population. Many of these people moved to the community, among other reasons, because it was an isolated and relatively pristine environment. They see the relative newcomers as wishing to shape Unalaska to their lifestyle, rather than adapting to current conditions and maintaining the community's small town flavor. In the words of one resident, "if they want it to be like the place they came from, why didn't they just 'stay there?'"

Many of the permanent residents perceive the instrumental attitude of the newcomers as exploitative, and react accordingly. Thus, when some permanent residents feel that when they have the upper hand in business dealings with transients, often they will attempt to exploit their advantage to the maximum extent possible. In a world where there are exploiters and the exploited, they are determined not to be the exploited again. Many local businessmen feel this attitude has made the Unalaska Corporation difficult to deal with at times. As a group, Corporation representatives have seen themselves as having been exploited so many times that they are unwilling to take the chance of this happening again, resulting in a difficult atmosphere for conducting business.

Perception of history, both recent and relatively distant, is thus important in the community to the extent that it patterns life in the community today and affects the formation of an individual and shared world view. For many Aleut residents, the events of the war and the conditions following the war still have a strong bearing on the direction of their life. For those born after the war, the events of that era nevertheless have made their impression. The reactions of their parents and their own growth and development during the period of economic depression have inevitably shaped the way the world is understood. There are definite changes in attitude or world view on the part of permanent residents of the community based on their age, and the corresponding relationship of the age that they were at the time significant and formative events took place in the community.

In their perceptions of the future, once again residents hold diverging beliefs and opinions. For the non-Aleut residents, assessment of the future is governed by the economic circumstances of the present. Some view the future as a bleak period and have made plans to leave the community. Others place a good deal of faith, either upon themselves or the economic system, and believe that the community will continue to grow and the quality of life will continue to improve. Semi-permanent residents tend to be highly ambivalent about the future. On the one hand, they are the most vocal in expressing their belief in continued economic growth. However, they are also most prepared to leave the community if such growth does not materialize. Permanent residents tend to be slightly less optimistic about the prospects of growth, perhaps because of their experience with growth (or the lack of it) in Unalaska in the past. Nevertheless, they are more committed to residing in the community than transients and semi-permanent residents and this Commitment is reflected in their world view.

Among the Aleut population in Unalaska, perceptions on the future also differ. Older residents see the future as a continuation of the present, both viewed in pessimistic terms. Younger residents see their future tied to certain political and economic opportunities resulting from the Alaska Native Claims Settlement Act. Their commitment to the community is influenced, in large part, by the degree to which the local native organizations are able to represent the interests of Aleut residents, securing for them a stable economic base in the form of land and a greater voice in community affairs.

As Hallowell (1955) and Redfield (1952) note, an important element of world view is a sense of self. Self identity has both an individual and a social component. In Unalaska, the major form of social identity is ethnicity. Relations between the different ethnic groups present in Unalaska have varied considerably across time, and are of course highly variable with respect to particular individuals. The two ethnic groups having had the longest contact are the Aleuts and the Euro-North Americans. Relations between these two groups have varied considerably over time. On an individual level, there are some Aleuts in Unalaska who profess to hate "whites." There are also some non-Aleuts who are quite hostile, at least in private, towards Aleuts. At the same time there are inter-ethnic marriages between the two groups, which are generally accepted by most of the people in the community and a large number of

Friendship ties across ethnic lines. For a significant number of individuals, ethnicity is of little importance in their interpersonal dealings. For many of the transient members of the community, interethnic relations is not the subject of much thought or concern.

The assignment of an ethnic identity is not a clear issue, and individuals have varying degrees of concern with their own ethnic identity. An Aleut ethnic identity was widely seen several years ago as something that was not a source of pride, and something that many people sought to hide or deny if possible. For several decades, Aleuts possessed an ethnic identity negatively defined by their experience of discrimination in the context of the larger sociocultural system. Even today, a few older Aleuts still refer to themselves in derogatory terms, an artifact of an educational system which devalued their beliefs, language, customs, eating habits, and modes of dress. With the passage of ANCSA there were tangible rewards for the declaration and instrumental use of an Aleut identity, and there were individuals in the community who for the first time in many years declared themselves to be Aleut, much to the chagrin of others who had maintained an Aleut identity all along. Along with the rewards offered by ANCSA, an attitude change in the country as a whole in the late 1960s and early 1970s placed a renewed intangible value and pride on a Native American identity.

The criteria for the assignment of an Aleut identity is unclear for many individuals, however. Traditionally, Aleut identity was associated with residence and place of origin. A few of the older Aleut residents still express pride in having come from one of the now extinct villages on Unalaska Island such as Makushin or Chernofski, but for the most part, residence is no longer an important element of Aleut identity. Moreover, the system of understandings that comprised traditional Aleut culture is now gone. According to one man: "Young parents have trouble today. Their children ask them what it means to be an Aleut, and they don't know what to tell them, because they don't know themselves." Current Aleut "cultural preservation" or enrichment attempts focus mainly on material aspects of traditional Aleut life: traditional crafts, tools, and arts. Additionally there is an emphasis placed on pursuing activities related to subsistence fishing and gathering, and pride is taken in preparing traditional foods obtained by subsistence methods. Interest in learning the Aleut language is lacking among younger residents, however. The lack of motivation, combined with other factors, is seen as contributing to the small success of the local Aleut language program.

Voluntary groups and some recreational activities within the community tend to be divided along ethnic lines. Employment patterns also vary by ethnicity, particularly with respect to place of employment, and position in the business hierarchy. Political movements along ethnic lines, and political actions based upon ethnicity are not uncommon.

As noted in the discussion on demographic structure, ethnic groups represented within the short-term transient population are varied. Typically, these individuals have little direct contact with the community outside their respective places of employment, and usually the employers hire large numbers of only any one ethnic group. In the past, where there have been large numbers of more than one ethnic group work-

ing for a single processor, strained relations between the groups have been common. Current breakdowns by ethnicity of processing workers are discussed in the economic structure section of the report.

Within traditional Aleut culture there were formalized systems of reciprocity and redistribution. While this system has disappeared, similar institutionalized relationships exist in Unalaska, though less formal than in the past and more highly variable by individual case. The "atcha" relationship, described below, is a relationship that features reciprocity as one of its attributes. The "kroosna" relationship is similar in this respect, though often more formal. Within memory of the older generations there was a redistribution of foodstuffs at Christmas time, although this has also faded. This practice involved the collection of food and clothing from local families to give to needy families or individuals.

The only formalized redistribution system that is now operating in the community is government assistance, in the form of AFDC payments and the federal foodstamp program. In the summer of 1982 there were approximately 20 families receiving foodstamps and 10 receiving AFDC payments. These numbers vary seasonally and were nearly double this in the winter of 1981-1982. The largest informal redistribution system in the community is the network that encompasses the core of the congregation of the Unalaska Christian Fellowship. Informal assistance is given in finding of jobs for new people coming into the community, and many social functions include the sharing of food. Shelter is also provided for those in need. Among some the Aleuts of the community, and a few non-Aleuts, there is an informal network of redistribution of subsistence goods to older residents unable to support themselves. There is also some redistribution of goods between friends within many networks at such social functions as holiday parties, going away parties, and other celebrations of various sorts. Community-wide redistribution occurs at holiday celebrations which often feature potluck dinners.

2.2. Organization

2.2.1 Economic Structure

The first subsystem is economic. We will discuss the economic organization of Unalaska in two sections, the cash economy and the subsistence economy. The cash economy of Unalaska includes the fisheries, both commercial harvesting and the processing industry, entrepreneurial activity, both small and large scale, alternative employment, including federal, state, city government and external commercial agencies. Subsistence activities to be discussed include fishing, hunting, and trapping. Finally, we will conclude with a discussion of the non-labor force, that is, unemployment, social security and pensions, welfare, and AFDC.

Unalaska's economy derives from its geographical location as a gateway to the Bering Sea region and its position as the only developed deep water port in western Alaska. The port facility in Unalaska serves as a stopover and refueling base for ships serving the Bering Sea and Arctic ports. It also serves as a customs clearing port for foreign vessels

entering and departing the Bristol Bay fishery. Unalaska is favorably situated with respect to several major fisheries, and commercial fishing has come to occupy the central place in the Unalaska economy. Fisheries exploited include salmon (of several varieties), crab, and, to a lesser extent, herring, halibut, and bottomfish. Unalaska's favorable location has led, in the past two decades, to the growth of a large processing industry as outside processors have located their vessels in Iliuliuk Bay and Harbor ("Inner Harbor"), Captain's Bay, and Dutch Harbor.

2.2.1.1 Cash Economy

The cash economy of Unalaska is dominated by fisheries and fisheries related activities. Most of the non-fisheries activity is designed as support for the fishing industry. This includes shipping companies, local retail and support businesses, and other transportation activities.

Iliuliuk Harbor is the most developed commercial section of Unalaska today and includes the plants of Whitney-Fidalgo Seafoods, East Point Seafoods, Universal Seafoods (and their associated commercial complex), Pan Alaska, Pac Pearl, and Panama Marine. To the south, in Captaints Bay are a Pan Alaska dock and Crowley Maritime. To the north, in Iliuliuk Bay, is the APL Dock, and further north, in Dutch Harbor, are the Sea Alaska dock and processor, the Exxon Dock, the City Dock (municipally owned), the Standard Oil Dock (operated by Chevron U.S.A.), and the boat harbor.

2.2.1.1.1 Commercial Harvesting

The backbone of the cash-based economy of Unalaska is the commercial fishing industry. This industry consists of two segments, the fishing fleet and the processors. The processors are divided into shore-based operations and floating processors. This industry is largely responsible for the increase in population during the past ten years and much of the projected growth of the community is tied to its continued prosperity. However, for several reasons, this industry is unlikely to grow to any degree in the next five to seven years, despite the projected increase in bottomfishing.

Although a major herring fishery existed in Unalaska during the 1930s, for most of its subsequent history commercial fishing was of minor importance to the local economy. The major source of income was seasonal employment in the Pribilofs during the fur seal harvest. In the 1960s, however, processors began to move into the area to harvest king crab. This shellfish was the foundation of a boom in the commercial fishing industry in the 1970s and most of the local vessels were purchased and equipped with revenues from this harvest.

Table 12

Aleutian/Bering Sea Seafood Catch

Year	King Crab	Tanner Crab	Total Crab	Salmon	Herring	Foreign- Caught Bottomfish
1970-74 (avg.)	42.6	1.6	44.2	58.7	0	N/A
1975	66.1	7.1	73.2	46.7	0	3750
1976	68.4	22.9	91.3	N/A	0	3376
1977	79.7	53.2	132.9	0	0	2782
1978	81.4	70.7	152.1	0	0	3016
1979	107.3	76.0	183.3	5.3	0	2824
1980	132.3	77.1	209.4	11.8	0	2870
1981	164.0	83.1	247.1	N/A	1.4	2798
1982	55.5	N/A	N/A	N/A	6.4	N/A

Source: Alaska Department of Fish and Game

In addition to crab, other species of fish have been harvested in the Bering Sea or North Pacific and processed in Unalaska, as indicated in Table 12.

It is clear the town depends heavily on the crab harvest. Salmon is relatively unimportant (though it may become more so in the future) and the community is unusual for this region of Alaska in that Limited Entry, which regulates the salmon fisheries, has had little effect. The community as it exists today is essentially the result of a crab boom in the mid-seventies which brought sudden and massive growth, followed by a decline in the crab fishery which has forced adaptation and diversification on the part of those exploiting the resource. Today the community is characterized by flexibility in economic activities as it has become obvious that crab alone will not be a sufficient economic base for either the individual or the community in the future.

Unalaska, despite the fact that it is the location of the largest Aleut population in the Aleutians, did not benefit from Limited Entry, which was designed, in part at least, to guarantee Alaska Native peoples a portion of the salmon fishery. This is because there was no real fishery in the area at the time of and immediately prior to the introduction of LE as a result of poor salmon runs for several years. These years of bad runs are just those selected by the state as the qualifying years for a Limited Entry Permit. As a result, no one in Unalaska, even though they had long fished when the runs were good, was able to get a permanent permit. The only permits held by locals are temporary and must be renewed each year. This is a risky process and entails an investment each year of up to thirty or forty thousand dollars based only on the hope that the Department of Fish and Game will grant the extension. Four people in town have permits of this kind.

The crab boom resulted in a dramatic increase in both fishing boats and processors in town. In the mid-seventies there were from 90 to 100 boats regularly fishing the Bering Sea. By 1979 the number had jumped to between 250 and 280. There were so many boats it was difficult to

find crew members. Before the boom it was rare to find crew members who had less than a decade experience. Following the boom, and continuing to the present, crew members have been younger and less experienced as boat captains are forced to hunt for crew wherever they can find them. Commercial processors grew from a couple of small scale, locally owned canneries to at least a half dozen large-scale processors financed by both national and international capital.

The crab boom peaked in 1979-80 and has since undergone a disastrous contraction. There are several reasons given for the decline in the crab population. Some feel it is strictly a matter of overfishing. Another theory proposed locally calculates that there are approximately 250 boats in Unalaska for crab, with 400 pots per boat. Each pot weighs on an average about 650 pounds, and in addition to the number of crab caught there are bound to be many which are crushed under the pots as they are set in the midst of large crab population concentrations.

Several local residents ascribe the problem to a combination of increased water temperature, salinity and overfishing. The 200 mile limit is also perceived to have had a negative impact on the crab fishery by forcing out of the region foreign vessels which had harvested groundfish, particularly cod which feeds on crab larvae. Both crab and cod appear in 7 to 10 year cycles, so a reduction in resource availability is inevitable. However, the coinciding of the cycles for both species appears to have had a devastating effect on the crab population.

Others give opposite reasons, that the foreign fishermen were not eliminated from the crab fishery soon enough and fished it out. This argument seems untenable, however, given the figures for total crab catch before and after the establishment of the 200 mile limit. Before its establishment, in the early seventies, average total annual yield of the crab fishery was between two hundred thousand and half a million pounds. However, following the establishment of the limit, and the large scale entry of American fishermen in 1975, yields jumped to between half a billion and a billion and a half pounds (an increase of a thousand-fold. Source: Bering Sea Management Area Report). The total amount of king crab processed in Unalaska two years ago was 164 million pounds. Last year the total was only 55 million pounds, and processors and fishermen alike say this year they will be lucky to get 30 million pounds.

The decline in catches and revenues from the crab fishery has resulted in some difficulties for, and adaptations among, local fishermen. Many feel one solution to the decline in the crab fishery is to convert to the bottomfishery. However, there are problems with this, not the least of which is the cost of conversion. The owner of a local boat told us that a three million dollar crab boat would require an investment of between \$600,000 and \$800,000 to convert it to midwater or bottomfishing; others put the cost at a million dollars or more. According to the local manager of Sea Land, groundfish is beginning to be a factor in the local economy. There are several joint ventures now and one plant processing significant quantities of groundfish (we will discuss these below). However, these are exceptions.

During these relatively difficult economic times, the investment for conversion to groundfish is simply too large for most. The fishery has

yet to be proven lucrative, and most are shorter of cash than they were a few years ago. Nonetheless, to the extent that it is possible most **local** fishermen are diversifying. Where a few years ago one could make a **princely living** from the crab fishery **alone** in two months; now it is necessary to exploit as many resources over as much of the year as possible. This is felt more acutely by the smaller, local, fishermen than for the highliners. Several of the **highliners** actually preadapted for the crab crash. Spurred by tax incentives they added **groundfish** capability to their vessels in the "good years". They are now quite successful at exploiting diverse species; the disparity between the highliners and the rest of the **fleet** is remaining steady, and probably growing, during a depressed period for the industry as a whole. The **processors**, too, as we will see below, have been forced to diversify in order to survive.

One means of adaptation is to spread the risk among several partners. Several **local** individuals have entered into joint ventures with foreign companies in the last few years. The owner of the **Morning Star**, a locally-based **highliner**, has been successfully involved in joint **groundfish** ventures for three years, first with the Poles and later with the Koreans. Several others are also negotiating such agreements, and the future promises more of the same.

There are some **stillable** to make a living by concentrating on crab, but there is insufficient quantities of the resource for everyone to do so* Those who are able to get enough crab, however, have been receiving handsome prices for the product. The scarcity has led to rises in the price paid by the processors as they bid it up in **competition** for limited catches. Last year (1981) the price went from \$0.86 per pound to \$1.70 per **pound**. Crab was selling for \$4.00 a **pound** during the 1982 season. Thus, those who can get crab **still do well**, but decreasing numbers of fishermen are able to do so. This year, according to **local** fishermen, there is no fixed price for crab. The fishermen did not desire one, as they expect the shortage of the resource to result in a dramatic bidding up of the price on the part of the processors.

In addition to novel structural and business arrangements, fishermen have also diversified into other fishery resources. One fishery which has harvested more in the last few years is halibut (halibut is **not** technically listed as a groundfish because it brings a much higher price per pound). However, the fishery is dominated by outsiders at the expense of local fishermen. This is because the halibut fishery is run on a **total** quota system in which open fishing is allowed **until** the quota is filled. It is first come, first served, and it has resulted in a near monopoly of the fishery by the Seattle **highliners** who catch most of the quota so rapidly the local fisherman has little chance. A number of local people fish for halibut in skiffs for sport or subsistence, but few so far fish commercially. Entry limitation for the halibut fishery is under consideration at the state **level**, and is a frequent topic of conversation in town. It would operate as a share system in which the individual would be guaranteed the right to take the same proportion of the total catch each year as he did in the qualifying years. Locals feel this is another ploy to maintain the advantage of the outside highliners, since it would keep the **small** fishermen small, prevent young people from entering the fishery, and institutionalize the **dominant**

position of the outsiders.

Another possible strategy which has re-emerged is exploitation of the herring fishery, which has been historically important in Unalaska but moribund since before World War Two. This has so far consisted of only a few runs at the local processors. Questions must be resolved concerning whether the fishery around Unalaska is actually a separate fishery or part of a more encompassing Bering Sea fishery. If the latter is the case it may be dangerous to heavily exploit the fishery as it would result in a decline in stocks in already established fisheries. On the other hand, if the Unalaska fishery is a discrete one, then exploitation could proceed without adversely affecting other areas.

Another fishery receiving increased attention is the salmon fishery. Most of the processors in Unalaska have packed salmon in the last few years and are in the process of increasing their salmon output as they try to eliminate down-time and cut wasted overhead. Unalaska is well situated with respect to runs of, particularly, reds and pinks and this is becoming an increasingly important sector of the fisheries economy. However, the near-total lack of local permits means that most of the salmon processed in Unalaska is caught in the Bristol Bay area. If that fishery declines Unalaska plants would probably suffer more, and sooner, than Bristol Bay plants.

The out-of-state fishermen and processing workers who dominate the industries in Unalaska come predominantly from the northwest U.S. and the west coast as a whole. Fishermen come up from Seattle and other west coast ports yearly for the salmon and crab runs, and they generally have vastly superior ships, equipment, and capitalization. These "highliners" are able to exploit huge amounts of the resource, and leave local fishermen far behind in terms of volume and income generated. As a group locals, and Aleuts in particular, are very underrepresented in the harvesting of marine products. Altogether probably less than a dozen boats are owned by local fishermen. Crews on these boats consist either of family members or close friends. While the preference seems to be members of one's family, fishing expertise is considered the most important factor.

Not only is the number of locally owned and operated boats small, they are also as a group smaller boats than the highliners from Seattle and thus have much less capacity. The processors take almost all of their product from the highliners, and relatively little from the the smaller boats. In fact, many of the processors refuse to go to the trouble of offloading product from the smaller boats. The highliners either deliver to the most convenient processor paying the highest price or enter into contractual agreements with a processor to deliver product. The processors frequently broadcast the current price over the citizens band radio system, and the highliners are free to evaluate where to deliver their catch.

There have been some suggestions designed to increase Aleut participation in the local fisheries. The Ounalashka Corporation is considering subsidizing the purchase of boats and equipment by Aleuts. A member of the Ounalashka Board of Directors says that for only \$5,000 invested one could set an individual up in a small boat; he could then repay the

Corporation and own his boat. This would lead to gainful employment for more Aleuts in an industry which many feel is part of their heritage. The Corporation has attempted on its own to hire exclusively or predominantly Aleuts, but has had difficulty in finding enough qualified and/or dedicated people so has been forced in many cases to hire non-Aleuts.

A lingering effect of the crab boom concerns taxes. Local fishermen have had difficulty with taxes in the past, and may be headed for future difficulties. There is talk in town that the IRS is clamping down on area fishermen, as it seems quite a few have not paid taxes for some time and now owe large amounts. When the IRS personnel were in town in the summer of 1982 many fishermen maintained very low profiles. Some residents passively resist taxes to a certain extent, although not much is actually said about it.

In the good years many fishermen paid less tax than they owed, if they paid at all, but it is also true that the difficulty with taxes is only one aspect of a general financial malaise in the community. The downturn in the crab fishery has resulted in the financial overextension of many fishermen. The manager of the local bank estimates that as much as fifty percent of the fishing fleet may be in financial trouble, and notes that most are being forced to go into other areas than crab. He says that several fishermen have either begun to "feed" large catcher-processors who are themselves having difficulty catching their capacities, or have converted their own ships into small combination catcher-processors.

One recent administrative change in the fisheries was at the instigation of a local fish and game advisory committee composed of fishermen and cannery representatives. They represent the local fleet in making recommendations to the board of fisheries. As a result of their input in 1980 the Bering Sea was made a separate exclusive fishery area. Vessels may now fish the Bering Sea fishery, or the Dutch Harbor fishery (as the Unalaskan fishery is officially labeled), but not both. It is seen as a means of protection against overfishing by outside interests.

2.2.1.1.2 Processing Sector

The processing industry is the dominant economic sector in Unalaska. There are seven large processors in town capable of processing a total of more than three million pounds of product per day.

Table 13

Unalaska Shore-Based Processors 1982

Company	Species Run (major)	Capability (lbs/day)	NO* of Employees	Major Ethnic Group
Pan Alaska	Crab, Salmon	1,000,000	500	Filipino/ Caucasian
Universal	Crab, Salmon	1,000,000	500	Vietnamese/ Caucasian
Sea Alaska	Crab, Herring, Salmon, Cod	500,000	350	Filipino/ Mexican
Pac Pearl	Crab, Salmon	250,000	200	Vietnamese
East Point	Crab	250,000	90-150	Korean/Mexican/ Caucasian
Whitney	Crab, Shrimp	250,000	35	Caucasian/ Filipino
Sea Pro	Cod, Salmon	80,000	60-70	Caucasian/ Vietnamese

(Note: These figures represent production and employment when the plants are operating at capacity. As we will note below, the slowdown in crab catches has resulted in cutbacks in both employment and output).

The major product is king crab, although the diversification forced by the decline of the crab fishery has seen the processors moving into salmon, other varieties of crab, shrimp, herring, halibut, and bottomfish.

The processing sector burgeoned during the crab boom. From two small processors in the sixties it has become a massive industry. Today there are seven major processors in town. Universal Seafoods and Pan Alaska are the largest. Universal began with the processor the Unisea, and later (in 1977) acquired the Vita. They now have two separate processing lines in each facility. During the peak king crab season Universal is capable of processing one million pounds of product per day. When operating at full capacity during king crab season the processor usually employs around 500, and has employed as many as 600. However, with the current downturn in the crab industry Universal is only employing between a quarter and a third of that. In the summer of 1982 hired only 200 people in the processing sector, 30 to 40% of whom were Vietnamese with the rest Caucasian. Employees are hired on a six month contract. Universal has concentrated almost exclusively on king crab in the past, but has now diversified into salmon, and has even attempted to process cod. The cod experiment involved two runs of salt cod, but lost money and has not been repeated. They have found that at this time and with the present methods they are unable to compete with foreign groundfish processors.

Universal officials are not optimistic about the rapid recovery of crab stocks. Both snow (hair) and king crab stocks are far below levels of a

year ago, and a year ago they were far below normal. Universal's response has been to diversify. One strategy has been to devote most of the resources of Dutch Harbor Seafoods, a wholly owned subsidiary of Universal, to processing salmon rather than crab. Dutch Harbor Seafoods operates two processors, the Galaxy and the Viceroy. Both of these have recently been sent out of Unalaska to follow the salmon fleet at close range to guarantee access to product.

Universal has also diversified operations in its other two processors, the Unisea and the Vita. These two were originally little more than empty hulks which were towed up from Seattle. They will never be able to leave their berths. They have been the major local processor of halibut, and in the summer of 1982 they experimented with herring.

Pan Alaska is the only processor in town which can equal the output of Universal Seafoods. The Pan Alaska plant consists of a shore plant and several barges, one of which can act as a small processor. They are located on Iliuliuk Harbor. The plant is capable of processing a million pounds of crab a day. Pan Alaska came to town in 1964 and was bought by Castle-Cooke in 1975. Castle-Cooke, however, has recently announced that its entire Alaska operation is for sale. The processor has run primarily crab, but since 1979 has run salmon as well. Running salmon puts the plant to use in the crab off-season.

Pan Alaska runs three lines currently, up from one in 1980. Most of the product now is frozen salmon, as canned salmon sales are down following the recent botulism scare. Salmon processing runs from May to August. Pan-Alaska normally employs approximately 500 people when king crab is running at high levels, but with the downturn they, too, have been employing far fewer. Current employment, for the salmon runs, is about 120. Of these about half are Filipino and most of the rest are Caucasian. The employees work on a six month contract. Pan Alaska also received a grant to run a batch of pollock on an experimental basis, but the results were not encouraging. Recently, Pan Alaska announced plans to suspend their operations in Unalaska in September for an indefinite period.

Sea Alaska is the third largest processor in town. Sea Alaska has also diversified its operations, and now processes crab, herring, salmon, and cod. Crab processed includes king, bairdi, and opilio. Cod is done as frozen fillets. The company is moving toward more cod and pollock, but is still developing the expertise and technology and has not begun groundfish on any large scale. The company operates two floating processors out of Unalaska, the Sea Alaska and the Sea Producer, and during salmon season the floater Resoff, usually tied up in Unalaska, goes out to follow the fishing fleet.

Sea Alaska has a capacity to process approximately 500,000 pounds of salmon or king crab per day. For tanner, brown, and opilio the capacity is about 300,000 pounds per day. Cod is just being tried, and so far has been running at about 10,000 pounds per day. They also process herring occasionally, but it is very cyclic and is run mostly for bait. Reportedly, there isn't much of a market for it as food at this time.

Sea Alaska employs about 350 people during the peak of the king crab

run. When salmon is being run employment is slightly less, usually around 300. Tanner crab requires only 200 employees, and cod only 150. However, all these figures have dropped somewhat with the deterioration of the economic climate. In 1982 the ethnicity of the workers was approximately 55% Filipino, 25% Mexican, 15% Caucasian, and 5% Vietnamese. Workers are on a six month contract.

In addition to Pan Alaska and Universal, capable of processing a million pounds of king crab per day, and Sea Alaska, capable of a half million pounds a day, there are four smaller processors in town. Three of these, Pacific Pearl, East Point, and Whitney-Fidalgo, are capable of processing up to 250,000 pounds per day, and the fourth, Sea Pro, is capable of 80,000 pounds per day.

Pacific Pearl usually employs around 200 people. However, as with most of the other processors, this season (1982) they are employing far fewer, probably around 85. The dominant ethnic group is Vietnamese. The processor runs primarily tanner and king crab. They have also, in the past, run red and pink salmon, some halibut, some cod for bait, and herring. These latter products illustrate an attempt on the part of Pac Pearl, as in the case of the other processors in town, to diversify production. No processor can survive on king crab alone anymore.

Pac Pearl has one processing line, but it is very flexible. It can be adapted for two shifts of 65 to 70 people or be geared down to one shift of only 15 people, which increases efficiency. Most of the employees of Pac Pearl are from the west coast, particularly Seattle. If they stay for 90 days their air fare to Unalaska is paid, and if they stay 180 days their airfare is paid out. Pacific Pearl has recently suspended its operations in Unalaska, however, and sold its Captains Bay Plant to Crowley Maritime.

Another smaller processor in town is Whitney-Fidalgo, which is 99% owned by Kioko Ltd., a Japanese company. Whitney has been in town since 1976 and has run primarily crab and shrimp. They also freeze bait cod and anticipate running salmon in the future. The cannery, though not large, is versatile and capable of running any of several products.

Whitney employs, on the average, around 50 people. The workers are employed on a six month contract. Most employees are relatively young, in their early twenties, and many are return employees, coming back for three to five years (a growing trend which we will discuss below). Most are from the west coast, Northern California or the Seattle area. The major ethnic groups are Caucasian and Korean.

Whitney is capable of running 250,000 pounds of crab per day. In the past they have run between 1.5 and two million pounds of shrimp per year as well. In 1981 they ran 1.75 million pounds of shrimp. This year (1982) has been very disappointing and in the first month of the shrimp run virtually none was processed. The plant is diversifying this year into dungeness crab, whereas previously they had run king crab exclusively. Whitney has two floaters, the Mokohama and the Yardarm Knot, as well as a shore plant (which is actually a permanently moored floater). As with Pan Alaska and Pacific Pearl, however, the recent downturn in the crab fishery has forced Whitney to suspend its operations in

Unalaska for an indefinite period.

The third medium-sized processor is East Point. East Point processes mainly crab and, like Whitney and Pac Pearl has a capacity of about 250,000 pounds per day. East Point employs approximately equal numbers of Koreans, Mexicans, and Caucasians. During full scale operations during the king crab season East Point employs over 150 people, however the downturn in crab has resulted in employment being cut back to between 80 and 90.

A relatively new entrant to the **Unalaska** processing sector is the Sea Pro. The Sea Pro began operations in 1982 and is a joint venture with a Norwegian company, Johanson. Johanson has 107 years experience with cod, and the Sea Pro is the only processor in **Unalaska** which regularly runs cod. It operates partially on land owned by Pac Pearl and Crowley Marine, and for this reason has a "no crab"* contract which states that Sea Pro cannot compete with Pac Pearl by processing crab. At times, however, Sea Pro does run salmon. One reason the company is unique is that it can make a profit running cod because the parent Norwegian company has direct access to the major European markets.

The operation consists of five boats fishing for cod and the shore-based processor. They employ a total of about seventy people. Because Sea Pro does not depend on crab, but is the only processor in **Unalaska** to do primarily groundfish, employment has actually risen in the last year from about sixty to seventy-two (as of the summer of 1982). The goal of the company is to keep volume down and quality up. They feel that if they attempted to produce more, but of lesser quality, there would be no way to compete with the Japanese, Poles, and Koreans. However, by turning out a quality product for a smaller market they are able to make a profit. Occasionally the plant runs salmon also, but the primary product has consistently been salt cod. They have been operating at a rate of approximately 300 to 400,000 pounds of product per week.

Though groundfish processing is seen by many in town as a potentially major future industry, currently only the Sea Pro is processing cod in any quantity. People in town are carefully watching this operation to see whether it succeeds and with the recent suspension of operations by the processor for an indefinite period, the question remains an open one. One additional problem with establishment of a groundfish industry is the lack of a cold storage capability. There is none currently in **Unalaska**. According to local opinion, if such a facility were built it would be of great service to the fishing industry, and would allow much more efficient use of the shipping which comes into town at any rate. Groundfish, as well as other marine resources, could be both processed and transshipped through **Unalaska**. **Unalaska's** location on main shipping lines could then be exploited to the fullest.

The decline in crab stocks has not only forced diversification on the part of both the fishermen and processors, but has changed the nature of the processors' work forces as well. We have already noted the contraction in work force which has affected all the processors with the exception of the Sea Pro which has been relatively immune as a result of its independence of crab. With the resulting scarcity of positions, all processors agreed there had been a change in the recent past in the rate

of worker return. During the height of the crab boom, which coincided with a favorable economic climate in the rest of the United States, the rate of return was usually around twenty five percent, that is only one out of four workers would actually return to work the next year. However, with increasingly difficult conditions in the lower forty-eight and the increasing difficulty in getting a job at the processors the employment market has stabilized since a job is much less readily given up now. As a result rates of worker return are now reported at between fifty and ninety percent. In essence what has occurred is that the total number of employees has come to more closely coincide with the number of steady or return workers employed in the past. The workforce has become less transient than it was previously. Nonetheless, workers are still overwhelmingly outsiders. As has been clear throughout this discussion, locals are greatly underrepresented in the processing sector. Almost none of the processing workers are local hire. Regardless of ethnic group, almost all the processing workers come from the west coast of the United States, in particular from the Seattle area.

Another recent trend which has affected the processing sector of the Unalaska economy is the movement of several processors from Unalaska to Akutan. There were about 13 processors in Akutan in 1981, most of which chose that location over Unalaska, and many of which moved from Unalaska to Akutan. This is of concern to local businessmen and politicians alike. The motives for this move have already been discussed in the section on relations with neighboring communities.

Akutan does not have readily available land suitable for shore-based operations to the extent that Unalaska has and lacks the capacity for transportation of processed seafood products. However, Akutan has been selected by the Army Corps of Engineers as one of four locations in the Aleutians suitable for harbor and channel improvements designed to encourage development of a groundfish industry.

The control by the Unalaska Corporation of most of the land in the community has meant that a few of the processors have had to lease land from the Corporation in order to operate. One of the reasons Unisea has been able to maintain a large presence and high profit level in Unalaska is that it actually owns the property on which it is located. They were able to acquire three General Services Administration parcels purchased prior to the passage of ANCSA which total 29 acres, and in this respect are favorably situated compared to most other processors in town. East Point, Pac Pearl, and Sea Alaska also own some land in town, and have been able to survive without a great deal of interaction with the Corporation.

A final trend of great importance in the last few years has been the unionization of the processing and transportation-related workers. Most of the processors in town now run union shops. Sea Alaska and the Royal Sea and Royal Venture of Pan Alaska have been in the International Longshoremen and Warehousemen's Union for some time. In March of 1981 the current organization, the Inland Boatmen's Union, came into being with the elections at American President Lines (the IBU is essentially the marine division of the ILWU). Now the Union is at Crowley Maritime, and a majority of the employees at Sea Land are members. The union does not have jurisdiction of the dock yet, but elections are soon to be held

there. It is necessary to have 30% of the employees with cards to hold an election, and if there is more than 50% the union can negotiate directly or strike for recognition. A strike, however, is unlikely, as every other Sea Land facility on the West Coast is union. However, all is not smooth sailing. Just last year the union lost an election at Pan Alaska. PA fired, and wouldn't rehire, the two organizers. Even if they are forced to rehire the employees, the local organizer feels that the company gains in its intimidation of the other workers. The union organizer also says that the company threatened to cut loose the Filipinos who are in Unalaska on work permits if they participated in the unionization action.

The next step contemplated is an attempt to organize the engineers and related personnel. The long range goal of the union is to organize all the processing workers in town, and any of the workers who have to do with transportation and processing. The people who work on the oil support ships are also a target. Right now they are getting relatively low pay, only \$65 a day for very dangerous work. Under the IBU they would get \$132 a day as a deckhand and earn five hours vacation time for every eight hours worked. Wages in Unalaska have increased markedly already as a result of unionization. For example, APL used to pay \$7.50 an hour before it was unionized. Now the pay is \$18.60 plus medical, dental, optical, retirement, vacation, and holiday pay. Holiday pay is time and a half or two and a half plus a straight time bonus later. Overtime pay is received after six hours, that is the first six hours between 8 a.m. and 6 p.m. The union and company also jointly retain an arbitrator twenty-four hours a day so it usually takes two days or less to settle a grievance.

2.2.1.1.3 Entrepreneurial Activity

Local entrepreneurial activity in Unalaska can be divided into small scale and large scale enterprises. The explosive growth of the town in the last decade has meant that population has rapidly outstripped services and support facilities. Such facilities are only now beginning to catch up with this rapid population growth. There has therefore been a proliferation of small scale enterprises in the last few years. Large scale enterprises have been in town in some cases for considerably longer than the last decade, but even they have been greatly expanded and have adopted new and more modern business practices and techniques in an attempt to cope with rapid growth.

Small-scale entrepreneurial activity of a local nature is beginning to grow as the need for support industries has grown. The period of the crab boom, and the time since, has seen a major expansion of small local businesses. There is now a garage in town, as well as a laundromat and a drycleaners. A branch of the Alaska State Bank opened in 1979, and there are now cab companies, several construction companies, marine supply companies, and so on. In general the town has come firmly into the modern consumer/credit economy, and people now have checkbooks, credit cards, and all the accoutrements of that society.

The growth in population has meant a need for new building, and several contracting companies have emerged in the last few years. Marine Construction and Engineering Company was started three years ago, and is

primarily in the contracting business. This was the first professional contractor in town. The company now employs a total of sixteen workers. The company has 36 pieces of machinery, and is also involved in sale of gravel, concrete aggregate, and road topping. They also do some transfer of material, move some cargo, and handle and stack crab pots. As in many other areas of the economy of Unalaska, it is difficult to survive as a specialist and diversification is the rule of the day.

In the time since Marine Construction and Engineering began operations, three other licensed contractors have set up business in town, and among them they employ a total of approximately fifteen workers. There are also several unlicensed individuals who do general contracting and related work. The major construction project at this time is the renovation and conversion of the sub dock to a drydock for small and medium sized ships. In the past some of the major projects have been housing and apartment construction, dock facilities (such as the American President Lines dock), and the Ounalashka Corporation is now completing plans for the construction of a full service gas station and garage. All of the construction companies in town look forward to the possibility of oil development in the region and express the belief that it will mean a good deal of business for them.

Northwest Marine Instruments was established in 1979 and is involved in electronics repair and supply. The company employs between three and four people. It is based in Unalaska for nine months of the year and in the Bristol Bay area for three months. Dutch Harbor Divers is another small scale business which is basically support for the fishing and processing industry. Their major business is underwater construction and vessel repair. A related business is Aleutian Explosive Services. One of the major marine service and repair businesses in town is Magone Marine. They are heavily involved in the construction of the drydock going in on the site of the World War Two sub dock. Another support activity is the Aleutian Marine Pilots Association which brings ships in and out of the port of Unalaska.

Several smaller support businesses were begun by fishermen who found themselves earning too much money during the crab boom and who needed another business for tax purposes. This was the case with the individuals who began the Alpha Cab Company, one of two now operating in town (the maximum allowed by the city council). This company was established two years ago and has three cabs, one for daytime, one for night, and one backup. (Fares are five dollars, except to Captains Bay and Sea Alaska which costs six dollars).

The Ounalashka Corporation has also embarked on some small scale enterprises. They have formed Unmaknak, a company which rents trucks and equipment. They have also recently received exclusive dealership rights for a Chevron service station (there is currently no adequate service station in town). The laundromat referred to above was built by the Corporation on Standard Oil Hill, and has been the focus of some controversy.

Large scale local entrepreneurial efforts are spearheaded by the major local retailers. These include Carlfs Commercial, Alaskan Commercial, Aleutian Mercantile, and the Unisea complex. Carl's Commercial is a

major retailer in the community, located on the Unalaska side. Carls consists of a store and motel complex. The motel has 13 units. Carls has dry goods, groceries, liquor and general merchandise. They also are the major supplier of fuel oil to the community and sell between 300 and 400,000 gallons per year. According to the manager, however, that figure has declined some in the last few years, probably in response to the decline in the crab fishery. A large proportion of Carl's business is in supplying fishing vessels and summer oil research vessels. Oil development has already had a dramatic effect in terms of supplies needed by the seismic and exploration crews working in the Bering Sea. Carl's has received several rush orders for thousands of dollars worth of groceries and supplies from oil related businesses in the last few years. However, local retail business provides the day to day income of the business. The manager of Carl's estimates that oil business is now worth approximately a million dollars a year for his store alone.

With the growth of the community and its businesses has come increasing efficiency and professionalism in business practices. For example, until recently Carl's had a large backlog of accounts due, and there was little coherence to the bookkeeping and financial management. However, this has been rectified in the last couple of years. Much of this can be traced to the present manager who increased business by 25% in the first quarter of his tenure. This was achieved through more efficient management of inventory. Previously there were no distinctions among the various kinds of sale, and all receipts went into one bag. This manager divided operations into the motel, liquor, fuel, groceries, hardware, and so on, that is, he established departments. Now each department is responsible for balancing its own stock and sales, and the entire operation is much more efficient than before. Carl's has also eliminated personal credit. In a discussion with the current manager he said that the town is now cosmopolitan enough that there are credit cards, a bank, and checking accounts available. One doesn't really need personal credit anymore.

This transition to a consumer society is by no means total, however. Though it is true there is now a bank in town it is still not a full service facility. All loans in the Unalaska branch must be handled through Anchorage. This means long delays. It is hard to do business, even though things have improved, because there is no resident inspector or surveyor, yet all building must still comply with all state and federal regulations. The bank did finance much of the Standard Oil Hill housing rehabilitation project of the Ounalashka Corporation as well as some other small housing developments but its role in the overall development of the community appears to have been minor.

Alaska Commercial is another major retailer in town. It is located in the Unisea Mall on Amaknak Island (we will discuss the mall in detail below). It was opened just a few years ago and has done well, though their gross is not as large as Carl's. The presence of the AC is generally welcomed by the consumers in town because it means there is more competition and prices don't fluctuate as widely as they seemed to in the past.

The Aleutian Mercantile is a third major retailer. AM has in the past acted as a caretaker for the community through extending longterm credit

to permanent community members. Most of these customers are Aleut as the store is in downtown Unalaska, and at present the store is carrying between seventy and eighty thousand dollars in credit on its books. The owner has written off thousands of dollars which he feels is uncollectable.

Most of the major retailers in town bring in their own goods rather than rely on Sea Land or American President Lines (these are discussed below). As in much of Alaska, the stores register their own ships as "fisheries" to avoid tariffs. For example, Carl's has its ships registered as "Pacific Fisheries", Alaska Commercial has their own registry, as does Aleutian Mercantile. Most of them bring their cargo in at the APL dock.

Another major commercial enterprise in town is owned and operated by Universal Seafoods. In addition to their processing operations, Unisea also runs several retail and commercial outlets in town. Unisea owns the Unisea Inn which was built in 1978 and has been expanded several times since. The Inn originally had only ten rooms and a gym. Two years later the gym was converted into twelve additional rooms. By 1982 there were a total of 46 units. Part of the building is devoted to a bar, and part to a restaurant. The Unisea tends to cater to the fishermen and processing crowd. It has been a very successful operation. Even during the off-season occupancy rates have been over 90%, and it is difficult to find a room without a reservation during fishing season.

The Unisea Mall was completed in March of 1980 and has been completely leased to businesses. Paradoxically, the inn and mall were originally conceived as support structures for the major Unisea income generators, the processors. However, with the downturn in crab in the last few years the mall and inn have eclipsed the processors as the main income generators.

The Ounalashka Corporation is involved in a project which will give Unalaska the capability to repair boats in drydock for the first time. This involves refitting the World War Two sub-dock to act as a drydock for small boats. Even so, most boats will probably continue to go to Seattle for major work and resupply because things are cheaper and more readily available there. The facility will be operated by Panama Marine, Ltd., a subsidiary of the Aleut Corporation.

This completes our discussion of the basic entrepreneurial sector of Unalaska. This sector has emerged with particular strength in the last decade, and this rapid emergence has meant the development of several problems which remain unresolved. There are several issues which emerged in discussions with businessmen in Unalaska which they feel affect, or will affect, the possibilities for commercial and industrial expansion in the future.

The isolation of the community has also presented problems, both for older established businesses and for the emerging support industries. The slowness and unreliability of deliveries to Unalaska from the rest of the state and nation means that a great deal of space must be devoted to warehousing and the maintenance of sufficient inventories. Carl's actually has more space devoted to warehouse than to retail space. The

presence of American President Lines is seen as potentially of great importance to business. Realistically local businessmen say one could have a seven day order from Seattle to Unalaska, from order to delivery. Foss Alaska, the major shipping line for goods coming into the community, now takes up to 34 days.

The presence of a Native corporation has also caused some conflicts. There is a general feeling among many of the businessmen and would-be businessmen, in Unalaska that the Ounalashka Corporation, whether by accident or plan, has stood in the way of the commercial development of the area. Most complain particularly about the shortage of land, which as resulted primarily from the conveyance of ANCSA land to the Corporation. Most feel the Corporation tries to lease or sell land at too high a price, or that they simply refuse to lease or sell it at all. Others note that the leaders of the Corporation are not trained or experienced as businessmen and are slow or unable to take advantage of available opportunities. Most of the businessmen in town feel that if the Corporation had more enlightened leadership it would be doing much better than it is, and other businesses would be doing better as well. As it is they feel the Corporation is cutting off its nose to spite its face. Another point raised is that the members of the board are elected, so it is more a measure of personality than of business ability which leads to control.

Another factor which has influenced, and will continue to influence, the rate of industrial and entrepreneurial expansion of the community is the availability of power. We have covered the problems of the electrical system elsewhere. Another factor important here is the potential for the development of geothermal power. If cheap geothermal power became available most local businessmen agree it would be a major spur to local industrial growth. According to Republic Geothermal officials there are only four or five areas in Alaska which look promising for the development of geothermal power, and Unalaska is the only one which has a market readily accessible to it. It is unlikely, however, that even with additional power resources, that manufacturing industries other than those directly tied to the commercial fisheries will develop in Unalaska for reasons to be addressed in the scenario projections.

Most local businessmen also voice the opinion that it is difficult to get motivated help. The depth of the workforce is so shallow that there are not enough good workers to go around. Nonetheless, several people feel the situation has improved in the last few years and will continue to improve. Universally businessmen note that alcoholism and absenteeism are major problems, and several noted that many employees hold jobs in Unalaska under circumstances which would rapidly lead to their termination anywhere in the "lower forty-eight". One result of this is the tendency for outside help to be brought in for almost every project. Thus, the last few years have seen an increase in construction activity and economic activity in general, but it has not resulted in any perceptible increases in the hiring of local help.

One possible area of entrepreneurial activity which is not currently being pursued but which might be appropriate to Unalaska was mentioned by the former local representative to the Alaska State Legislature. This is the raising of cattle and/or sheep. He felt that such an

industry could develop alongside the development of a bottomfish industry, and that both would benefit greatly from, and perhaps help instigate, a cold storage facility. One problem has been the reluctance of people to live the isolated life necessitated by large scale ranching. There was a major ranch at Chernofski, but it was run by a single family and ultimately the children left rather than take over the family business. Problems with ANCSA lands have also hurt this ranch, and ANCSA land selections were the immediate cause of the termination of production on another ranch formerly operated in Unalaska Valley.

2.2.1.1.4 Alternative Employment

Alternative employment includes employment by outside governmental agencies, federal and state, municipal government, and external commercial agencies. In this section we will not discuss federal and state employment, as these areas are covered extensively in the section on political structure. Municipal government is also covered in that section; however, we will discuss here the major political functionaries of the community and the salary structure of the municipal government. Other aspects of municipal employment are covered under political structure. Finally, we will discuss the major external commercial agencies and their employment patterns in Unalaska.

In recent years, with the crab boom and attendant growth, there has been an explosive growth in city government, particularly in the police department. Whereas the city had only one police officer in the late 1960s, today there are sixteen. These officers are now referred to as Public Safety Officers, and are trained in firefighting techniques, lifesaving techniques, and diving search and rescue. There has been considerable controversy in the community over whether such a major expansion was necessary.

None of the councilmen are salaried, nor is the mayor. The effective political power in town is in the hands of the major salaried official, the city manager. The city manager makes approximately \$60,000 per year, although the salary is set by contract. In fact, the issue of salaries for city officials has also been a point of contention in the last few years as these salaries have risen considerably. The Administration of the City of Unalaska, however, considers that the salary range for each administrative position is consistent with prevailing compensation patterns in both private and public sectors in the community. The following table presents the salaries of the major city officials.

Table 14

Administrative Salaries of Community of Unalaska

<i>Official</i>	<i>Salary</i>	<i>Salary Range</i>
City Manager	\$59,192.40 + \$12,000.00 Housing/Util. + 660.00 Travel \$71,852.40 Total	By contract
Director of Finance and Administration	\$44,501.00 + 2,640.00 Travel \$47,141.00 Total	\$45,795-64,005
Police Chief	\$51,107.00 + 2,310.04 Travel \$53,417.04 Total	\$40,824-57,318
Director of Public Works	\$51,107.00 + 2,310.04 Travel \$53,417.04 Total	\$40,824-57,318
City Planner	\$52,214.00 + 1,320.00 Travel \$53,534.00 Total	\$37,442-52,541
Director of Parks, Culture, and Recreation	NA	\$36,742-51,586

These figures are taken from a survey done by the Committee for Responsive Government and the salary ranges were provided by City Planner. It must be kept in mind, however, that non-salary benefits such as the employee travel allowance and, in the case of the city manager, housing, are in-kind and not in cash. Recently there was a proposal to change the classification system and salary structure, causing a good deal of controversy in the community. This proposal was abandoned, however. (For a more detailed picture of municipal government see the political structure section).

2.2.1.1.5 External Commercial Agencies

The status of Unalaska as the major Aleutian deepwater port, and as a major transshipment facility has resulted in the stationing of several major outside commercial agencies in town. The most important of these are the shipping companies, the commercial air carriers, and energy related companies. The latter, in particular, are in the process of expanding operations in the community as activity in the Bering Sea oilfields accelerates.

There are several major shipping companies represented in Unalaska. Sea Land has been in Unalaska for ten years. Their major activity is ship-

ping , most of which is domestic. Their **Unalaska** operations are concentrated on taking out fish and fish products and bringing in whatever is needed (although it must be under 50,000 pounds because that is the capacity of their crane). They bring in goods at \$30 per 100 pounds. Most imports are supplies for the canneries and building and related materials.

Sea Land employs varying numbers of people, with employment peaking during the king crab season when there is most need for their shipping services. During king crab season employment usually consists of four drivers, four longshoremen, a secretary and the manager. During tanner season the four drivers are reduced to two.

While Sea Land is the major domestic shipping company in **Unalaska**, American President Lines is the major international shipper. APL came to **Unalaska** in early 1979 and constructed a major dock facility. Actually the dock was constructed jointly by the regional **Aleut Corporation**, which owns 49% of the facility, and the local corporation, which owns 51% of the facility. The dock is being leased to APL for \$30 million.

APL has six permanent employees. There are approximately 18 to 21 ships involved in operations through **Unalaska**. APL has entered into a joint venture with the **Ounalashka Corporation** which calls for corporation operation of the dock and on and offloading facilities. APL has a long term lease on the land on which the dock is located which is owned by the Corporation. The terms of the lease provide that the land and facilities will revert to the Corporation after the lease, and all extensions, has run its course.

The APL dock additionally serves as a terminal for other shipping which comes through **Unalaska**, notably Foss Alaska Lines, a domestic shipper. Foss carries mostly fish products to the United States. They ship for \$28 per 100 pounds. Foss has been in town for about four years now, and they ship most of the canned salmon which goes out of **Unalaska** (most of the frozen product goes out on APL). They do almost eighty loads every three weeks during season. The incipient development of the groundfishery has already had economic ramifications for Foss. They move a lot of salt, used for salting cod, now. They ship salted cod out of **Akutan** and **Unalaska**. With "superbag" salt the processors use about one pound of salt to one pound of fish. Of the seventy-eight loads (containers) Foss was expecting at the end of August, 1982, thirty-two were salt. In the two trips previous to that over 1.2 million pounds of salt was delivered to the Sea Pro (the major cod processor in **Unalaska**). Despite this level of activity, however, Foss recently closed their operation in **Unalaska** after having lost a contract to supply the Naval Air Station at Adak.

A shipping run to Tokyo takes six days. Freight costs are very high in **Unalaska**, and it is actually cheaper to ship from Japan to Seattle than from **Unalaska** to Seattle. This is due to the economies of containership operation between Japan and Seattle as opposed to the container/barge operations which link **Unalaska** with Seattle. Current shipping prices for crab are 12 cents a pound to Seattle and 15 cents a pound to Japan. APL is proscribed from shipping to the United States because it is a subsidized carrier. However, they are currently attempting to convince the government that the Aleutians should be in the same legal category as

Hawaii and Puerto Rico. This would allow an Alaskan bound shipper to be subsidized and move domestic cargo simultaneously (Hawaii and Puerto Rico have such status as a result of the Jones Act of 1936).

Shipping peaked during the period of the crab boom, and has declined since. However, most feel that this decline will not continue. The head of the local Sea Land operation, for example, feels that shipping will never regain the level of the crab peaks, but that it will stabilize at a slightly lower level. Others feel this is likely as well, particularly if oil development occurs. There is a general feeling that oil development will not be subject to the wide fluctuations and cyclicity of the fishing industry.

Air transport is another area in which external commercial agencies are represented in Unalaska. However, the level of air service, both passenger and freight, has been constricted by the lack of satisfactory airport facilities.

Reeve Aleutian Airways is the major commercial agency in air transportation sector. Reeve runs the airport and operates flights in and out of Dutch Harbor/Unalaska. Reeve was joined as a regular commercial passenger carrier in the fall of 1978 by Air Pac. Air Pac carries both passengers and freight, as does Reeve. The main route is from Dutch Harbor/Unalaska to Anchorage. There is also Grumann Goose service to Akutan and the outlying islands, but it is strictly on a charter basis. They have a couple of employees in town, but it is hard to say exactly how many since they are shifted between town and Anchorage.

Another group of external agencies which is becoming increasingly important is the oil companies. The possibility of oil related development is widely recognized throughout the Aleutians, and in Unalaska in particular. However, this is not mere speculation. There have already been clear effects of oil related activity in several areas of the community's economic life. We have already noted the increased trade for the retail businesses in terms of provision of food and other supplies to the seismic boats operating in the area. Locals estimate that there are at least thirty seismic boats in the general region, and many feel that this will be a larger find than the North Slope, even though there is little evidence to date that oil even exists in the region.

Chevron has had a facility in town for about thirty years, which is the resupply point for almost everything north of the island. The facility supplies jet fuel and aviation gas, gasoline, ship fuel, and diesel for the town. There is a storage capacity of 13 million gallons, and about 75 million gallons go through the facility every year. Chevron sells fuel to fishing boats for \$1.083 per gallon. They sell gasoline for \$1.193 a gallon. They currently have five employees.

There are several oil companies, including ARCO, Shell, EXXON, and several others, which have operations out of Unalaska conducting studies of the lease areas. They have been discreetly attempting to find land in Unalaska. Offshore Systems, Inc. has leased land by Captain's Bay from an individual who owns the property as a native allotment administered by the Bureau of Indian Affairs. OS1 is now constructing a support base on the property which will be leased to ARCO. Exxon has also

leased a site from the **Ounalashka Corporation** on the Dutch Harbor waterfront.

If oil development comes to the region it is possible that **Unalaska** may be chosen as the site of storage and/or refining facilities. This again depends on several factors, not the least of which is the availability of sufficient and cheap energy. The geothermal project currently being developed could aid greatly in this area, serving as a source of abundant and relatively cheap energy.

2.2.1.1.6 Marketplace Relations

Unalaska's economy and economic structure is strongly linked with the external economic structure of the region, state, nation, and world. **Products, particularly fishery related, go out of the town bound for the west coast, the Orient, and other points even further removed. Most of the income which is earned in the community is not spent in the town itself but is destined for other locales around the country and world. This has been a major complaint of locals for some time. Very little of the money earned in the community actually redounds to the town's benefit. This is known locally as the "rape and run" syndrome, and is particularly characteristic of the fishing and processing community.**

Very few of the needs of the people of **Unalaska** are supplied from products produced within the community. Almost all food, dry goods, household goods, business needs, and so on are imported. Thus, the community is closely linked to the outside economic world, but the link is an expensive one. People pay very high prices for the necessities of life. Though there is a fair amount of subsistence activity, most daily needs are filled by imports. Thus far the local business sector has been more oriented to support for the fishing industry rather than to local production of necessities per se. Since 1980, however, there has been a discernible trend for the fishing industry to rely upon the local economy for goods and services rather than to continue being self-supplied.

We have already discussed the major means by which goods are brought into the community. The major shipping lines handle by far the majority of imports, although some is brought in by the air carriers as well. The local retailers stock themselves almost totally from outside, and the time and distance involved has resulted in necessarily inefficient warehousing and inventory maintenance strategies, which has led to even higher prices for the local consumer. This is the major distribution problem to be confronted by the city in the future.

One suggestion which has gained currency in the last few years is the establishment of **Unalaska** as a Foreign Trade Zone. Although the idea was originally proposed for the purpose of providing for the operation of a bonded warehouse at the **Unalaska Cargo Dock**, the FTZ status could have profound effects on **Unalaska** as a marketplace. One of the movers behind the idea is the head of the local **International Longshoremen's and Warehousemen's Union**, which is the major union for the processors and shippers in town. He argues that the FTZ would allow transshipment of goods without paying taxes or tariffs. It is legally an extension of international waters to inland waters. If goods are eventually shipped

to the United States then taxes are paid at the time they officially enter the country. If foreign caught fish were brought into Unalaska unprocessed then processed here and shipped to the U.S., the tariff would only have to be paid on the raw fish. That would drastically change the economics of the groundfishery.

There have also been some concerted attempts in the past to have Unalaska declared an official Port of Entry, which would result in some of the same advantages as being declared a Foreign Trade Zone. However, federal law has recently been changed to require that any Port of Entry have a population of at least 300,000. The City of Unalaska submitted an application in March, 1982 to the Regional Commissioner of Customs for Port of Entry status which was unsuccessful. But it is not necessary to be a Port of Entry to have a Foreign Trade Zone, so this is the angle of attack now being pursued. With the FTZ there is no expenditure of government funds. Private industry pays for the customs agents and other personnel needed as part of the cost of doing business (interestingly, this is the only example of the payment of public officials by private funds allowed under U.S. law).

One recent change in the community which has had major influence on distribution and consumption patterns is the construction of the bridge from Amaknak Island to Unalaska. Residents of Unalaska now frequent stores on the Amaknak Island side much more often than before, and competition has increased between the two sides for the consumer.

2.2.1.2 Subsistence

Subsistence in Alaska refers to local resources which are harvested by local people. Traditionally, Aleuts have relied on marine resources for subsistence. Salmon provided the bulk of the Aleut diet, followed by seals and sea lions, mussels, clams and sea urchins. Gull eggs were gathered; ducks and geese were hunted, fox were trapped, and various forms of vegetation, including berries and wild celery, were gathered and consumed.

There were two periods of change in subsistence patterns among the residents of Unalaska. Following World War Two, during the period of Unalaska's depression, patterns changed to greater dependence on subsistence items, in particular salmon. People in Unalaska harvested salmon and exchanged it with people in the Pribilofs for seal. This pattern lasted until the 1960s when the fisheries began to play an important part in the Unalaska economy. As the fisheries developed, and particularly during the crab boom of the seventies, dependence on subsistence items, and utilization of them, began to decline.

Today subsistence activities continue, though in altered form. In the 50s and 60s people still prepared sea lion stomachs for storage, and "manufactured" some needed articles out of seal gut. No one does this any more. Clams are harvested, but are disappearing. Sea eggs (urchins) and bidarkis (chitons) are eaten. Crabs are gathered when they are near to shore and the tide is low. Salmon and halibut are popular, as is cod, which is a year round fish. Blueberries, mossberries and salmonberries are gathered. No one gathers eggs anymore, at least they don't discuss it as it is illegal for many species. Seal and sea lions are

used occasionally. Other than berries, plants are not much used. Medicinal plants reportedly were used quite frequently until the late 60s, though their use is infrequent now. Pootchky (wild celery) is eaten, mostly by children, and petruskies (a type of herb) are widely used for seasoning. They are boiled with fish, dried, frozen, and put in peru (fish pie). Bird hunting is still done, mostly for ducks and geese, but just how much is unclear.

For the most part, subsistence activity does not rely heavily upon modern-day methods of transportation, with the exception of motor-powered skiffs. Occasionally, four-wheel drive vehicles are used to reach remote locations on Unalaska Island for subsistence activities or a private airplane may be used to travel to other areas, such as the Alaska Peninsula, to hunt for caribou, but the use of these forms of transportation is relatively infrequent. As most of the activity occurs within the immediate vicinity, transportation is **not** a major component of subsistence.

In the last five years a problem of increasing incidents of illegal subsistence activity has developed in Unalaska. The major problems include people who "snag" salmon (hooking them illegally through their bodies using rod and reel and oversized hooks with no bait) and take fish with unmarked gill nets. To snag a fish, one simply casts over an area of the stream where the fish are running and drags the line back to the shore, trying to hook the fish in the process. Unmarked gill nets are used by people who have been apprehended or fined before for fishing illegally and who don't want to be identified if their nets are found again.

One thing which may have contributed to the increase in illegally taken fish is the recent **reduction** in the number of subsistence fish allowed by the state. Prior to 1982 an individual could get subsistence salmon permits for 250 fish. This was reduced to seventy-five fish in 1982. The reaction has been heated in many cases. Additional subsistence permits are issued, however, to permanent residents who are clearly in need of the resource. The permits have been abused in the past, primarily, it appears, by processing workers. These individuals would catch their **limit** of 250 fish and have them sent to the lower forty-eight where they sold them. However, according to the regulations the fish caught are supposed to be for personal use. Overfishing of major subsistence areas has been a problem as well, and contributed to the reduction in the number of subsistence salmon allowed. Overfishing led to the closure of Margarets Bay. There were simply too many nets and the spawning population was being threatened.

Aleuts in Unalaska maintain that subsistence continues today, but for different reasons than in the past. With the "Anglicization" of the community the Aleuts became, for the first time, a minority. This was a threatening situation, and one of the responses has been to reaffirm the Aleut identity and the traditional value system on which that identity is based whenever possible. Subsistence activities are an important part of this reaffirmation. Several of the Aleuts said it made them "feel good" to eat "Aleut food" or engage in Aleut crafts. Different people use different subsistence activities for the same end. Thus sealing or duck hunting or even fishing may be done not so much out of a

need for the resource as out of a need for the activity itself.

Subsistence activity among Aleuts in Unalaska is also representative of competing values systems in the community and the role of the Aleut in the non-Native economy. As noted above, subsistence activities were an inextricable part of the traditional value system. While certain aspects of subsistence activities, notably the social exchange of subsistence items among Aleuts and the affirmation of Aleut identity, continue to reinforce the traditional value system, these activities also constitute a set of social boundaries distinguishing ethnic groups within the community. The continued use on subsistence items for food and the affirmation of ethnic identity by Aleuts in Unalaska is indicative of their limited involvement in the non-Native, cash-based economy, although, as noted earlier, there are few if any Aleuts who are not involved in this economy in one form or another, usually as consumers. While this limited economic activity may reinforce the overall socioeconomic position of the Aleuts vis-a-vis the non-Native population of Unalaska, it also represents a mode of adaptation to the fluctuations and relative insecurity which has characterized the Unalaska cash-based economy in the past. The increase in illegal subsistence activities also represents a type of reaction to certain aspects of the modern value system, particularly the importance of rules and regulations which are perceived as restricting the adaptive value of these activities. Thus, while not a conscious attempt to violate the law, illegal subsistence may be as much a form of "reference group alienation" (Berreman, 1964) as it is a response to certain economic needs.

Hunting is not a major activity on Unalaska Island as there are no large terrestrial species which could serve as a source of food. Trapping, however, does occur. The island has a fairly large population of fox, mostly red fox, as a result of attempts in the early part of the century to establish a trapping industry, noted earlier. There are still substantial numbers of fox present and trapping seems to be making a modest comeback.

There are currently, according to one local who traps frequently, about four parties of men who trap on the island. Trappers work in parties of from two to four men each. The only trapping done now is for fox. There is no limit on fox, and the trapping is fairly lucrative. This individual was able to get 30 fox last year in 3 weeks work in Captain's Bay. He says that trapping has been picking up the last three years. Hides bring around \$100 in Unalaska, although "down south" they only bring about \$40.

An advantage of the general lack of trapping for several decades is that the foxes are not particularly man-shy. They will often walk right up to the trapper. Most of those trapping do so as an income supplement.

2.2.1.3 Non-Labor Force

Unalaska has a relatively small non-labor force. The nature of the community as isolated and dominated by processing and fishing means that few people come to town without previous arrangement, and it is equally difficult for someone to stay in town without gainful employment of some kind. This is somewhat less true for the Aleut population than for the

outsiders, but even here unemployment appears to be as much a matter of choice as of necessity.

There is a legal services fee agent in town who helps with applications for foodstamps, taxes, welfare, and so on. There is relatively little unemployment in Unalaska. Few people come to town looking for work; almost everyone comes to town with a job already contracted or promised. There is a Job Service Office in the Unisea Mall. According to the worker there unemployment is seasonal, and is highest during the fall and winter unless the individual has specific job skills. In the first two weeks the office was open this year (it was closed from mid-May to mid-August, 1982) there were six unemployment claims, and there were several as well that were handled by mail during the time that the office was closed. Nonetheless, it is the opinion of almost everyone in town that employment is always available if it is genuinely desired.

2.2.1.4 Oil-related Development

Mineral development has already had an effect on the community of Unalaska. We will briefly discuss below the growth of the transient fleet of seismic vessels visiting Unalaska, and the effect of local and external expectations regarding OCS development on local land speculation and on local planning and zoning (e.g., in efforts to obtain funds for the city dock, airport, school, and other facilities). To one degree or another almost every major decision facing Unalaska today involves consideration of this projected development. While groundfishery projections have until very recently been seen as the likely source of future support for the Unalaska economy, given the short term demise and dim long term prospects of the crab fishery, oil development is now coming to be seen as a significant future support for the community, at least in the short term. We discuss the likely consequences of a continuation of trends related to development of the OCS in our third alternative scenario in this volume. For purposes here we focus primarily on the role of such activities in Unalaska today.

The City of Unalaska, after having enjoyed several years of boom crab fishery returns, which resulted in a very high tax base (relative to population), and associated rapid population growth is now in the process of retrenchment. The pressing economic issue has become "How can we make the most out of a declining economic resource base?" This involves careful consideration and scrutinization of the relatively high administrative overhead and the priorities of the community, including the city government, the department of public safety, the department of public works, and the level of community services. Although these problems are discussed at length elsewhere in this report, they are noted here in the context of oil development because part of the argument used to support maintenance of current levels of administration and services involves the anticipated effect of projected oil-related development in Unalaska. We note, however, that the fiscal effects of the recent crab decline on city revenues should not be overemphasized. According to the City Planner, the fiscal year 1984 budget includes \$14.6 million, of which \$3,693,962 are included in the General Fund portion which is derived primarily from fish revenue. While revenue in this fund is has dropped

only \$150,000 since the FY83 budget, the long term consequences on indirect taxes on processing facilities may be very significant if processors **elect** to depart the community or to resist increases in their tax rates.

While the **city's** position is that fixed sources of revenue (i.e., local property tax, federal revenue sharing, etc.) **will allow** for continued slow growth in the community for the next 3-5 years, this flexibility **could** conceivably be restricted by several factors. First, most local leaders take for granted several more years of minimal crab harvests which will dramatically reduce income from the **city's** share of the State of Alaska's fish tax. These harvests may be even smaller than **currently** forecast. Second, we can foresee some difficulty in the city collecting property taxes from the processors. Their taxes have increased markedly in the last two years as a result of **an** increase in assessed value of the processor-owned property. **While** these firms are not expected to default, we have noted in similar lean circumstances in other communities a tendency for processors to postpone, negotiate, and, in other ways attempt to avoid **timely** payment of taxes. Third, the generally restricted capital markets, and the current economic position of the State of Alaska, along with **other** factors, combine to make it difficult to float bond issues or in other ways generate capital for **local** projects. With the tenuous nature of funding sources for projected budgets of Unalaska, administrative and service cutbacks are expected to be required within the next year or two.

It is within this fiscal context that the leadership of Unalaska has begun to consider both detrimental and beneficial aspects of projected OCS development. We emphasize that it will be those in decision-making positions or those with commercial interests and **not** the average fisherman, processor employee, or short-term resident who will be most concerned with the financial ramifications of oil development at these **early** stages. Almost invariably, **it is** only **after** actual effects of development felt to be detrimental are evident that significant numbers of average citizens **will** take a position, but by then, of course, it is too late to avoid those effects. We cite as an example the OCS Scoping session held in Unalaska during our research. The OCS staff made what seem to be extraordinary efforts of planning and advance canvassing to assure participation (including hundreds of letters, phone calls, and other technical arrangements). The result was a disappointing turn out the night of the meeting: only two or three actual residents remained for the entire session. This, unfortunately, was predictable. In general, individuals cannot be meaningfully brought into a decision-making process when they (1) do not understand what is being considered, (2) do **not** see any immediate relevance to the discussion, and/or (3) do not feel their **input** can possibly affect the process. There is a nearly universal feeling in Unalaska among those who are, at least mildly concerned with trying to control development and growth in the community that the **whole** process of oil-development is predetermined, fixed, and cannot in any way be altered by "the people."*

Individual's opinions on the subject also vary according to their structural position in the community. Leaders and entrepreneurs are likely to view development in positive or necessary terms while Aleut residents, many long-term residents, and recent immigrants are likely to be

opposed to such activity. It is clear that those individuals who can see no direct benefits arising from oil development will not be favorably inclined toward, or may, in fact, be opposed to such development while the obverse is true as well.

If there is a position that is considered universal in Unalaska it is that oil development cannot be considered as a long term solution to the problems of the community and for this reason such development is viewed with caution. Bottomfishery development, on the other hand, is seen as a long-term solution and most feel that such development should be encouraged. Nevertheless, the absence of significant local development in this area and the generally ambivalent attitude of local processors toward the likelihood of imminent development of this fishery, has tended to enhance positive attitudes toward oil. Many now agree that given the marked decline in the crab fishery, and the seeming failure to progress in the groundfishery, that if community expectations regarding local development in relation to mineral development and expectations of new monies generated by oil development are not met, then the city will be "in a bad way" economically.

The current economy of Unalaska is in a transitional period. Over the last decade, it has been dominated by the crab fishery. It was crab that brought this community into economic prominence and made Unalaska the number one fishing port in the United States in terms of value of product landed in 1979. The crab fishery generated the capital, the employment, and the industry that spurred a 400% population increase in less than a decade. During the last three years, the physical resource on which this growth was based, has virtually collapsed, dropping from 130,000,000 lbs landed in 1979 to an anticipated 30,000,000 pounds in 1982, affecting every commercial, governmental, and private entity in the area. During this same period the community experienced the incipient growth of activities related to oil exploration and development. These activities included leasing land, establishing contractual relations with local suppliers of fuel, the purchase of equipment and supplies, the letting of transport contracts, etc. During this period there was also the beginning of various public relations activities such as community presentations on the benefits of oil development, attendance of oil representatives at all appropriate community discussions, and a generally concerted effort on their part to assure that personnel employed by the exploration companies have a minimal contact with the local population, thus avoiding any negative social effects or impressions which might affect their future activities. This activity is just beginning to become significant as far as the community is concerned, and has become the focus for some concern.

Still in the future is the third aspect of Unalaska economic development: The much hoped for and anticipated development of the groundfishery. As noted in this report, the projections of the University of Alaska Sea Grant program and E.R. Combs, Inc., have been very instrumental in altering the way Unalaska has prepared for the future. The primary reason cited in every request for State or Federal funding (for the city dock, clinic, airport, and school, among other projects) over the last two years has been the dramatic population and economic growth projected to result from groundfishery development. Thus, while there have actually been little direct effects of such development to date

(i.e., well into the projection periods of these two reports only Sea Pro has attempted commercial production of **groundfish**, and this attempt faces major structural impediments) these published reports themselves have had substantial effects. As directed by the contract, we will include in our draft final report our assessment of the role and character of a specified level of groundfishery development on the community of **Unalaska**. We note here, however, that while there is little question that future development of the Bering Sea **groundfishery** resource will have significant effects on the community of **Unalaska** (the direction of which will of course depend upon the way the fishery develops, such as where in the region it will be based and what percentage of the catch ultimately ends up in shore-based processing plants among other factors), they have yet to have any widespread direct or concrete influence on the current economy.

Our discussion of the rapid growth and decline of the crab fishery and its influence on the current social, political and economic organization of **Unalaska** is presented elsewhere in this report. Our discussion of the future role of groundfishery development in **Unalaska** was presented earlier under economic structure. We present here an abbreviated discussion of the character and extent of the effects of recent activities related to Bering Sea mineral development on **Unalaska**.

The effects of recent oil exploration activities and incipient oil development-related activities on **Unalaska** can be broken down into direct and indirect consequences. The direct consequences are **predominantly** economic, while indirect effects include political and social effects, as well as indirect economic consequences. Among the direct economic effects we include **local** purchase of supplies and **equipment**, docking fees, **lighterage fees**, vehicle rentals, **fuel** costs, and other expenditures which directly buoy the **local** economy. These have been significant though remarkably unnoticed. We say unnoticed because very few individuals in the community have come regard oil exploration activities as significant. As noted above, **Carl's Commercial**, a **local** equipment supplier, **estimates** that **fully** 1 million dollars of this (1982) year's income resulted from incidental (**since** most of these exploratory vessels come **fully** supplied) and contracted purchases made by oil exploration vessels. There appears to be a potential for additional oil-related employment in the community in the near future. According to several sources, there is to be a dock built in Captains Bay to service and support **oil** seismic and rig support vessels. It is felt that the development companies will attempt to hire **local** labor to build it. At the **present** time, there are approximately 5 **local** long-shoremen that are hired on an intermittent basis to work on the support vessels currently utilizing the **Crowley** dock in Captains Bay.

Indirect economic effects, at this stage, occur mostly as a result of advance preparation (on the part of planners and established enterprises) and speculation (on the part of investors or **potential** entrepreneurs). Both amount to the same thing: taking calculated risks in today's economic environment in order to be in a more advantageous position in the future environment. For city planners this means formulating budgets which attempt to anticipate development needs. The purchase or leasing of land, letting of construction contracts for **water**, **power**, sewage facilities, and many other requirements **must** be met

long in advance to take full advantage of the economic opportunities offered. The bulk of the most recent changes that have occurred in the economic environment of Unalaska have been due to the decline of the crab fishery. The development of this fishery occurred almost overnight and brought with it an accelerated program of facility, service and administrative upgrading that reached a peak only last year. Unfortunately, the boom in the crab fishery which created the perceived demand for these services ended as abruptly as it had begun, leaving the community with a sense of overextension. The size and cost of the police force and city administration have been the first targets of public concern and complaint, but other expenditures are likely to face reduction as well. In a sense, oil development is seen by many community leaders as a "stop-gap" solution to the more long-term problems of the economy.

For commercial enterprises that must anticipate long in advance the needs of petroleum development, for example, Carl's Commercial, Chevron USA, Alaska Commercial, the Unisea restaurant and inn, Crowley Marine, APL, and the local subsidiaries of the Aleut and Unalaska Corporations, among others, hopes for petroleum-related development are second only to the hopes for rapid groundfishery development combined with at least a partial return of the crab fishery as a support for the local commercial economy.¹ Were all three to fail to materialize the viability of these firms would be in question.

How active has oil exploration been? How many vessels and how many transient technical crewmen have actually come into contact with Unalaska? Where do they stay, where do they eat, what do they do in the community? These are some of the issues that must be discussed before an assessment of actual social effects can be made.

Though there was considerable activity in 1976 as the result of test drilling in the St. George basin, 1981 can in some respects be seen as the beginning of the current oil-related activity in Unalaska, both because of the continuous nature of the activity since that time and the changes in the social and economic environment of Unalaska since 1976 which render this a much different situation. During 1981 nine seismic vessels en route to locations to the Bering Sea side of the Chain passed through Unalaska. These vessels typically carry crews of 25 to 35 individuals and remain in Unalaska only long enough to refuel, load equipment, or make necessary repairs. Delays for parts or equipment which must be flown in from Seattle or Texas, however, are frequent. A very subjective, but widely shared, appraisal of average time in port when delays occur is about 3-5 days.

1. It is very doubtful whether local planning efforts in Unalaska really expected the extraordinary population increases projected by the E.R. Combs report. As the City Planner has noted, however, "Local planning efforts have been much more concerned with the ultimate level of population that with the specific year in which particular levels would be reached" (pers. comm., July, 1983).

ARCO established a facility in Captains Bay to supply the vessels that

tend the COST (Continental Offshore Stratigraphic Test) wells operating in the Bering Sea. These wells operate with between 83 and 93 crewmembers of which only three or four are directly employed by ARCO. The rig now active is located about 220 miles from Unalaska or about 16 hours by vessel. About five longshoremen are employed ashore to handle related support vessels and rigs.

The ARCO operation began in March of 1982 and has grown rapidly. The site contains three large, new, and well-equipped trailers that were originally designed to support a much larger crew than is now present. The land is leased from Crowley Maritime. The total crew present at this facility is five plus a crane operator from the local union (#302) of operating engineers out of Anchorage.

Two rig tenders (the Biehl Trader and the Biehl Traveller) are the only oil support vessels that can be claimed to be stationed in Unalaska. These two vessels are part of the ARCO-operated COST well development and are used to supply and support the drilling currently underway. They carry a crew of eleven each and one vessel is always located at the well itself for evacuation or other immediate support activities.

The dominant concern in community relations has been with holding the lowest possible profile in the community. This approach has come from very high levels of authority and is a product of a good understanding of what the most likely impediments to oil development will be: the actual social consequences of the presence of large numbers of petroleum-related employees in the social environment of small communities. For example, local employees are "given to understand" that they should not visit local bars at all, should not participate in local social functions, and should not even spend leisure time in the city. On the other hand, it should be added that many of these individuals, due perhaps to social or occupational background, are not seemingly as prone to rowdy behavior as fishermen and others.

Another example of how efforts to maintain a low profile are effected is the periodic movement of crews to and from the COST rigs. In the words of one local oil employee, "the people here never see them." The old crew arrives via a chartered helicopter, the new crew gets on and takes off while the old crew gets on another waiting chopper and departs. They have little interest in remaining in the community. After the hard work and isolation of the oil rig they just want a flight home. Thus, they have literally no social effect on Unalaska.

The attitude of these outside agents, and the effects of this attitude, must also be taken into consideration. The transient seismic and exploratory crews that have visited Unalaska are, on average, about five years older than their fisherman counterparts. They are predominantly well educated and highly skilled workers. They are fulltime employees with lengthy employment histories and strong oil-related career objectives. The fishermen who come to Unalaska to fish for crab are younger, less educated, primarily concerned with temporary high paid positions--and, while these mostly occur on crab vessels, these individuals would easily shift to another occupation if it paid as well. Fishermen enter the community, after several weeks at sea, with large amounts of cash and with the objective of "having a good time" before they must leave

again. The outside crews of the seismic vessels have much of their pay withheld or sent directly to their families, are not as interested in the local bars, entertainment or "hobnobbing" with the "locals" of Unalaska. Where they choose to go for entertainment, if they go at all, is the relatively formal and "western" Unisea Restaurant and Bar located on Amaknak Island. It is for this reason, as much as any other, that very few people on the Unalaska side are at all familiar with these transient oil-related workers.

Local employees of ARCO at Captains Bay are in a slightly different position--having to live for longer periods near the community. During the early periods of their residency they noted more curiosity than concern on the part of the residents of Unalaska to their presence and activities. These workers state that they have not been given any formal instructions on how to relate to the local residents but by one means or another they are given to understand that the less interaction the better. An informal curfew for the female workers has been established and they have been advised to avoid the pizza restaurant and the local bars--leaving very little else to do in town. The ARCO facility enclave is located over two miles out of town and the only transportation available is by company vehicle, effectively limiting travel to town.

We should also note that the facilities available at the small Captains Bay site are very comfortable. Typical working shifts are long, and workers are transported to and from the community on a one week on and one week off basis, well equipped with video equipment, games and movies and other entertainment. Employee job satisfaction and commitment are very high.

A larger, more transient oil related population, are the crewmen associated with the seismic research now very actively examining the bottom of the Bering Sea for indicators of potential oil and gas deposits. Seismic research activity increased significantly in 1982. At least 53 such vessels docked in Unalaska by October of 1982. Several issues should be brought out; first, these vessels are ostensibly unassociated with the ARCO facilities located in Unalaska. These exploratory vessels are paid for by individual (or small groups of) companies wishing to gather data for their own private development needs. Second, the nearly 1,500 crewmen of these vessels have actually had less direct social effects on Unalaska than one might expect. There are rarely more than two vessels in port at any one time. More importantly, however, there has been a concerted effort on a high level of authority to allay community concerns over the effects of the presence of these workers on Unalaska. Each member of every crew that has come to Unalaska has been formally and informally given to understand that there should be a minimum of contact between themselves and the residents and facilities of Unalaska. This effort has been quite successful. There have been no arrests, no reported barroom incidents, no accidents or reports of inappropriate behavior on the part of any of these employees. This is remarkable given that Unalaska is, for many of these vessels, the only port of call for long periods of time. The traditional behavior, among fishermen and sailors at least, for such visits has been drunkenness, rowdiness, and arrest. But this indoctrination has had a more pervasive effect than simply controlling excessive behavior. As a result, many individuals in Unalaska were unaware of the presence of the crews of the

COST rigs, seismic vessels, and rig tenders. However, even considering the size of this year's oil-related transient population and the effectiveness of their "low-profile policy," it is still difficult to imagine how **this policy** could camouflage the presence of as many as 4,500 crewmen from the 150 such vessels expected (by several sources) to visit the community in 1983.

The use of local services by oil development companies is constrained by several factors. First, direct employment opportunities, often those considered by residents and local government as well to be of greatest beneficial effect to the community, are likely to be nonexistent during all phases of oil development. Almost all direct employment opportunities will be for skilled outsiders. Thus, this expectation will not be met and will negatively affect residents to the extent it is relied upon in community planning. It is, in essence, **an unfulfillable** expectation that will cause problems for the community. Local services may be required in the area of peripheral support services such as welding, machine shop, and commercial laundry, but even this is likely to occur on an incidental basis. For example, it is economically and logistically easier for ARCO and other petroleum operations to contract with outside firms for supply and maintenance requirements. These firms are familiar with the requirements of these facilities from long experience. For another example, local produce, usually of lesser quality because of lengthy transport and storage, is required only sporadically and even then there is substantial reluctance to purchase items locally because of the risk of "upsetting the delicate supply and demand balance already established." This, too, they have learned elsewhere from the experience of purchasing large quantities of goods from local commercial interests only to create severe local shortages or over-dependencies on continued purchases of such goods or services. The same applies to air transport, in that the more that is shipped by Reeve or AirPac for the oil companies the slower the delivery of local freight. It applies as well to air passenger service for other passengers must endure longer waits to the extent that routine scheduled crew changes disrupt normal passenger service.

Local services currently utilized include a contracting company which hauls materials for ARCO, the purchase of oxygen and other gases, the purchase of fuel, the use of local hotels when the rigs come into town, a few groceries for most vessels and contractual total resupply and logistical support for a few, and periodic use of the airport. The outside seismic vessels and crews also make use of similar services when they are in port though again on a relatively modest scale.

ARCO has contracted with local fishing boats to be used as standby for possible evacuations, other emergencies, or when they are short of transport facilities. There have been three under contract in the recent past. They have also used Sea Land and APL for trucking and hauling of staging material at least once a month. They use the Foss barge to bring in supplies on a periodic basis. Future service contracts are expected to be made during the oil production phase, should it come, when turbines, generator repair and other types of support activities will increase. It should be noted that in the opinion of the local ARCO representative the total resident population growth in association with oil development will be far below the projections made by

the OCS Office and that future conditions, even during the construction and production phase of development would be more or less the same as today.

We feel these early contractual and personal relationships and patterns of behavior will have a significant bearing on how future OCS development will be perceived by local residents, and the degree to which it is viewed in either negative or positive terms,

One further note should be added. In the course of fieldwork in the community the researcher had an opportunity to interview most of the opinion leaders, businessmen and officials best informed regarding current seismic and exploratory efforts as well as several informal discussions with the crews of these vessels. While it is not normally our function to enter an area of speculation, there is sufficient circumstantial evidence to support certain remarks concerning the success of recent exploratory efforts in the Bering Sea. Our opinions are presented here only because we feel the the MMS Office should have access to the most up-to-date information available--even though derived from secondary sources.

Our conclusion, based on the above interviews with knowledgeable but unofficial sources, is that the prospects for oil discoveries in the Bering Sea are very high. Research crews, in particular, have been ebullient on their return to Unalaska and seem certain that their data support the high likelihood of oil or gas discoveries. Pre-lease research activity, as noted above, has increased from 9 vessels in 1981, to 53 in 1982, to a projected 150 in 1983. It should be clear from similar earlier experience, that even assuming no significant finds in the Bering Sea, the process of verifying this fact will be lengthy and involve a major portion of those oil-related transient and semi-permanent workers assumed in the low discovery scenarios. That is, we, and others involved in the process, believe that the results of the current phase of exploration are probably sufficient to warrant further offshore development. These very sketchy results, and the crews of these vessels recognize the need for security, would seem to determine in a significant way, the course of oil development for the next five to ten years at least and thus the effects of this development on Unalaska.

Our projections regarding social changes expected to occur in the near future as a result of petroleum related development in Unalaska will be provided in a subsequent memorandum (U/CB-5). We remark here only that the introduction of 220 new oil-related permanent residents into the community of Unalaska in 1985, as suggested in OCS Table IV. B.2.a.-2, would have major social consequences. These are very briefly noted in our third alternative scenario below.

The effect on the social system of Unalaska as a result of the introduction of these permanent residents, depends to a major extent on the social characteristics, objectives and expectations of those selected to reside in the community. Discussions with ARCO representatives lead us to believe that those ultimately assigned to Unalaska will be the more senior employees, those in management and key technical positions. The presence of even a seemingly small number of long-term temporary employees in Unalaska is significant as these individuals, given the char-

acter of political decision making in Unalaska, have greater impact than a much larger number of transient employees because of the type and character of their interaction with the community.

Oil interests are quick to note the great technological strides taken to ensure the safety of the physical environment. These interests have, as well, learned a great deal about the social forces that, more than any other factor, can inhibit the exploration and development phases of resource extraction. They have been applying this experience to Unalaska in an ever increasing effort to assure a course of development of the resource that is as smooth and problem-free as possible.

While it has not yet become a major factor, the differences in social and economic adaptation to the Unalaska environment between Aleuts and non-Aleuts will eventually have a significant influence on how oil development will affect subpopulations of Unalaska. This will be discussed in detail in our subsequent report but we note here that the occupational and physical mobility of the non-Aleut population of Unalaska puts them in a more favorable position in the event of economic stagnation in Unalaska--they can, relatively easily, find other jobs elsewhere in Alaska or the U.S. and leave the "sinking ship" whereas Aleut and other permanent residents must continue to contend with local conditions having very few viable options.

In conclusion, we note that it is social forces, not actual physical effects, that directly come to affect the leasing and development process. Even in a relatively larger community such as Unalaska, a single strongly motivated individual can have a significant influence on community perception of development.

2.2.2 Social Organization

The community of Unalaska can usefully be analyzed and categorized along several different dimensions including ethnicity, occupation, socioeconomic status, religion, location, and length of residence. At its best, the community may be viewed as a diverse one; at its worse, it may be viewed as rife with division and conflict. Rather than attempt to emphasize either position, however, we shall strive to present the sociocultural system and social groups within it, in as objective a manner as possible.

While several social categories exist throughout the community, the two most relevant distinctions appear to be those between resident and transient and between Aleut and non-Aleut. The first distinction became particularly salient during the last ten years when the population grew at an enormous rate. Much of the transient population is involved with the seafood industry, either as fishermen based elsewhere or as processing employees divided into supervisor's who usually remain in the community for a few years and line workers who typically renew their six month contracts less frequently than do the supervisors. Line workers also tend to represent non-white ethnic groups, particularly Filipino and Vietnamese.

2.2.2.1 Residential Groups

Among the resident population, distinctions are often made between the population residing in the community before the decade of rapid growth in the 1970s (permanent residents) and those who arrived during or after that period (semi-permanent residents). The second group is much larger than the first.

The following are the residence categories that will be used in this report and their composition:

Transients are those individuals who are in the community for six months to a year. The goals of the individuals in this group are often to take advantage of the opportunities offered by the six-month employment contracts common in Unalaska, and then to move out of the community as soon as some relatively short-term financial goals are accomplished. This group is primarily composed of people who work at the processors in town. Ethnically this group is quite diverse, with the dominant group being Southeast Asians. Most often the individuals in the transient category do not become actively involved with the community, but rather live, work, and interact socially with the other transients at the processors. These individuals do not often seek to gain other employment outside of the work that they are involved with currently, that is, they do not compete with others in different segments of the employment market.

Long-Term Transients are those individuals who are in the community for a specific period of time longer than one year. The normative length of stay is approximately 2 to 5 years. The defining characteristic of this group is that the individuals in this group perceive their stay in the community as a limited one, at times emotionally roughly analogous to a "tour of duty" in the armed services for those whose experience is an unpleasant one, or an "adventure" for those whose experience is an enjoyable one. These individuals have some stake in the affairs of the community and often participate in community activities. Their perceptions of the city are influenced, however, by the knowledge that Unalaska is not their permanent residence. Often these individuals are in town to save enough money to make some ambitious financial goal a reality. The ethnic composition of this group is predominantly Euro-North American.

Semi-Permanent Residents are those individuals who have settled in the community since the development of the crab industry, yet consider Unalaska their permanent place of residence. Some of these individuals may in fact be in town no longer than some of the long-term transients, but they are differentiated from this group by their perceptions of their role in the community, and their commitment to the community. Only a small minority of these individuals, however, plan to spend their retirement years in Unalaska. Their decision to move to the community was informed by the conditions in Unalaska at the time of their move, and those economic, social, and cultural conditions differed significantly from the conditions which were existent prior to the development of the crab fishery. As a result these individuals often have different value orientations and expectations than those who were settled in the

community prior to the economic boom. Like the long-term transients, the ethnic composition of this category is predominantly Euro-American, though in this case it is almost exclusively so. There are some Aleut individuals and families who have moved to the community since the coming of the crab industry, however in the large majority of these cases these individuals or their parents have ties to the community that pre-date the crab fishery and have lived in the community previously.

Within this group, a further distinction between the "pioneers" and "newcomers." While both groups share similar social characteristics, they are distinguished by their time of arrival into the community. Those who arrived before 1978 (the height of the crab boom) are referred to as pioneers while those arriving afterwards are considered newcomers.

Permanent Residents are those individuals who have been living permanently in the community since before the development of the crab fishery. These individuals are often influenced by a different set of values and goals than the other groups. They are a minority in the community today, and in terms of ethnicity they are predominantly Aleut.

Until recently, the interaction between the resident and transient populations was characterized as inconsequential. Outside fishermen were regarded as troublemakers who would come to the community to get drunk and get into fights. Despite the fact that these fishermen would patronize local businesses, many local residents resented the fact that the bulk of earnings from the fishing industry would not remain in the community and outside fishermen became a convenient target for their ire. With respect to the processing workers, interaction has traditionally been minimal. Most of these transients were housed on the Amaknak Island in facilities provided by the processors. Until the construction of the bridge linking Unalaska to Amaknak Island in 1979, residents would rarely see transient processing personnel, other than those from the Pan Alaska plant. The inability to speak English on the part of many of the processing employees who were Vietnamese or Filipino also added to the perceived social distance between residents and transients.

While there appears to be some animosity toward outside fishermen, relations between resident and transient members of the community have improved in the past few years. This is largely due to two factors. One has been the trend toward longer stays in Unalaska on the part of transients. The extended fishing season due to declining crab stocks has created an incentive for fishermen to move to Unalaska with their families. The processing crews have also become more stable, partly because of the poor economic conditions in the continental U.S. and partly because of the incentives provided by the processors through stock options and bonuses. Although exact figures are unavailable, the rate of return of processing workers is estimated to be between 75 and 80 percent.

A second factor promoting improved relations between resident and transient segments of the population is the increased frequency of contact. With the construction of the bridge between Unalaska and Amaknak islands, interaction between the residents of the two areas has increased. Processing workers are now able to utilize the stores, restaurants, and businesses on the Unalaska side. Interaction between the two groups

also occurs in the form of recreational activities such as basketball and softball.

Interaction between permanent and semi-permanent residents appears to be more tenuous. Within the last ten years, "strangers" has become an important social category and many of the old-time residents lament the diminished utility of traditional networks of association and interaction. These two groups are readily distinguished by their orientation and value systems, as noted above.

2.2.2.2 Ethnic Groups

The second major distinction found in the sociocultural organization of the community is that between Aleut and non-Aleut. Although Unalaska has not been regarded as a "Native community" for a number of years, until recently, Aleuts represented the majority of the local population. A tradition of racial discrimination and forced evacuation of Aleuts from the area during World War 11 created the potential for hostile relations between Aleuts and non-Aleuts. Additionally, ethnicity has become a major issue within the last ten years, as a result of two particular developments. The first was the passage of the Alaska Native Claims Settlement Act in 1971. The impact of this act on the reaffirmation of traditional Aleut ethnic identity has already been discussed in the examination of value systems in Unalaska. We can note here, however, that with this reaffirmation, ethnicity has become polarized in the community, creating at times rigid boundaries between Aleut and non-Aleut where none may have existed before. It would be unfair to characterize all Aleut-non-Aleut relations as being affected by this one piece of legislation, but both segments of the population readily acknowledge the tension generated by this legislation and its political and economic ramifications.

The second development has been the rapid increase of the non-Aleut segment of the local population. Since the time of the Russian explorers and traders, Aleuts have been dominated politically and economically by non-Aleuts even though they constituted the large majority of the population in the region. Although the passage of ANCSA helped rectify this situation, the recent influx of non-Aleut residents to Unalaska has resulted in increased pressure on Aleuts to reassert their traditional ethnic identity. Many feel their traditional language and culture are rapidly disappearing and attribute high levels of alcoholism and depression to the rapid encroachment of the larger sociocultural system. This encroachment is most visibly represented in the large number of non-Native immigrants from other parts of Alaska and from the lower forty-eight states. The effect of this encroachment has been widespread. It is estimated that there are somewhere between 11 and 15 individuals left in the community who can speak Aleut. A generation gap exists between older adults desiring to retain traditional beliefs and values, younger adults who wish to maintain an Aleut identity for political reasons, among others, and the youngest generation which is most exposed to the values and beliefs of the larger sociocultural system, especially through participation in the local school system.

As a result of these developments there is some voluntary segregation, even among younger-age school children. Non-Aleuts express resentment

at control of local land by the Native corporations claiming that the corporation has acted as a barrier to growth and development. Aleuts, on the other hand, express resentment at the perceived continuation of non-Aleut domination of community affairs. Many older residents prefer to associate only with members of their own ethnic group. Interethnic relationships are common and occur in the form of friendships, marriages and workplace relationships. Most of the local Aleut population is self-employed, work in blue collar positions, or are employed by the Ounalashka Corporation. Non-Aleut employers report that they are often reluctant to hire Aleuts because of lack of adequate skills and a history of poor work attendance.

2.2.2.3 fin-based Relations

In addition to the two major dimensions of length of residence and ethnicity, several other features of the sociocultural dimension are used to divide the population into segments of association and interaction. Social interaction and association are based on a series of primary and secondary networks. The major features of each of these types of networks in Unalaska will be examined.

Unalaska is an unusual community with respect to the transient nature of much of its population. As a result, kinship ties are much stronger among some parts of the population than others. In point of fact, there are a large number of individuals who have no kin in the community or no kin relationships outside of spouse and children. The largest kinship networks are found among the permanent residents of the community, the majority of whom are Aleut. Historically, there has been a good deal of intermarriage between Aleut families, both within Unalaska and between Unalaska and neighboring Aleut villages. Consequently, there is an extensive network of relationships. These relationships are important in determining behavior and serve as a focus for interaction across a broad range of contexts from political and economic to highly personal ones. The Aleut population of Unalaska should not be thought of as a historically contiguous, homogeneous one however. Because of economic and ecological conditions before World War II, wartime relocation to southeastern Alaska, and subsequent resettlement after the war, a significant number of Aleut individuals and families originally from other villages on Unalaska Island and residents from other villages in the region settled in Unalaska.

As noted in the historical review of Unalaska, traditional Aleut society was based on a matrilineal descent system with the preferred form of marriage being between cross-cousins. In Unalaska today, descent could be better characterized as bilateral or unilineal, although for older residents, one of the vestiges of the matrilineal system was the special relationship between mother's brother and sister's son. Boys were often sent to live with their maternal uncles for brief periods of time. The uncles were responsible for instructing them in certain traditional subsistence activities and, in general, seeing to their welfare. This practice does not appear to be common among younger Aleuts today, however.

Among Aleuts there are four fictive kin relationships still quite strong in their ability to influence behavior: the two most important were

atcha and kroosna relations. Atcha is a reciprocal relationship between individuals of any age and is assigned in a number of ways. The primary obligation of the relationship is to protect each other's interests and reputation: to see that the other person gets a fair deal in exchanges and to defend his or her honor in the atcha partner's absence. Atchas are sometimes assigned at birth based on physical resemblance or personality characteristics. If a child bears a resemblance to another, for instance, they are assigned by elder kin members as atchas. Two adults who share a bond of friendship can agree to become atchas, and at times two individuals are assigned to be each other's atchas by a third person who sees either a similarity between the two or a good reason the two should enter into the relationship.

Atcha relationships were not merely dyads. If one person was an atcha of a second person, who in turn was an atcha of a third person, the first and third person would also be considered atchas. In this manner, a network of fictive kin relations encompassed the entire Aleut community.

The kroosna relationship is a godparent relationship that is under the auspices of the Russian Orthodox Church. Historically, godparents had a much larger role in the raising of children than they do today, and reportedly were the objects of both respect and fear. It was their responsibility to see that the child was brought up in the ways of the church, and with this responsibility came the authority to act contrary to the wishes of the parents, should the need arise. Even today, kroosnas are the objects of special attention and consideration on special occasions.

Two other traditional Aleut relationships were chusa and ungtassee. Chusa relations were very informal and were held by individuals who possessed the same first name but were not directly related. These individuals usually came from different communities in the Aleutian Islands and relations were established when one individual visited the community of another possessing the same name. Chusa usually provided the basis for friendship, and sometimes food and shelter. Ungtassee were business associates or partners. The term originally was used to describe the close, mutually dependent association between hunting partners who owned one baidarka. It is still used by a few local Aleuts to describe business associates between whom a strong bond of friendship exists.

Among the non-Aleut permanent residents of the community, generational depth is lacking. While there are some extended families, there are no families where the original generation that moved to Unalaska is not represented by at least one surviving individual.

Among semi-permanent residents and even long-term transients there are a small but significant number of consanguineal (blood) kin relations. As a "frontier town" there have been a number of father-son and brother-brother dyads that have come to the community to work together. With the isolated nature of the community, business relations with kin has proven to be an adaptive response to a situation where good help is reportedly hard to find, and the undertaking of an economic investment is a potentially high risk situation where the reliability of a partner

is a great asset. In other cases, two adult generations of a family have come into the community, one at the recommendation of the other. Although the two generations may participate in different economic activities, they spend a good deal of time together in social interactions.

Patterns of family structure within Unalaska must be viewed in terms of Aleut and non-Aleut families. Aleut families were traditionally extended networks with affinal ties to other communities in the region maintained through well-established patterns of intermarriage. Although many of these networks remain, extended kinship has declined in importance in Unalaska. The focus of family relations has shifted to the nuclear family and although extended kin still constitute the major network for social interaction, this network has begun to diminish in importance in recent years under pressure from the larger sociocultural system. Traditional patterns of reciprocity and redistribution have been seriously weakened as values and attitudes have assumed more of an individualistic and less of a collective orientation.

Parent-child relations within the Aleut nuclear family are characterized by a particular fondness for and extreme tolerance of infants. However, there is an increasing indifference on the part of parents as children grow older, reportedly resulting in an increasing incidence of child abuse. Involvement in the education of children has also diminished over the years as this task is now almost exclusively handled by the local school system.

One of the major problems confronting the Aleut family is the generation gap. The incidence of alcoholism and spouse and child abuse in Aleut families have become the objects of considerable local concern. These problems weaken family structure and have contributed to a high number of single parent households among the Aleuts in Unalaska. Although several factors contribute to this state of affairs, the willingness of younger family members to adopt the values and beliefs of the larger sociocultural system to the disdain of their parents plays a crucial part. Parents complain of a lack of respect from their children, both for their own authority and for traditional values and beliefs. Children, on the other hand, complain that their parents are too "old fashioned" and are unwilling to make the necessary adjustments to survive in the changing sociocultural environment. The widespread problem of alcoholism within families is a result in part of the loss of traditional status and the inability to adjust to the new environment. The problem, through socialization, has also become intergenerational (i.e. transferred from parents to children through imitative behavior.)

Relations among non-Aleut families tend to be exclusively centered on the nuclear family. The non-Aleut permanent resident families are involved with several different enterprises, and account for a disproportionately large segment of the economic activity in the community. One of the families owns the majority of the privately held land in the community and a retail business, another owns a fishing boat and is involved in several other ventures. Others are or have been involved in various investments from ranching to transportation services. Few non-Aleut adult permanent residents have spent the entirety of their childhood in Unalaska.

Among the **non-Aleut** population, the number of single parent households is also increasing in conformance with national trends. The major family structure among semi-permanent residents, however, is a young married couple without children. Of those recent immigrants and those projected to immigrate to the community within the next few years, unattached young adults and young married couples will comprise the overwhelming majority.

2.2.2.4 Neighborhood Relations

In the past, there was little sense of neighborhood relations in **Unalaska** independent of other relationships. Until very recently there was only one neighborhood in all of **Unalaska**, though as construction and growth have taken place, the **geosocial** map of the community has changed dramatically. The large majority of new housing is located away from the city center in new neighborhoods or in relatively isolated locations. With this growth, neighborhood identification, if not interaction, is growing in importance.

Until the recent population boom, the vast majority of the individuals in **Unalaska** lived in what is now the **Unalaska** side downtown area. Prior to World War II, most of these residents were **Aleut**. After the war, a new area of housing was added, forming a sub-neighborhood adjacent to the existing housing. This was composed of two rows of cabanas, located perpendicular to the **Iliuliuk** River across from the community center. Housing primarily individuals from the other villages on the island that resettled in **Unalaska**, the area was known as "new town*". Reportedly, there was an amount of friendly rivalry between individuals from different villages in the past, and some social distinction between the different groups. The individuals who moved from the other villages were distinguished as outsider **Aleuts**. As time has passed, much of the distinction has faded, though it has not disappeared completely.

There are social relationships that were no doubt fostered and are now nurtured by residence within the downtown area, but it appears that previously existing social relations among **Aleut** families determined housing patterns, not vice versa. As new families and individuals have moved into the community and land tenure has become more formalized, residence patterns have changed. Social relationships that at one time may have been isomorphic with living arrangements are now relatively independent.

As a result of the location of the downtown area with respect to recent development, the **Aleuts** come into daily contact with the rest of the community. This area is the center of the City's commercial and recreational activities and thus draws a considerable amount of traffic. This traffic serves to weaken the sense of neighborhood for **Aleuts** living in the area by placing them in constant contact with "strangers"* as well as exposing them to intoxicated patrons of nearby bars.

Adjacent to the downtown area, though physically separated, is another housing area composed primarily of HUD housing discussed earlier. These 15 homes, occupied exclusively by **Aleuts** (or **Aleuts** and their **non-Aleut** spouses or kin) effectively form a new neighborhood. Ethnically homo-

genous, the development is removed from the traffic of the downtown area. Though this might be classed a "low income" neighborhood, there appears to be no stigma attached to living in the development outside of the opinions of some of the more well-to-do non-Aleuts. The lack of stigma attached to the housing may in part be due to a lack of class differentiation based on wealth in the community and in part due to the fact that the new housing is superior in construction and appearance to much of the existing housing in the community.

Nirvana Hill forms a neighborhood of sorts. The bulk of the property on the hill was purchased by a group of friends who originally came to the area to fish and have since sold portions of the property to individuals whom they know. Most of the social ties are based on friendship, and no longer run along occupational lines. A minimal number of kinship ties exist.

The new housing development in Unalaska Valley forms another new neighborhood. The individuals who have built the recently constructed homes that form the neighborhood are mostly professional level individuals, including a superintendent of one of the seafood companies in town, the manager of the bank, a teacher, an engineer for one of the seafood companies, and the head of one of the city departments, among others. Interaction due to the proximity of housing is reportedly minimal; however, some of these individuals interact in other contexts. Due to the economic status of most residents and the relatively "expensive homes, the area is sometimes sarcastically referred to as "snob hill". It is perhaps the first example of a concentrated area of geosocial differentiation based on wealth in Unalaska.

The Ski Bowl area is another area of relatively concentrated housing. At one point, when the cabanas were first being reoccupied many of the individuals worked for the department of public works, and therefore had cross-cutting occupational and residential ties. As time has passed, these employees have scattered to housing elsewhere, and the individuals living on Ski Bowl now work at a variety of jobs and belong to a variety of social networks.

On Amaknak Island, outside of the processors, there are two clusters of housing that could be considered neighborhoods: Standard Oil Hill and Strawberry Hill. Standard Oil Hill is composed of rental duplexes, and the tenants that live there are a broad spectrum of individuals with respect to occupation, background, and social interests. As an area of heavy population concentration there are a number of social ties that exist within the neighborhood that are based on relationships other than residential proximity. There are peer group relationships between some of the children in the area, and some differentiation of living arrangements by occupation. As an example, three of the families of public safety officers live in adjacent units. The area is quite transient due to a number of factors, among which are the high rent and the transient nature of a major portion of the population of Unalaska. It is the only large concentration of rental housing, and the high turn-over rates effect the growth of neighborhood-based social ties.

Strawberry Hill is another area of concentrated housing forming a neighborhood. It has been described as the only area with a "true feeling of

neighborhood'' outside of the downtown Unalaska area. Some residents have lived in the same place over a number of years, and a core group of individuals form a relatively stable housing cluster with social ties between the neighbors that apparently were originally based on residential proximity.

2.2.2.5 Friendship Relations

Social ties based on friendship are important for individuals in all of the segments of Unalaska's population, though the basis for the formation of friendships vary between these population segments. Among permanent residents, friendships are often broad-based, as the individuals know each other from a number of different contexts, and the social relations between individuals are often complex with many cross-cutting ties. These people are now in the minority in the community, however. Among semi-permanent residents, friendship is often originally based on occupational interests, which expand to other areas. Common political views or a common religious conviction are also frequent bases for the origin of friendships. The Unalaska Christian Fellowship, for example, appears to generate a large number of friendships among members of its congregation. Friendship relations among long-term transient and the transient segments of the population are most often congruous with occupational or workplace relations, supplemented with relationships formed on the basis of formal social interaction.

2.2.2.6 Voluntary Associations

Voluntary social organizations form the basis for significant social interactions primarily for the semi-permanent residents and the long-term transients of Unalaska.

There are several organizations sponsored by the City of Unalaska. These include the Unalaska Volunteer Fire Department, and the Volunteer Emergency Medical Service. These organizations serve as the focus of interaction for some individuals in the community, though a large percentage of their ranks are made up of professional public safety officers volunteering their time.

Recreational organizations draw a good level of participation from many segments of the community. One of the most popular is the recreational softball league. This past summer the league was composed of 12 teams sponsored by a number of the small businesses in town, one of the churches, and several of the seafood processors. The softball league is reportedly one of the only activities that brings a wide range of individuals in the community into contact with one another outside of the usual social networks, bringing people together who would not otherwise meet. The city basketball league is a wintertime version of the softball league, performing the same social function. One of the higher visibility recreational groups in Unalaska is the square dance group, whose members perform at quite a few of the civic functions.

There are a number of classes offered by the Department of Parks, culture, and Recreation and the University of Alaska Rural Extension Office that serve as focal points for social gatherings. In this formalized

context new individuals in town are sometimes drawn into social networks. Participation in class offerings is not broadly based, however, as a small core of individuals take many of the classes offered.

The only formal service clubs in Unalaska at this time are the recently organized Lions Club, with 51 male charter members, and an all women's Chamber of Commerce (formed in part as an express counterpart to the Lion's Club). The Unalaska Aleut Development Corporation performs several social service club style functions, and draws participation from beyond its staff and shareholders.

One of the most recently formed voluntary associations in Unalaska is the local chapter of the Alaska Native Womens Statewide Organization. Membership is open to all women in the community and currently numbers 75 in Unalaska. The objectives of the organization include: (1) administering to the health, educational and cultural needs of native women; (2) improvement of home, family, and community life; (3) provide events that promote cross-cultural communication; (4) work towards preventing domestic violence among local families; and (5) promoting ethnic pride and preserving cultural tradition. The organization is based on a network of women in the community, many of whom are also linked by extended kin ties, who represent an increasingly powerful political voice in Unalaska. It is highly likely that the organization also will become the functional equivalent of the now defunct Sisterhood of the Russian Orthodox church, which was an organization that performed many social services for the Aleut families of the community, along with serving as an important social group for the women involved.

The churches of the community form the basis for many of the most active social networks. Although the Russian Orthodox church does not perform this function as explicitly as it did in the past, members of the congregation have many cross-cutting ties that facilitate their interaction as a social network. The most explicit of the network forming churches is the Unalaska Christian Fellowship which seeks to incorporate new and old members of the community into its ranks and also brings in individuals from outside of the community to Unalaska to perform community service work and help build the congregation. The Fellowship provides numerous opportunities for social interaction, in addition to religious activities, including picnics, pot-luck dinners and sporting events. Much of this network is based on extended family relationships but includes newcomers, members of the local Catholic mission, and processing personnel as well. It also appears that the network has been used by some of the recent immigrants to find employment in the community.

2.2.2.7 Workplace Relations

Relations between crew members on the fishing boats that work the area are highly variable by vessel. On vessels owned by permanent residents of the community the crew tends to be drawn from among family members where possible, and then along extended kinship and friendship lines as needed, though ability as a fisherman is always a major consideration irrespective of ties of kinship or friendship. Relaxation of standards of course applies where young sons are being trained in the business.

On vessels owned by semi-permanent residents there are two distinct hiring patterns. Some of the skippers hire locally, employing interested and available kin in addition to using friendship networks to locate available and competent crew. Others hire their crew exclusively out of Seattle. The cited advantage of hiring crew from outside of the community is to keep the crew relations on a more formal basis, allowing more freedom of action when it comes to hiring and firing decisions.

The vast majority of the fishing vessels in the fleet in the waters around Unalaska are not locally owned or operated. The bulk of the fleet is based in Seattle and most of the crew members are hired there, though they come from a diversity of backgrounds and from a variety of places around the country and the world. Individuals who reportedly make good fishermen are lumberjacks, many of whom are now looking for employment. One of the crews interviewed was composed entirely of college graduates, two of whom held Masters degrees. Others have held a variety of blue collar jobs. Most of the crew members are young, especially those in the crab fleet. Crab fishing is considered a young man's occupation because of the agility and quickness required under adverse fishing conditions. Losing a half-step in speed can mean the difference between avoiding and receiving serious injury. Fishing vessels are also treated by some as an avenue of escape from financial, personal, or legal responsibilities elsewhere.

The rate of turnover of fishing crews is also highly variable by vessel and appears to depend upon the personality of the skipper, profitability of the vessel, and the crew share percentages offered. Social factors that come into play are the operating dynamics of the crew and the goals of individual crew members. Life aboard the relatively small boats in cramped quarters, with fatigue common, can be a very trying experience for many people. If the crew members are unable to get along with one another the situation can quickly become intolerable. The lifestyle forced by the nature of the fishing industry is hard on the family life of many of the crew members, and many leave the fishery, at least for a period of time, because of personal relationship difficulties. Some of the crew members have very specific goals which, once attained, means their departure from the fishery. For example, one crew member interviewed was working just long enough to earn enough money to pay off a sports car in danger of being repossessed, and to put a small sum of money in the bank. When he achieved that goal after one fishing season, he left the boat. At times vessels are left short-handed after such departures, and even boats that usually do not hire out of Unalaska take on temporary crew from the community. Most vessels spend little time in the community, though this is changing as the result of current economic conditions.

Workplace, or occupational relations vary in importance by social group in Unalaska. Among permanent residents, many of whom are entrepreneurs or have held a wide variety of jobs in the community over the years, workplace relations do not form a central focus for social networks. Social relationships among these people are multi-dimensional with cross-cutting ties, though less so than in the past. Typically, length of residence in the community is inversely related to the significance placed upon occupational social networks as primary social arenas. Exceptions to this rule are certain occupational groups which have

formed strong social bonds for a number of reasons. These include teachers and public safety officers among others.

For the long term transients, and especially for the transients in Unalaska, workplace relations are the prime focus of social life. As mentioned above; long term transients usually have a specific goal, external to the community. This being the case, a great deal of time and effort is directed toward achieving this goal and the individuals could easily be seen as "workaholics". Such behavior is understood in Unalaska however and not considered unusual, though it at times places strain on family relationships.

For transient workers, the only extensive contact with the community is usually through employment. Working long hours and long weeks during the fishing seasons and living in company group housing, the workers by fatigue and often by choice are effectively isolated from the community. Another important factor in this isolation is ethnicity. Different ethnic groups dominate the workforce at the different processors, and a significant portion of the workers at each of the processors speak little or no English, which effectively reinforces the isolation from the community. Largely independent social networks are formed at the different processing companies, which overlap only slightly with other social networks. Most of the processors employ a large number of individuals only from any one ethnic group. In the recent past there have been disturbances with the disputing groups drawn along ethnic lines (for example, a near riot was narrowly averted where the issue at hand concerned the type of rice to be served at the commissary) and management feels it prudent to try and avoid these situations. One force tying the various workplace networks together is the move toward unionization that is gaining momentum. The International Longshoremen's and Warehousemen's Union has successfully organized in the community. The group is providing a measure of overlap between the various workplaces, though at the individual level, social contacts have not increased significantly in many cases.

2.2.2.8 External Social Networks

Many people of Unalaska have important social ties to other areas of the state. For some of the Aleuts of the community there are important kinship ties to the other villages in the region, notably Nikolski and Akutan on neighboring Aleutian islands, and the villages of St. Paul and St. George in the Pribilof Islands. Several spouses of Unalaska Aleuts are from these villages. For a few Aleut families in Unalaska, these ties have been maintained by reciprocal exchanges of subsistence items such that seal meat and oil is sent from the Pribilof Islands communities to Unalaska and salmon is sent to the Pribilofs in return. Additionally, several families have relatives in Anchorage. Visits to the other villages are not uncommon, particularly for marriages and funerals. These ties appear to have diminished in intensity in the past decade, however, and while certain kinship links still exist, patterns of reciprocity and social interaction are much less evident.

In the past, ties with other communities in the region were also created by employment opportunities. Before the recent crab boom, many Unalaska Aleuts would journey each year to the Pribilof Islands to work in the

seal harvests and, later, to King Cove to work at a cannery during the salmon fishing season. During the early 1970s, a few residents from Akutan and the Pribilof Islands would come to Unalaska to work on the processors, but this is no longer the case. The development of educational facilities and economic opportunities in other communities in the region have reduced the need for travel to Unalaska by residents of these communities.

With the coming of the ANCSA corporations there has been an increased awareness of the region as a social unit. Corporation business of both the Aleut Corporation and the Aleutian/Pribilof Islands Association often necessitates contact between villages in the region, at least on the part of the management of the corporations, which has fostered new regional social networks.

For some non-Aleut residents of Unalaska involved in the fishing industry, there are social ties to individuals in the fishing industry in the region, most notably Akutan. The superintendents of both of the shore-based processors in Akutan and many of the upper level workers were formerly employed in Unalaska. Individuals who fish some seasons in different parts of the state, develop social ties in those areas. Other non-Aleut residents have social ties to Anchorage and a few have ties to other communities in the state, though typically the individuals moving to Unalaska come directly from out of state. City administration officials have social ties to Juneau and Anchorage as a result of the need to work with individuals in those cities.

Most of the individuals involved with the fishery have social ties to the Pacific Northwest, especially the City of Seattle. Most of the processing companies and the vessels of the fishing fleet are based there, and the individuals hired by these companies were hired out of this region. Processing employees are literally from around the world with strong and important ties still existing for some in such places as the Philippines and Southeast Asia. Unalaska has been termed by one seafood superintendent as "a refugee camp that pays wages", and in an important sense it is. Many of the employees are from third world countries and are seeking to earn enough money to send home to improve the life for their families there, or to earn enough money to bring their families to America to join them.

2.2.3 Political Structure

2.2.3.1 Local Affairs

Local political affairs are dominated by two institutions. The first is the city government, consisting of the city manager, various city officials, the city council and mayor, and associated agencies and offices. These positions are almost totally dominated by non-Aleuts. The second important institution from a political standpoint in the community, is the local Aleut profit corporation, the Ounalashka Corporation. This corporation is, of course, dominated by Aleuts. Although the corporation is not a political institution per se, in its attempt to meet the proprietary economic needs of its shareholders, it has occasionally come into conflict with the city administration over

specific development issues.

The current political structure is a reflection of historical circumstances as well as current sociocultural conditions. As was noted in the historical review, since the establishment of Unalaska as a trading center by the Russians in the late eighteenth century, and the consolidation of residents of other villages on Unalaska Island at the site of the Aleut village of Iliuliuk, there has always been two distinct but co-existing forms of government, one dominated by the Natives and the other by the non-Natives. Although the village council held authority over the Aleut population of Unalaska, the real power lay in the hands of non-Native institutions. This state of affairs underwent a significant change in 1971 with the enactment of the Alaska Native Claims Settlement Act and the eventual formation of the Ounalashka Corporation. Although responsible for the management of land reconveyed to the Aleut population, the Ounalashka Corporation has been called upon to take an increasingly political role as it seeks to protect the interests of its shareholders.

A second factor contributing to this division of power is the fact that even though there are more Aleuts in Unalaska than in any other town in the Aleutian chain, they are nonetheless a minority of the total population. This is a unique situation for the Aleutians, and one result has been a tendency for the Aleut population to withdraw, both socially and politically. Unalaska Aleuts are often characterized, usually by non-Aleuts, as apathetic, especially politically, but much of this is certainly a result of the suddenness with which the population became a minority of the total city population during the days of the crab boom, and of the vigor and assurance with which outside non-Aleuts assumed positions of power. Only with the economic, and resulting political clout, conferred by ANCSA did the Aleut population begin to regain some of its self-confidence.

The structure of leadership in Unalaska is organized along certain well-defined lines. The municipal government is dominated by recently arrived outside professionals. These are usually people who have been in Unalaska for only a few years and who, in all probability, will remain in town for only five years or so. This group is not committed to permanent residence in Unalaska (with certain individual exceptions) but is using the experience gained in Unalaska as a stepping stone to positions in other urban areas in the United States. They are development-oriented and appear, whether consciously or not, to be the spokesmen of the commercial interests in town, despite the often sharp conflict between the city administration and local industry on short-term development issues. On the other hand, the Aleut community is in a state of transition with respect to leadership. With the formation of the Native corporation, Aleut leaders have concentrated on that structure and abdicated most positions in the municipal institutions. The Aleut leadership cadre is currently in transition from the traditional leaders to more militant younger leaders. This has caused some difficulties in the recent past, though it appears the younger group is becoming more comfortable and competent in their positions.

This split between the city administration and the Aleut population was aggravated a recent election for city council. The president of the

Ounalashka Corporation ran for a city council seat, and his campaign was opposed by some members of the city administration who expressed the opinion that being a member of the city council and leader of the corporation simultaneously, would be a conflict of interest. There are several outstanding matters between the municipal government and the Ounalashka Corporation on which a council member who was also an corporation officer would find himself on two sides of the same question, and would be prohibited from voting in council for that reason. Although these matters involve specific conflicts and not policy issues, they do provide a clear indication that the Ounalashka Corporation is more than simply a business, but is perceived, at least by the non-Native segment of the population, as a political institution representing Aleuts and as such is the cause of some concern. Despite this concern, however, there has been little to indicate that the Ounalashka Corporation is perceived in a similar light by Aleut residents. While the corporation has effectively represented Aleut interests on specific economic development issues, it has thus far not been in a position to speak for the Aleut community on other matters.

This division between the city government and the Ounalashka Corporation is usually centered on specific issues regarding community development. The corporation, though they own most of the land in Unalaska, cannot afford to subsidize a new subdivision. One reason for this, as perceived by the corporation, is that with increasing bureaucratization and regulation, the city has enacted legal restrictions requiring an investment of between twelve and twenty thousand dollars in a lot before selling it. Restrictions include surveying work, assurance that the property meets all the requirements for which it is zoned, and so on. The corporation has had difficulty obtaining funds for subdividing their property from a bank because they cannot meet all the regulatory restrictions. Thus, the Ounalashka Corporation perceives the city as standing in the way of its development enterprises.

For its part, the city argues that it has a statutory obligation to regulate such activities. According to the city planner, real property interests in Alaska must be "of record" to be legally sold or leased, with few, limited exceptions. Good business practice requires that real property interests be adequately described by an on-ground survey. Banks will not finance real property purchases without the additional step of an "as-built" survey. The city currently has under consideration a set of regulations which would expand the obligations of the property owner in a subdivision to emplace access and utility improvements. Such exactions, it is maintained, are uniform practice in developing communities, differing only in the degree of improvement required. The cost of such improvements are a normal cost of the land development business and are uniformly passed along to the customer. The perception of the city on this issue is that the Ounalashka Corporation seems to feel that the public at large has the responsibility of improving corporation-owned land for the corporation's benefit.

While disputes such as this are often exaggerated by the rhetoric of the opposing institutions, it should be kept in mind that the source of this conflict is disagreement over the costs and benefits of future development, not over the future of Unalaska which is assumed as a given. Far from detracting efforts at community development, most participants seem

to regard such conflict as the **essance** of community development and consider that there are no risks that delay associated with such **con-**
flict might retard the developmental process. This is consistent with the underlying attitude that the determinants of economic development are external in nature and not under the control of any local group or coalition of groups.

There **also** are other potential political forces in the **community** besides the municipal government and the **Native** corporation. The processors are a potentially powerful political force, **but** as of yet, they appear to lack integration and common purpose. There are signs this is beginning to change, however, as they are forced by economic necessity to coordinate their production activities. A second potential political faction is centered on the **Unalaska** Christian Fellowship. This group, along with other **non-Aleuts** in **Unalaska**, has been the motive force behind the creation of the Citizens for Responsive **Government**, a **citizens'** watchdog committee concerned with what it perceives as the inordinate growth of city government, particularly law enforcement, in the last decade. Women in the community are **also** a potential political force. Women administrators and managers are a visible representation of **this**. The Alaska Native Women's Statewide Organization is becoming a focus of this political power.

2.2.3.2 Native Corporations/Associations

The **Native** Corporation was established with the passage of the Alaska Native **Claims** Settlement Act. Under the conditions of the Act, local and regional Native corporations were organized to manage the **property claims** of all Native residents of Alaska. The regional organization, which includes **Unalaska** is the **Aleut Corporation**, and the local organization is the **Ounalashka Corporation**. There are also two non-profit Native associations represented in **Unalaska**. They are the regional Aleutian/ **Pribilof Islands Association** and the local **Unalaska Aleut Development Corporation**.

The **Aleut** Corporation owns all subsurface rights to lands held by the local corporation. If such land is unavailable, the regional corporation may claim surface estates (as when the local corporation claims land in a federal preserve). Village corporation shareholders are also shareholders in the regional corporation. The **Ounalashka Corporation** was founded in 1973 and has 265 shareholders, 150 of whom live in **Unalaska**. It employs about fifteen people year-round, though the number varies slightly seasonally, and oversees about 96% of the available land in the area.

The major source of income for the **Ounalashka Corporation** is derived from long-term leasing of land to commercial interests and local residents. Its chief goal is economic efficiency and land investment is seen as the key to the future of the **Aleut** segment of the community. The **OC** has also acted to remodel over forty World War II vintage housing units on **Standard Oil Hill** but, given the high rents (\$1000. or more per month) that must be charged in order to realize a profit, it has not been regarded as a worthwhile investment, even though rentals provide the major source of income for the corporation at present. The corporation also rents lots on **Strawberry Hill** and **Ski Bowl** for \$150 per month

and individuals must provide their own housing. The corporation appears to be unwilling to invest in the commercial fishing and processing industry because it is seen as too great a risk. Land is regarded as being the only real asset because it provides a steady income, involves little or no additional investment, and the person leasing the property usually improves it. The corporation has negotiated with Chevron U.S.A. to operate a gas station in the community.

The Unalaska Aleut Development Corporation is the local non-profit Native corporation in the community. It currently administers four government grants to fund: 1) a project to restore the Russian Orthodox Church in Unalaska, 2) the restoration of the Bishop's House, 3) Aleut education programs, and 4) operating expenses for the corporation itself. The UADC's major problem is that it possesses no revenues of its own and must rely on external funding or the generosity of the Unalaska Corporation for its existence. This has led to some friction between the OC and the UADC, particularly since the building in which the UADC is housed, is rented from the OC. The two groups also have different perspectives on the best way to improve the quality of life for the Aleut community. While the OC places its emphasis on economic efficiency, with the long range goal of financial returns for stockholders, and pragmatic education of Aleut shareholders with respect to their stock before 1991, when shares may be sold, the UADC is concerned with improving the quality of life through cultural enrichment and Aleut-oriented educational programs.

The Alaska Native Claims Settlement Act has had deep political consequences in the community. It established a structure in which, for the first time in many years, Aleuts would have control of an organization with political and economic clout and preference for positions of power. The most enduring consequence of the formation of the Native corporations was the emergence of a cadre of Aleuts in leadership positions, something which has not occurred on a large scale for many years, prior to ANCSA. At the same time the corporations shifted Aleut interest even more away from serving on community boards, the school board, city council, and so on. Thus, ANCSA served to institutionalize an ethnic polarization of political power which had previously been informal in nature.

The principal mandate of the Native corporation is to show an economic profit. However, thus far, this has been a difficult undertaking. Much of the problem has been the lack of cooperation between the city government and the corporation. Unfortunately the two appear to have defined their relationship as one of adversaries, and the result has been unnecessary difficulty for both in achieving their goals. Most feel that the corporation in particular has suffered from a lack of leadership, though there are signs that those in control of the corporation are beginning to feel more comfortable with a corporate structure and are beginning to develop the expertise necessary to run such an institution. One of the difficulties for the corporation, in the first phases of its existence, was the lack of experience of its leadership. The traditional leaders of the Aleut community were seemingly cast aside when the OC was formed and leadership positions were taken by relatively younger, more militant Aleuts. Though these individuals were well motivated, they did not, at least initially, have the experience necessary to

effectively manage a corporate structure. The Corporation recently underwent a change in management and is now actively recruiting for a new President.

As we noted, the corporation is set up so that, according to the provisions of ANCSA, the shareholders will have the right to sell shares publically in 1991. One of the fears of many Aleuts is that the corporation will not be successful in organizing its affairs enough to turn a large profit by then. If by that time the Corporation is not making money for its shareholders the danger is that the shareholders will be tempted to sell to outside interests rather than hold on to seemingly worthless stock. Many fear the Japanese interests who they feel are waiting in the wings for the shares to become available to the public. Oil companies are also the subject of similar rumors, and many feel they will also attempt to buy Up shares when they become publically available.

The Ounalashka Corporation and the Aleut Corporation have joined together in a development project called Dutch Harbor Development. The American Presidents Line docking facility was constructed by the two Native corporations, with the OC owning 51% and the Aleut Corporation owning 49%. The facility is leased to APL for \$30 million. Panama Marine, a subsidiary of the Aleut Corporation, has renovated the World War II sub dock, leased from the Ounalashka Corporation, on Amaknak Island and operates it as a marine repair facility.

2.2.3.3 Municipal Government

The other community-wide political organizations in Unalaska are associated with the municipal government. Unalaska was incorporated as a first class city in 1942. It is run by a city council and city manager. The city council members are elected for three year terms. There are six members. The mayor is elected separately from the council. Although he attends city council meetings, the mayor is a nonvoting member, except in the case of a tie. His position is generally regarded as a figurehead office. The current (1983) city council includes a teacher, superintendent of a processor, a residential construction contractor, a clerk/receptionist, an unemployed resident, and the owner of a local transport business. The mayor is the Alascom station manager.

The city government is largely controlled, then, by the non-Aleut residents of the community. There is only one Aleut on the city council. In the past, Aleut representation on the city council has been fairly regular. However, as we noted, the passage of ANCSA resulted in a perceived conflict of interest between representation on the city council and the Native corporation. The Aleut council member prior to the last election in November 1982 was the Russian Orthodox priest who is not a member of the local corporation and hence was viewed as neutral.

The city government is broken down into Administration, Public Safety, Public Works, Planning, and Parks, Culture and Recreation. The total number of city employees varies seasonally, but the average is between 45 and 50. Revenues are currently generated through a property tax, use tax (including a 1% sales and use tax), shared state revenues, state grants, and fees and permits. The FY82 budget was \$4.1 million in the

General Fund alone.

The City Council has established a set of priorities for the future development of the community. These priorities reflect the interests of the commercial, and basically non-Aleut, sector of the community. It is instructive to note the changes in these priorities over the last five years. In 1977 the priorities were listed as, in order: 1) a bridge from Amaknak Island to Unalaska (since completed), 2) city dock and wharfage facilities (since completed with the exception of the shed, warehouse and cold storage facilities), 3) electric utility system, 4) housing, 5) highway improvement, 6) airport facilities, 7) sewer system, 8) hospital facilities, 9) fire protection, and 10) recreation facilities. Since that time, many of these projects such as the city dock and bridge have been completed. Priorities for FY84 capital project requests to the State legislature were: 1) Unalaska airport expansion (on-shore improvements), 2) Phase II Water System improvements, 3) vocational education facility, 4) boat harbor expansion/relocation, 5) multi-purpose community recreation facility, and 6) public safety facility.

The Planning Commission is seen as sympathetic to the commercial interests in the community. One of the priorities of the city council strongly supported by the Planning Commission is the expansion of the airport. This expansion was included in one of the DOT/PF draft capital programs and an "appropriation of \$4.5 million in State funds and authorization for expenditure of up to \$45 million in federal funds has been included in the FY84 budget. The local electorate also approved the taking out of a general obligation bond for construction of a new terminal.

Despite these planned improvements, there is resistance to airport expansion by a significant portion of the population, especially those who are not involved in processing or fishing activities. They are particularly concerned that the expansion is primarily for the benefit of fishing and processing interests, but that these interests are mostly outsiders. That is, many local residents feel they are being asked to pay for improvements which they do not really need and which will benefit people who are assuming none of the financial burden. City officials argue, however, that the facility could be self-supporting if well-managed.

Another local political issue concerns the size of the city government itself. According to a former mayor of Unalaska, the city administration has become too top-heavy. Much of this is ascribed to ill-advised expansion during the period of the crab boom. Now that the boom period has passed the city possesses a large bureaucratic and administrative apparatus which may not be necessary for existing needs. At the same time there is no question that the city will likely continue to grow, and if oil or groundfish industry development occurs, what appears to be a top-heavy structure, may turn out to be a brilliant case of pre-adaptation.

Another source of controversy lately has been the efforts of the Citizens for Responsive Government to call attention to the supposedly extravagant salaries of certain city officials. At the heart of this controversy was a proposal to convert the department heads from the

classified service to contract employees. A significant provision in the agreements was a termination for convenience clause (the current policy requires cause). The proposed agreements were rejected by the council in February, 1982 and one **incumbant** has since resigned. The remainder continue in the classified service.

2.2.3.4 **Social Control and Crime**

Means of social control in **Unalaska** are undergoing rather dramatic change. Social control may be achieved in one of **two** general ways. It may be formal, as in the case of formal law enforcement agencies with a court system with established canons of procedure and established punishments for particular crimes, or it may be informal, in the sense of gossip, social **censure**, and other informal social mechanisms. In the area of formal **social control** the most controversial in **Unalaska** revolves around the police department (formally known as the Department of Public Safety), and an additional problem is the inadequacy of the local **court** system. In the area of informal social control we will see that the **Aleut** community has one style of control while the remainder of the community, made up primarily of outside elements, has a much less integrated approach.

The issue of social control is a volatile one in **Unalaska**. The focus of **this** controversy is the Department of **Public Safety**. This is the agency responsible for the protection of property and lives in the community. The **DPS** consists of three administrative divisions: police, volunteer fire department, and Emergency Medical Services. Full time personnel include the chief, seven police officers, a **police division commander**, a fire department division commander, an EMS director, **four** corrections officers, and a clerk typist (**Unalaska Dept. of Public Safety 1981:2**). The fire department consists of two companies, one based on **Amaknak Island** and one on **Unalaska Island**, each with thirteen volunteers. There is also an Emergency Dive team. The **DPS** assumes a sizeable proportion of the City budget with \$613,491 allocated for police protection in 1981, \$102,999 for fire protection, and \$25,608 for EMS (**Unalaska Dept. of Public Safety 1981:17**). The 1982 budget for the entire Department of **Public Safety** in the General Fund was \$751,788. The revised FY83 budget was \$960,832 and the approved FY84 budget is \$937,998.

The police powers of the city actually extend only to the city limits, although the **DPS** is often involved in emergency medical action or search and rescue for a much larger area. In addition to the **DPS**, law enforcement services are provided by an Alaska State trooper, stationed in **Unalaska** since late 1981. There are also two State Fish and Wildlife Protection Officers in **Unalaska** who possess certain **police** powers, although they are generally concerned only with violations concerning fish and game. In addition, **two** of the processors have in the past hired night watchmen, but these individuals are not empowered to make arrests.

The police department is located in the center of **Unalaska** in a single building. The station consists of a waiting room, a squad room, office, and a small kitchen (**Alaska Consultants 1981:60**). The **Unalaska** jail, located in the same building, contains three cells designed to separate women and juveniles from male prisoners. However, the facility has, in

the past, been overcrowded during the king and tanner crab seasons. The facility also is used to house prisoners being transported from other Aleutian jurisdictions to Anchorage pending completion of travel arrangements.

Police equipment includes eight late-model patrol vehicles with portable FM radios with telephone capability, a 17-foot Boston whaler for search and rescue operations, and a 1980 modular ambulance (Alaska Consultants 1981:61).

The department has become a particular target of the group known as the Citizens for Responsive Government (discussed above). This group is, in general, opposed to the rapid expansion of the city government which has occurred in the last decade and they feel valuable city funds are being wasted on personnel who are not justified by the size of problems of the community. To explore this issue in relation to the size and scope of law enforcement in Unalaska, we will first consider the nature of criminal activity in Unalaska, then discuss formal mechanisms of control, and finally note the informal means of social control most prevalent.

Criminal activity in Unalaska adheres to a pattern which is typical both of a frontier environment and a "boom town." Much of this activity is related to the use and abuse of alcoholic beverages. Alcohol is not only a law enforcement problem but has also become a major political issue recently. Several businessmen, particularly the bar owners, have advocated the extension of hours of operation, including Sundays. This has mobilized several community factions, including many families, the Aleut leadership, and members of local religious groups against the extension, and many businessmen and fishermen in favor of it. This issue is complicated by the current business composition of the city council. Several feel there is a conflict of interest. Another problem with controlling alcohol-related violence is the failure of the bars themselves to accept responsibility for drunks by ejecting them from the bar. None of the bars employ bouncers, but instead depend on the police to act as bouncers for them. Whenever there is trouble with a drunk the police are automatically called, and much of their time is spent in this activity. However, it also encourages the local perception of too many police, since they are seen so frequently by so many people in the bars.

According to the local magistrate, the nature of criminal activity in Unalaska has changed somewhat in the last few years, following the classic pattern of criminal activity in a boom town. When the boom (in this case, for crab) began there was considerable public violence, especially alcohol-related assaults and fights. The next stage was an increase in rapes and robberies. Finally, families began to move in as the boom became institutionalized, and with them came a demand for greater police protection. This was the phase which led to the rapid growth of the police department from one, to sixteen officers. Professional people began to move in and demand further protection. Once the boom began to wane there was a decrease in assaults and theft and an increase in civil suits, as people no longer had the high incomes to which they had become accustomed, and they became increasingly concerned over money and involved in litigation over it. At the same time criminal cases are down. The result appears "as if all hell is breaking loose" but in fact the incidence of criminal activity is down, and the

bulk of cases are civil in nature.

Nonetheless, the level of criminal activity in Unalaska is remarkably high for a community its size. In 1981, the police department responded to over 13,200 calls for assistance. The most serious crimes are assaults, rapes, burglaries, and thefts. As indicated by Table 15, all have undergone significant increases in the past three years, and almost all, particularly rapes and assaults, are alcohol-related.

Table 15

City of Unalaska
Department of Public Safety
1981 Annual Report

Criminal Activity

Category	1979	1980	1981
Total Cases	224	655	756
Homicides	2	0	2
Burglary	13	31	31
Assaults	66	87	72
Theft	28	78	86
Sex Crimes	1	4	9

According to the Department of Public Safety Report of 1981:

1981 saw a stabilization of prisoners incarcerated in the Unalaska safekeeping facility. Prisoner count for 1979 was 233, 1980 being 329 and 1981 counted 322. However, it should be noted that the actual time served by these prisoners has seen a steady increase from 376 in 1979 to 533 in 1980 and a record 655 days served in 1981. That is an average of two people per day in 1981. Better support from the Court and well investigated cases are reflected by these statistics (1981:4).

The same report notes that in 1981 custody cases included 34 felonies, 302 misdemeanors, and many agency assists. Unalaska Public Safety Officers also assisted in the arrest of two felons wanted by United States Federal Marshals.

It should be noted that these figures do not seem to support the contentions of the magistrates reported earlier, that assault and related crimes are declining. However, it should be remembered that the recent expansion of the Department of Public Safety has probably resulted in a greater response ability on the part of the police, with the result that the statistics may have been an artifact of the increased availability of the police to respond to more calls.

Traffic-related incidents are also on the rise. The DPS Report for 1981 notes that:

In 1980 a total of 28 traffic accidents were reported with no fatalities. 1981 records show 58 traffic accidents with two fatalities. Both fatalities were alcohol-related accidents. Driving while intoxicated charges in 1980 were 55 with 32 convictions. This year had 38 individuals charged with D.W.I. and 27 convictions with 4 cases still pending. Regular court calendars, professional investigation practices and increased traffic enforcement have resulted in 84% convictions of criminal cases filed. The officers wrote 190 traffic citations and 64 warnings in 1981. This was an increase over the 1980 totals of 127 citations and 34 warnings (Unalaska Dept. of Public Safety 1981:6).

As we noted, the major law enforcement agency is the Department of Public Safety. The department is the focus of a good deal of controversy in town, and the issue seems to bring out very strong opinions. As recently as 1974 there was only one policeman in town and there were three or four public works employees who occasionally doubled as policemen. Now there are sixteen Public Safety Officers, trained in law enforcement, firefighting, and emergency medical care. Some are also trained as search and rescue scuba divers. Few residents seem neutral, but rather most are either strongly in favor of the expansion which has occurred, or strongly opposed. Many feel that the department over-expanded during the period of the crab boom, and now is too large for the city in the aftermath of that boom. However, the police chief is understandably reluctant to yield the men, material, and funding accumulated over the years.

There is currently some dissension within the police department as well. The issue is primarily one of pay, with the officers feeling they should get additional pay, particularly as they are constantly upgrading themselves through firefighting training, lifesaving techniques, and so on. A related problem is the high rate of turnover which the department has experienced. The last police chief resigned in early 1983 and a new chief was just recently hired. Many of the officers see the Unalaska department as an opportunity to gain experience which would be difficult to gain in a major urban area. Most view it as a stepping stone to eventual employment elsewhere, a chance to get some training and experience. This causes several problems.

First is the issue of pay. In order to attract qualified personnel to Unalaska, it is necessary to pay them well, but unfortunately this draws many individuals who accept the position just for the pay. Second, the more training provided, the more attractive the department is as a stepping stone. Individuals will come to get trained, and after all that investment has been made, they will leave the community. There are also problems with supervisors, few if any having supervisory positions before coming to Unalaska and thus lacking experience, which would be helpful in their present positions.

Another problem noted by several members of the police department is the relationship between the police and the citizens. They note that in a small town it is difficult to maintain a distinction between an individual as a lawbreaker and an individual as a friend. It is equally difficult for the officer to "put down" his official capacity. Everyone

knows who **is a police officer**, and even when **the individual is off work he is treated as such**.

Associated with the discrepancy between urban-oriented law enforcement in a rural-oriented environment is the political nature of law enforcement. As noted by the former police chief, "every action we take is political," in the sense that it is subject to public scrutiny and contention. Selective enforcement of the law which is common practice elsewhere brings with it charges of "favoritism" in Unalaska. The growth of the police department, viewed by many as an attempt to acquire power, is a political issue. The placement of police activities in the political arena, according to police officers, hampers effective law enforcement.

Faced with these problems the DPS has increased its emphasis on public relations in the last few years. To combat the problems of high turnover and the lack of supervisory experience, personnel have been involved in various training programs. The role of the department in providing emergency medical services, also promotes community goodwill. Much of the hostility against the police force comes from members of the Aleut community, who fear them because of past experiences with police brutality. In the past, harassment of Aleut residents by law enforcement officials, both military and civilian, was common and while there is no indication that such harassment occurs today, many bitter memories remain. The current administration of the department appears to be sensitive to these issues and has made progress in allaying these traditional fears.

The second administrative division of the Department of Public Safety is the volunteer fire department. The Unalaska Volunteer Fire Department is housed in two separate stations. The oldest, a wood frame structure with two bays, is located in Unalaska adjacent to the Unalaska Creek bridge, while the second, also containing a single bay, is housed in the Unisea Mall complex on Amaknak Island. Fire protection is provided throughout the road-connected area within the City's corporate limits, including fish processing vessels tied to docks along the waterfront.

Firefighting equipment consists of five vehicles: A 1978 quick response vehicle; a 1946 Dodge truck, with a 750 gallons per minute pumping capacity, stationed on Unalaska Island; a second quick response vehicle; a 1,000 gallon tanker; and a new Crash-Fire-Rescue truck, with a 1,000 gallon water capacity, stationed on Amaknak Island. The department also has two portable pumps and a 1,000 gallon holding tank used for pumping and storing water, from surface sources, in areas without hydrants (Alaska Consultants 1981:62-63).

Nineteen eighty one was considered to have been a very effective year for the Unalaska Fire Department. Fire calls declined from 52 in 1980, to 48 in 1981. There was a corresponding drop in dollar loss from \$1.2 million in 1979 to \$130,000 in 1980 to \$94,000 in 1981, largely the result of increased training and equipment and the development of a fire prevention plan. Despite this improved safety record, however, firefighting efforts in Unalaska continue to be plagued by its inadequate hydrant system, particularly on Amaknak Island. This is especially acute during the winter months when water levels are very low. High

winds also pose a problem, "particularly in the Unalaska townsite where many buildings are old and close together and where a wind-swept fire could spread rapidly from one unit to another" (Alaska Consultants 1981:63-64).

The court system is represented in Unalaska by a state district court, which handles primarily misdemeanors and civil suits under ten thousand dollars. The court hears approximately 300 to 350 misdemeanor cases per year and about 40 to 50 felonies. However, since the crab boom has subsided, these figures have dropped somewhat, and the court today probably handles two-thirds as many cases as it did a few years ago. The most frequent kinds of cases involve assault and theft, and usually these are alcohol-related.

The magistrate handles the day-to-day proceedings of the court, but as yet, Unalaska does not have a resident public defender, nor is there a district attorney in town. More serious cases must await the judges, who come into town on a six week or two month rotation, during which time local residents also have access to public defenders and a district attorney. There is no professional legal service available in town, although there is one paralegal aide. Because of the inadequacies of the legal system, there is a high risk of legal errors resulting in case dismissals.

Up to now only formal social sanctions has been discussed. However, every community, particularly small scale communities, depends also on informal social sanctions for the maintenance of social control, particularly on a day-to-day and face-to-face basis. Among the Aleut portion of the community social control appears to be very much an individual affair. There is little social censure for fighting or alcohol abuse. Although there is evidence to suggest that alcoholism on the part of Aleut leaders is the cause of some loss of prestige for these individuals, alcohol abuse and alcohol-related assaults and other criminal behavior do not meet with social censure as a rule. This is not to suggest that the Aleut population is uninterested in the social actions of its members. The fact that Aleut residents are well known to one another and interact with each other frequently over periods of many years means that there is a strong support network available for the individual. It is simply less accepted among this segment of the community that public censure of an individual is justified. Nonetheless, when an individual does become intoxicated or runs into difficulty, there are almost always people ready to take care of him/her and insure that they are safe. Social controls do operate, but they are not aired as publically as would be expected by an outsider.

The Aleut population is more integrated and cohesive than individuals on Amaknak Island which is made up primarily of people from outside the community. There, dependence is much heavier on formal means of social control, largely because of the lack of an integrated social network which would allow for the efficacy of informal controls. Thus, the police and formal agencies are used with less compunction by this group than is the case with the Aleuts. The Aleuts generally avoid interaction with the police, and prefer to settle their difficulties among themselves if possible. The non-Aleut group, however, is very quick to call on these formal agencies, partly because of their outside exper-

ience and partly because the lack of a tight **social** network precludes the use of informal methods.

2.2.3.5 External Affairs

A final aspect of the political structure of the community involves the relations between **Unalaska** and the outside world, particularly at the state and national level. At several points in the preceding discussion we have alluded to developments at the state or federal levels, which are important to **local** citizens. Here we will simply note the major structures through which interaction between the community and these more encompassing structures takes place.

Until recently, the state representative for this region was a **non-Aleut** from **Unalaska**. However, he lost the most recent election to a candidate from Bristol Bay. This is believed by many **local** residents to have weakened **Unalaska's** bargaining position at the state level considerably (as suggested in the cut of funding from the **FY83** budget for the airport expansion project which was directly attributed by the defeated representative to his failure to win **re-election**), although there has been **no real** evidence to support this contention.

Another concern of the community, which involves a state level organization, has to do with subsistence activities, and the view of the **State** of Alaska Department of Fish and Game concerning such activities. This is a pressing local issue, partly because it has recently, particularly subsequent to the passage of **ANCSA**, become an extremely important element of **Aleut** identity to pursue subsistence activities. This leads inevitably to conflicts with the Fish and Game Department which is seen by many **Aleuts** as an outside force attempting to prevent them from pursuing centuries-old practices.

Unalaska has recently seen the formation of a local branch of the Alaska Native Women's Statewide Organization. The organization is based in Anchorage and was founded in **1979**. The **Aleut** women of the community have perceived the need to take action to preserve the integrity of the family, traditional language and culture. In essence, the **local** branch of the **ANWSO** has taken over much of the same structural position once held by the old Russian Orthodox sisterhood.

The most important national level effects being felt in **Unalaska** are a result of the actions of the Department of the Interior, in opening up certain areas of the Bering Sea to offshore oil lease sales. The **potential** for oil-related development which has resulted from this will be a major issue facing the community of **Unalaska** over the remainder of this century.

A common perception among **Unalaska** residents is that outside elements, in this case the oil companies, are able to play one community off against the other and in the process hurt the bargaining position of **all** the communities in the region. This is not a situation which has occurred with the oil companies alone. People note that the same thing has occurred with the seafood processors as when it appeared that **Akutan** was being played off against **Unalaska**, enabling the processors to acquire significant financial breaks from the former for relocating

there. One suggestion for overcoming this regional atomism has been the creation of a borough structure which would unite all the communities of the region under an encompassing political structure. However, the history of noncooperation among these communities may preclude such a development.

2.2.4 Religion

The religious system of Unalaska, in contrast to several other communities in Alaska, plays a significant role in the tone and direction of social life for all residents, directly or indirectly. For the members of the Russian Orthodox Church and the other denominations, religion is an important locus of social identity and provides important networks of social interaction. Religion also plays a role in the provision of certain social services such as counseling. Religion is increasingly becoming a factor in the political arena as community residents with similar religious preferences work together to influence the course of community development and affect community policy on various issues.

The great influence of religion on the social system of Unalaska is largely a product of two different factors. The first is the community's historic importance as a regional center for the Russian Orthodox Church. The local church is regarded as one of most impressive in Alaska and was the seat of a Russian Orthodox bishop who administered church activities throughout the Aleutian and Pribilof Islands. The Russian Orthodox church was a major institution of the Aleut community and remains a direct link between the traditional Aleut villages of Unalaska and the present-day Aleut population of Unalaska. Second, religion is viewed by many community members as playing a role in the future of the community. With the increase in social and psychological problems resulting from the period of rapid economic and population growth, religion has relevance to local residents as a possible stabilizing factor. This opinion is not shared by all local residents, however, resulting in the creation of rigid social boundaries.

There are three major components of the religious structure of Unalaska, each identified with a segment of the local population. The first component, associated with the traditional Aleut community, is the Russian Orthodox faith and church. The second component, associated with many of the recent non-Aleut immigrants to the community, is Christianity, most visibly represented in Unalaska in the Unalaska Christian Fellowship. The third major component, also associated with a large segment of the non-Aleut population of Unalaska, is actually nonreligious or secular. This component is more a state of mind and attitude than it is a set of institutions and behavior. Each of these three components will be examined in this section.

2.2.4.1 Russian Orthodox Church

The oldest church in Unalaska is the Russian Orthodox Church of the Holy Ascension. Since its original construction in 1820, it has served the religious needs of the community as well as provided the focus for the identity and social organization of the Aleut population. Although

introduced by the Russians in the late eighteenth century, it has come to be regarded as an **Aleut institution**, with **Aleut** clergy and **Aleut** members. Throughout its history, membership in the church was **synonymous with residence in the community**.

Throughout the years, the role of the church has undergone several different revisions. With the initial conversions to the Russian Orthodox faith, the church in Unalaska served as an intermediary between the **Aleut** community and the Russian authorities. As noted above, the first Russian Orthodox priest to have visited the community travelled back to Russia in the late eighteenth century to petition the government for better treatment of the **Aleuts**. Under the leadership of Ivan Veniamenov, the church became the focal point for an effort to preserve traditional **Aleut** culture in the face of growing encroachment by Russian traders and the values, attitudes and behavior of the West. At the same time, membership in the church was a badge of 'civilization' entitling the **Aleut** members to a measure of respect, or at least a measure of tolerance, from the Russians. The educational system which was an important part of the early church enabled the **Aleuts** to learn the language and culture of the Russians so that they could improve their own position in terms of dealing with the traders and local authorities. In the American period, the Russian Orthodox church was the focus of **Aleut** community life. Even during the postwar period, the village council and church council were one and the same and with the decline of **Aleut** leadership after the community became incorporated as a first-class city, the church became even more important because it was the one institution in which the **Aleuts** were able to achieve some measure of control over their own lives. The village chief was also the warden of the church and while his political role diminished with the influx of **non-Aleuts**, his leadership role in the church continued well into the post-war period.

Nowadays, the church plays a somewhat reduced role as the focus for the social organization of the **Aleut** community. The power and prestige of the church in community affairs has been weakened by the influence of the larger sociocultural system and the growth of the **non-Aleut** segment of the population in Unalaska on the one hand and increasing secularization among the **Aleuts** on the other. Nevertheless, the church continues to play an important role as a focus for ethnic identity, particularly in the sense of tying the present community to its past by virtue of the church's status as a national historical landmark, and in the sense of providing them with a set of beliefs, customs, and networks of interaction which distinguish the **Aleuts** from the **non-Aleut** residents of Unalaska.

The current church membership is estimated by the Russian Orthodox priest to be somewhere between 175 and 200 people and consists almost exclusively of **Aleuts or non-Aleut** spouses of **Aleut** residents. Attendance at weekly services, however, is much smaller, usually ranging in size between 20 and 40 members. Those who attend church services on a regular basis are for the most part either older community members or church leaders and their families. The weekly attendance appears to be overrepresented by the old members and the very young. During the holidays, however, particularly Christmas and Easter, participation in church activities increases.

Despite the small weekly attendance, belief in the Russian Orthodox faith continues to be strong. Religious icons and crosses, for instance, can still be found in the homes of most of **the Aleut** residents of **Unalaska**. Many of **the** value conflicts affecting the **Aleut** community are due to the continuing influence of the traditional religious belief system.

There are two types of leaders in the church: religious and secular. The religious leadership is vested in the office of the priest. The local priest has a great deal of influence over the direction of the church in the community and plays a visible role in certain secular aspects of community life as well. In the recent past, the priest has served on the city council and continues to be active in many aspects of community **life**, such as teaching courses in **Aleut** language and culture. He also served as a member of the national commission investigating wartime internment of **Aleuts** and Japanese-Americans, making him a figure of regional importance.

Despite his position and involvement in community activities, the current priest may be viewed as possessing a marginal status in political and cultural senses of the term. With respect to his position in the city council, the priest was nominated to the position because he could represent the **Aleut** community by virtue of his ethnic heritage but not pose a threat to the non-Native segment of the community because **he** is a shareholder in a Native corporation in another part of the state. He possesses a neutral status and is generally regarded as not being **politically** threatening. With respect to his position in the community, the priest is not seen as a threatening leader, although his involvement in local activities is high.

The priest and his wife are supported by a small salary but both supplement their income by working in other positions as well. It is for this reason that the two are working as teacher's aides in the local school and run the **Aleut** language and culture program.

Lay leaders are also important to the performance of church services and social activities and are usually individuals who hold leadership positions outside the church. There are two formal offices held by lay leaders in the church. The warden is the caretaker of the church building. It is his responsibility to make certain that the church is open and well-maintained. He is also in charge of hiring new priests when necessary. The president is in charge of church finances. **He** manages the funds which are obtained from the congregation and sees to it that bills are paid and funds are made available for special purposes such as church festivals and special events. These lay leaders are assisted by a church committee. In recent years, however, the duties of the warden and the church committee have declined and even the current membership of the board is unclear.

In the past, the church also supported a social infrastructure in the form of religious brotherhoods and sisterhoods. Principally fraternal and **sororal** institutions, these groups usually saw to the welfare of the church itself as well as the entire community. In times of economic hardship or famine, these groups would bring food or provide assistance

to needy community members. In the early twentieth century the **Unalaska** Russian Orthodox Church supported two brotherhoods and one sisterhood. One of the brotherhoods disbanded prior to **World War II** and the other disappeared shortly after the war. The sisterhood remained in existence until the early 1970s, largely due to the strong leadership of one of the older female **Aleuts** until her death.

2.2.4.2 **Unalaska** Christian Fellowship

There are different Christian institutions in **Unalaska**. Historically, a Methodist mission played a major role in the community, operating a local school, small clinic, and the Jesse Lee Home for orphans from 1890 to 1925. The mission was run by the Women's Home Missionary Society of the Methodist Episcopal Church.

The major Christian religious institution in **Unalaska** today is the **Unalaska** Christian Fellowship. The Fellowship was an Assembly of God mission for several years. It has been independent from the Assembly of God denomination for the past two years and currently maintains a non-denominational status. The Fellowship also has ties with the Methodist mission in that the family of the last Methodist minister in **Unalaska** are active in the fellowship, having assumed positions of leadership and exerting considerable influence over church policy.

The congregation of the church is an active one, believed to be somewhere between 75 and 80 individuals. It consists of three major components: a group of recent immigrants who have come to **Unalaska** to perform community service through the auspices of the Fellowship, a group of "permanent" non-Aleut residents who have lived in the community for a number of years, and processing workers and management personnel. Participation in church activities is very high. The majority of members attend the Sunday services and social activities also draw large numbers of members and visitors.

Within the congregation there are a fair number of charismatic. There was also an instance of fission within the church, with one splinter group leaving the congregation to hold prayer and fellowship services by themselves. The cause of this split was a dispute over religious doctrine. However, it has not yet resulted in the formation of a new church.

The Fellowship is also very active in its efforts to recruit new members. These efforts have enjoyed some success among two particular segments of the community. One segment is the transient processing population. The Fellowship is the only religious institution in **Unalaska** to actively pursue members from the processors, largely by inviting them to attend various social functions and providing transportation for those interested in attending religious services. The other segment of the community which has been subject to missionary activity is the young. **Unalaska** may be viewed as a community ripe for missionary activity because of the social and psychological problems associated with recent growth. Given the high percentage of broken families and the increasing problems of alcohol and substance abuse, the Fellowship makes a special effort to minister to young members of the community.

One segment of the population of Unalaska which has thus far resisted, for the most part, the Fellowships efforts to recruit them, is the Aleut community. The Fellowship does include a few Aleuts within its congregation, but these are primarily fishermen or individuals who have a marginal status in the Aleut community of Unalaska, either because of their income or because they are from other communities.

The present minister of the Fellowship came to Unalaska in 1981 at the suggestion of his son, already settled in the community, who saw the need for a Protestant minister in the community. A former schoolteacher, the minister has worked to enlarge his role by participating in several different community activities. While public reaction to his arrival was mixed, the minister has enjoyed considerable support from the community. He usually directs the organization of social events, Fellowship activities such as the renovation of the Jesse Lee Home, and church ministry policy. The minister also provides counseling for church members, assisting them in dealing with various social and psychological problems.

The Fellowship provides a full weekly schedule of religious and social activities for its members. On Saturday evenings, communion services are held at the community church for Roman Catholics in Unalaska. Protestant worship services are held on Sunday mornings. A Cooperative Woman's Ministry meets on Monday evenings and a Men's prayer meeting is held on Friday evenings. A Church Bible School for children is also held on Monday evenings. On Wednesdays, there is a Bible Study for young adults and a Home Fellowship for adults which are held at the same time. After Sunday services, a luncheon or picnic is held with recreational activities such as softball being held afterwards. There is also a pot-luck dinner on Wednesday evenings before the Home Fellowship. These social activities provide the major opportunity for church members to interact with each other as well as with visitors from other segments of the community.

In contrast to the Russian Orthodox Church, the Unalaska Christian Fellowship is very social in its orientation. Whereas the Russian Orthodox church was one institution in a cluster of social groups which comprised Aleut social life, the Christian Fellowship has become an institution of greater relevance to the social life of its members. It is the center of a well-defined group of Unalaska residents, the Christian community. Fellowship members share an explicit set of beliefs and interact principally with each other in both social and religious contexts. In contrast, while there are activities in the community that predominately involve Aleut residents, it is ethnicity, and not church membership, which is the critical factor in determining networks of participation and interaction. Membership in the Russian Orthodox Church is exclusive, whereas membership in the Christian Fellowship is inclusive. This is to say, that the latter institution is used by members to isolate themselves from other segments of the community while members of the Christian Fellowship use the church as a basis for including other segments of the community in their sphere of social life and religious practice. The Fellowship places a higher priority on recruitment than the Russian Orthodox church.

The role of the Unalaska Christian Fellowship in the community is a

strong one. It is the church with the highest attendance and it can be argued that this church has greater political clout in the community than the Russian Orthodox Church. In the recent political debates over the extension of hours that bars may serve liquor, several of the prominent members of the Fellowship's congregation spoke on the moral aspects of the issue, appealing to religious values in an attempt to influence a political issue.

The Unalaska Christian Fellowship is also coming to be used by the community at large in their efforts to deal with some of the social problems currently plaguing Unalaska. The minister has been approached by local residents for counseling and the city government has approached the Fellowship to provide a facility to temporarily shelter victims of parent or spouse abuse. The Jesse Lee Home has recently been used for this purpose although no established procedures have been developed to handle cases of this nature.

2.2.4.3 Catholic Church

The Roman Catholic Church is represented in Unalaska in the form of St. Christopher by the Sea Mission. There is no priest in Unalaska and the responsibility for the mission is currently assumed by a Catholic nun. The congregation is a small one and, as no priest is available on a regular basis to conduct mass, usually gathers together for a communion service held in the facilities of the Unalaska Christian Fellowship. These services are also attended by members of the Fellowship, the Catholics, in turn, frequently attend the religious services of the Fellowship. There is a good deal of overlap in the social networks of the two congregations and in some contexts, particularly in contrast to the Russian Orthodox Church, they can be viewed as one social group.

2.2.4.4 Baha'i Faith

Unalaska also has a small Baha'i fellowship. The Unalaska fellowship began as a mission in 1957 and its members were involved in the establishment of one of the first shore-based crab processing plants in the area. During the 1960s the fellowship reached its peak and a few of its members were officials in the statewide Baha'i organization. The fellowship experienced a decline in the 1970s, reaching a low point in the late 1970s. Recently, there has been some resurgence of activity. Members get together twice a week for "Fireside Meetings."

2.2.4.5 Church of Latter Day Saints

There is a small Mormon congregation in Unalaska. Members gather for Sunday worship at the high school. The congregation recently attempted to seek funding from the Church of the Latter Day Saints to construct a church of their own, but were unsuccessful because they could not sustain the required minimum weekly attendance at their services. One of the leaders of the church recently left Unalaska and, with his departure, some of the vitality which sustained the congregation, was lost. Whether his departure will have a significant long range impact on the Mormon church in Unalaska remains to be seen.

2.2.4.5 Secular Organizations

As is the case throughout Alaska and the United States in general, for a large segment of Unalaska's population, religion plays little or no role in social organization. Religious beliefs are replaced with "secular beliefs," and participation in religious organizations and attendance of religious services is minimal, if it occurs at all. There are, however, no "secular" organizations in Unalaska which replace the role of the church.

While secularism has been on the rise throughout rural Alaska, in Unalaska it takes a peculiar form. The growth and influence of the Unalaska Christian Fellowship has, to a certain degree, served to polarize the religious and non-religious segments of the community. Among many non-religious individuals in the community, there is resentment over what is perceived to be the "righteous attitudes" of the Christians and a concern over their increasing political power. For those attracted to Unalaska because of its "frontier spirit," the thought of the possibility of the legislation of morality is particularly distasteful. If the Unalaska Christian Fellowship does indeed become a politically powerful voice in the community, it may result in a unification of the disparate secular elements of the population and the coalescence of distinct non-religious, perhaps even "anti-religious" opinions and attitudes.

2.2.5 Education

Formal education has been available in Unalaska since the first school was established by Veniamenov in the early nineteenth century. Nevertheless, much of the existing educational system is relatively recent, having come into existence with the economic boom of the 1970s. Furthermore, community attitudes toward education have undergone some revision with the recent economic decline. As the crab fishery continues to be depressed, staying in school for longer periods of time seems a likely possibility. As the community becomes increasingly involved in the larger sociocultural system, whether through fishing or oil development, the role of education in the community becomes all the more important for local residents. As more outsiders move into the community, the diversity of interests and needs increases accordingly, placing additional demands on the existing educational structure. This has already been evident in the growth of adult education classes and the pre-school in recent years. For many residents, these classes are seen as improving the quality of life in Unalaska.

The educational subsystem of Unalaska can be divided into pre-school, primary, secondary, and adult. Educational opportunities exist for virtually all members of the community. However, not all segments of the community make equal use of the educational system.

2.2.5.1 Pre-school

The Unalaska-Dutch Harbor Cooperative Preschool is a relatively recent institution in the community. It began during the 1981-82 school year as a pilot program and met with such success that it has opened on a full-scale basis for the 1982-83 school year. Classes are held for

three and four year olds each week day at the Unalaska Community Center. Funds for running the activities have thus far come from parents whose children participate in the program. Community response to this program has been very favorable with virtually all of the parents of pre-school age children electing to enroll their children.

2.2.5.2 Primary and Secondary School

2.2.5.2.1 Facilities

Because of its status as an incorporated first-class city, the educational needs of the community of Unalaska are met by an independent school district rather than the Rural Education Attendance Area which serves other communities in the Aleutians. The Unalaska City School District provides educational services for students from Kindergarten through high school. These services are provided at the Unalaska School which includes both primary and secondary grades. The School, however, is not accredited although it is scheduled for an accreditation review by the State Board of Education during the winter of 1982-83.

The Unalaska School is organized into two basic units, elementary and secondary, both of which are located in the same complex, located on a 5.5 acre site on the Unalaska side of the city. Within the school complex, however, the elementary and secondary grades are physically and administratively separated. The secondary school component is located in the main building, constructed in 1973. The elementary school component is housed in a new wing at the northwest end of the main building (Haeg Bettis Associates 1982:18). Existing facilities include 20 general classrooms two special education rooms (one for elementary and the other for high school students), two shop areas, a band room, a library, a full gymnasium which also hosts the school's hot lunch program, a kitchen, two lounges, a nurse's office, administrative offices and several storage and work rooms (Alaska Consultants 1981:67).

Outdoor school recreation facilities include a playground with a variety of play equipment and a general sports area. The community pool is also located near the school plant and is often used for school activities. The school also has a small fish hatchery on the Iliuliuk River within walking distance of the school. During non-school hours both the library and gym are available for public use.

2.2.5.2.2 Catchment Area

With few exceptions, the Unalaska School serves the entire school-age population of Unalaska. Occasionally, students from Unalaska have been sent to other school districts in the region on a temporary basis to bolster attendance figures in the communities of relatives for funding purposes. The fact that the existing school in Unalaska is not accredited has been responsible for the loss of some of the long-term transient and semi-permanent resident families for the community who would like their children to be more adequately prepared for post-secondary education.

In the past, the school provided services for students from the communities of Nikolski and Akutan as well, but since the construction of

facilities in these two communities, the school, with few exceptions, serves children and adolescents from Unalaska only. Several students are children from processor families and spend no longer than one or two years in the local schools. Of the students who attended school in the past year, 40% were estimated by the principal to have been new to the community. Bus service for Amaknak Island and those living in the more remote areas of Unalaska Island is provided by a private contractor (Alaska Consultants 1981:67).

Enrollment figures for the past ten years are included in the two tables below. From 1976 through 1981 the school population grew at a rate of 12.5%. The junior-senior high school grades grew at a rate of 15.5% during the same period. The enrollment showed a decline in the past two years, however, indicating that the school-age population has begun to level off with the decline in the seafood processing industry (Haeg Bettis Associates 1982:20-21). In fact, because the second grade only has five pupils, it will be combined with the third grade and taught by one instructor.

Table 16

Total Unalaska School Population (K-12)
1972-1983

<u>School Year</u>	<u>Enrollment</u>
1972-73	113
1973-74	103
1974-75	117
1975-76	122
1976-77	119
1977-78	133
1978-79	140
1979-80	160
1980-81	199
1981-82	165
1982-83 (projected)	160

Table 17

**Unalaska High School Population (7-12)
1972-1983**

<u>School Year</u>	<u>Enrollment</u>
1972-73	49
1973-74	51
1974-75	64
1975-76	66
1976-77	58
1977-78	63
1978-79	63
1979-80	73
1980-81	93
1981-82	84
1982-83 (projected)	72

Tables 16 & 17 Sources: Haeg Bettis Associates 1982:20
Alaska Consultants 1981:69.

2.2.5.2.3 Personnel

School district personnel include a superintendent and one principal for grades Kindergarten through Twelve. There are nine certified elementary school teachers and nine certified high school teachers, a part-time librarian, two half-time bilingual (Aleut) education teachers, and nine classified personnel.

The teacher rate of return is viewed as generally stable. Traditionally, the turnover rate for qualified teachers in Unalaska, as has been the case throughout Alaska, has been high. In the past decade, this rate has levelled off and begun to decline somewhat. In the past few years, the average turnover rate has been somewhere between 10 and 15 percent per year. In the past year, however, only one teacher elected not to return. Due to a projected decline in enrollments and the combination of second and third grades into a single class for the 1982-83 school year, it was decided not to replace the teacher. There appears to be a higher turnover among school administrators.

The Russian Orthodox priest of Unalaska and his wife serve in part-time capacities as bilingual/bicultural education instructors. They teach courses in Aleut language and cultural traditions which are attended mostly by Aleut students. Another teacher serves as a vocational counsellor although there is no officially designated counseling position at the school.

2.2.5.2.4 Administration

The Unalaska City School District is governed by a five person, city-wide, elected school board. This board is responsible for the selection

of school administrators and ultimately responsible for course selection and curriculum. The chief administrative officer is the superintendent and the chief academic official is the school principal. The school administration is responsible for the hiring of teachers and maintenance of the school plant, while the City is responsible for the construction of new school facilities, as required by state law (Alaska Consultants 1981:67).

Funding for the school comes from a variety of sources. The 1982-83 school budget was \$1,970,726. A significant amount of the funding for the school comes from the city. In the 1980-81 school year, the city's share of the budget was \$140,000. By 1982, this figure had jumped to \$210,000. Other funding sources include the state and federal governments. Funding for the Aleut education programs come from three sources: Indian Education Act funds, Johnson-O'Malley funds which filter to the school by way of the Bureau of Indian Affairs and the Unalaska Aleut Development Corporation, and the State Department of Education.

2.2.5.2.5 Educational Objectives

The primary objective of the Unalaska school is to provide a basic education comparable to that of any school system in Alaska. Besides regular academic courses, a number of special programs are available to Unalaska students. Title I and Title IV federal funds provide individualized instruction in mathematics, reading and language and specialized instruction is also available for students with learning disabilities, including hearing problems (Alaska Consultants 1981:68). In addition, the school operates a Graduate Equivalent Degree (GED) program, a fish hatchery program for high school students and the Aleut language and culture program. The "Cuttlefish" program, for which academic credit is given to high school students, produces a published history of the Aleutian Islands each year.

Both the level of achievement and motivation appear to be quite high for a rural school district. Recent test scores placed local students at a slightly higher level than the state average. The dropout rate is very low with only three high school students leaving out of a population of 85 in the past year. Despite the transience of many of the non-Aleut students, the motivation to learn appears to be high. A significant number of Aleuts are oftentimes under pressure from their families to pursue other activities or receive little encouragement for academic achievement in the home. Some of these students are also encouraged to abandon attempts to pursue further studies outside the community at a college or university and motivation suffers accordingly. The number of students who intend to go on to college is quite high. Of a recent senior class of 14 students, four were planning to attend a four year college and four were planning to attend a junior college or technical school. In the previous senior class of 17 students, 11 attended a four year college, junior college, or technical school.

Despite the high levels of achievement and numbers of students who leave the community to attend college, the number of local students who actually graduate from college is quite small. This is perhaps due to the sense of isolation in urban communities and homesickness. Aleut students have a particularly difficult time because often they are under a

good deal of pressure from their families not to leave the community. Unlike students from other rural communities, Unalaska students also often lack the financial incentive to pursue a higher education. As they witness fishermen earning more money in a single season than their teachers do in several years, these students often decide that the pursuit of excellence in school is not as rewarding as the pursuit of fish.

There is a widespread belief that more vocational counseling and training is needed. Until recently, the objective of the local educational system has been to encourage and prepare students for higher education outside the community. However, this has been revised in light of the local need for trained workers and the high dropout rate of local students in colleges and universities. There is an individual who does perform some vocational counseling at school by attempting to make students aware of these needs. An effort has been made by the special education teacher to secure jobs in the community for students but the school administration appears to be less enthusiastic about this venture than local employers. Vocational programs do exist in business and office machines, woodshop, welding and metalshop, and home economics, but these are seen as being low priority.

Providing leadership skills is another major concern among local educators. This is particularly important within the Aleut population as local leaders are increasingly called upon to assume additional responsibilities requiring greater expertise. With the passage of the Alaska Native Claims Settlement Act and the formation of the Native corporations came a need for a number of Aleuts with business and management skills beyond those currently available. It is a concern among those in power in Native organizations now that their children acquire these skills, although the sentiment is not often shared by the children themselves. The lack of enthusiasm of Aleut children stems from several different factors. One is the lack of well-paid positions. Most of these positions are essentially political offices and hard work itself provides no guarantee that the education will be put to good use. There is also the possibility that once the training is received the individual will not wish to return to the community. Finally, concern for the welfare of the Corporations and welfare of the Aleut people as a whole does not always supplant or complement personal goals until later in the individual's life.

In addition to formal classwork, the Unalaska school provides numerous opportunities for extracurricular activities. The most popular form of extracurricular activity in the schools is basketball. Interest in varsity and intermural competition as well as informal games is quite high. Other athletic events such as wrestling, cross country and track have met with only limited success. The student newspaper is also popular. Recently, however, the school has been under pressure from parents to increase the number of extracurricular activities available for students.

Formal parental involvement in the educational program is fairly minimal. Two notable exceptions are the parents committee for the Indian Education Program and a bilingual/bicultural committee. There is no local parent-teachers association at the moment, although in the past,

such an organization attempted to wield great power and influence in matters of school policy. Informal participation by parents varies widely by individual and by population segment.

Aleut parents are particularly interested in programs which promote an interest in Aleut culture among their children but few are perceived by school officials as willing to extend themselves to participate in this endeavor. Many do not take an active part in the formal education of their children and frustrated school officials often feel they view the school as being little more than a baby-sitting service. Aleut children seldom are given encouragement to pursue an education, particularly beyond the high school level. The reasons for this lack of support are varied but most relate to the parents' own experience in school. Most of the older persons in the community have memories of an education where an Aleut identity was looked upon as something not to be proud of. In the past, the major goal of non-Native teachers was to "acculturate" Aleut children, enabling them to "fit into" the mainstream of American life. In practice, this meant discouragement or punishment of behaviors that were considered to be Aleut, such as speaking the Aleut language (Jones 1969). It is also the case that some of the Aleut parents still find the school and the teachers to be intimidating. There was some resentment among Aleut parents, for instance, over the fact that in a recent kindergarten class of 13 students, four of the six Aleut pupils were held back. Although the school administration defended the action on the basis of a lack of adequate language skills on the part of the pupils, a few Aleut residents pointed to the incident as an example of discrimination. Aleut parents also find themselves in a bind in that some would like their children to succeed in school but do not wish them to leave the community, which is inevitable if a student decides to pursue a college degree.

Another problem encountered by the Unalaska school which affects all students, Aleut and non-Aleut, is one typical of many small, rural schools. The small size and budget precludes the offering of specialized programs for individual needs. Concern has been voiced in Unalaska, for instance, over the school's inability to meet the needs of gifted children.

2.2.5.3 Adult Education and Extension Classes

In addition to the Unalaska School District, there are two other programs which provide educational services for local residents. One is the Unalaska Rural Education Center of the University of Alaska. Established in 1978, the Center maintains an office in the city-owned Parks, Culture and Recreation Building. The program is managed by a part-time director and instructors come from all segments of the community. Occasionally, guest lecturers are brought into the community for short-term courses. A wide variety of courses on such topics as art, literature, typing, vocational skills, and EMT are offered. In the past year, the most popular courses were: Aleutian history, Watercolor Painting, Drawing, and Microcomputers. In the 1981-82 school year, 29 classes were taught and over 187 students were enrolled. Eighty-four percent of these students were Caucasian, seven percent were Aleut, and the remainder were Asian and Hispanic processing workers (Unalaska Rural Education Center 1982:10). An estimated 75 percent of the students are permanent

residents. Tuition is \$25 a credit for all courses except the EMT classes, which are free.

The second program is the Adult Basic Education Program. The program is funded by the State of Alaska and the Aleutian/Pribilof Islands Association and employs two half-time teachers. It has been in Unalaska for one full year and is aimed at people with math and reading skills at or below the eighth grade level. The program also offers GED programs for local residents and English language classes for processing workers. Community response to the program has thus far been light. Of those who have attended classes, about 50 percent are Aleut and all are young adults.

2.2.7 Health Care

Given the history of illness and disease in Unalaska referred to in the historical review, the health care subsystem is of vital importance to the well-being of the entire community. Beyond the traditional health care practices of the Aleut community, however, health care in Unalaska has been intermittent and inadequate throughout much of its history.

The contemporary health care system of Unalaska traces its roots to the clinic operated by the Women's Home Missionary Society from 1890 to 1925. The Bureau of Indian Affairs operated a hospital for local residents from 1933 until its takeover by the military during World War II. After the war, health care in Unalaska was provided by Navy corpsmen and occasional visits of government personnel on such vessels as the Hygiene.

In 1968 a local Health Council was established to raise funds for the health program. The council worked to acquire a building from the City Council to use as a clinic. In the following year, the city appointed a Board of Health for the City. The ground floor rooms at the back of the old school gym were secured for use as a clinic. The clinic opened on a regular basis a few times a week while the Board of Health attempted to solicit assistance from outside agencies.

In 1970, the city was approached by representatives of Alaska Children's Service, based in Anchorage. The ACS was interested in developing a child and family welfare program for Unalaska. Two community organizers were sent to Unalaska and a program combining health and social services was initiated. In 1971 the Board of Health was expanded to include two members from the local Aleut League Health Committee. In 1972, the Iliuliuk Family and Health Services was incorporated as a non-profit institution.

Health services in Unalaska today are provided by the Iliuliuk Family and Health Services Clinic. The clinic was constructed in 1976 and a major addition was completed in 1980. The facility has two overnight holding areas capable of accommodating three patients at a time, an emergency room, an X-ray room, a well stocked pharmacy, a laboratory room, four examining rooms, a dental area, a kitchen, four offices, bathrooms and a waiting room (Alaska Consultants 1981:65).

The current facility provides outpatient services, radiology, general ambulatory medicine and acute care to the City of Unalaska, including the fish processing industry, the domestic fishing fleet, crew members from foreign vessels, and residents of Nikolski. health care facilities (Alaska Consultants 1981:64-65). (Residents of Akutan, who once depended on the Unalaska clinic for primary care, now have a clinic of their own). In addition, the Clinic's radiology facilities are sometimes used by Cold Bay residents. Emergency transportation services are provided by a Department of Public Safety ambulance manned by a volunteer EMT-trained crew.

Surgery performed at the clinic is usually limited to hernias, appendectomies, sterilizations, and D&Cs. Bad accidents that occur on fishing boats in the area are usually brought to the clinic for treatment. Serious cases are taken by medivac flights to Anchorage but that usually takes about six hours depending on the weather, whether or not a suitable aircraft is in town, and the time of day (as the local airport cannot accommodate night landings). "According to Clinic staff, the facility serves roughly 8,500 outpatients per year. Patient loads are heaviest during the king and tanner crab seasons, sometimes reaching as high as 80 patients a day" (Alaska Consultants 1981: 66).

In addition to the clinic, emergency medical services are provided by the Department of Public Safety. Every member of the department is an EMT I with some completing Level 11 and Level 111 training as well (DPS Report 1981:11). In addition, the EMS branch is responsible for providing EMT training to other members of the community. In 1981, training in the community was as follows:

Table 18

Residents of Unalaska Trained in Emergency Medical Services

Emergency Trauma Technician	60
E.M.T. I	65
E.M.T. II	14
E.M.T. III	5
Advanced Cardiac Life Support	9
Cardio Pulmonary Resuscitation	35

Source: Unalaska DPS Report 1981:11.

EMS equipment includes a 1980 modular ambulance. In 1981, over 207 ambulance runs were made (DPS Report 1981:11).

In the past, Unalaska had an Alcoholism Treatment Center. It was the only organized center of its kind in the region and provided public education, individual counseling and referral, detoxification, outpatient services, rehabilitation and a halfway house. Facilities consisted of a one room, 2 bed detox unit and a 2 room, 4 bed intermediate and halfway care unit. The facility was supported by funds from both the city and the state (APIA 1978:46). While the program is regarded to have been successful by those who participated in it, the city withdrew

its support and the program's director resigned, effectively terminating the program.

Health care is also provided by a few different clinics which operate on a periodic basis. A private dentist from Anchorage provides services to Unalaska residents on a fee-for-service basis during periodic visits and the APIA sponsors an ophthalmologist who visits the community four times a year. A veterinarian also makes periodic visits to the community at which time he makes use of the clinic facilities.

There are two policy-making organizations which are responsible for the health care needs of the community. The first is the Health and Human Services of the City of Unalaska. Members are appointed by the City Council and advise on such matters as rat control, pollution and sanitation, and other health issues not directly related to clinical care.

The clinic operates under the auspices of Iliuliuk Family and Health Services, Inc., a non-profit corporation and is administered by an eleven member Board of Directors. A major reorganization in 1979-1980 resulted in greater efficiency and a board which is designed to be representative of the entire community. The board receives no compensation and serves as a policy-making body. It is ultimately responsible for determining health care and staffing needs.

The clinic's staff includes a full-time physician who is an osteopath who came to Unalaska in the summer of 1982 partially as the result of a desire to be a medical missionary. Prior to 1982, a physician from Kodiak was hired by one of the processors to provide service on a seasonal basis. Other staff members include a student physician's assistant, a lab/x-ray technician bookkeeper/acting director, and several clerical personnel. As noted above, a dentist visits the community once every two months and an ophthalmologist visits on a quarterly basis.

In addition to the clinic, local health care is provided by a team of EMS technicians and some of the processors. The EMS team, consisting of volunteers and employees of the Department of Public Safety, handle mostly accident trauma cases. The Pan-Alaska processing facility has a full-time RN while the other processors have untrained personnel who perform tuberculosis screenings and basic checkups for transient workers.

Some of the funding for the health clinic has been provided by the Alaska Native Health Center and from the fishermen who visit Unalaska. The city provides some of the operating revenues for the clinic but most of the funding comes from fees charged to patients. The City of Unalaska owns the property on which the clinic is situated and the Ounalashka Corporation has donated the property for two trailer homes for the medical staff. Despite this funding, however, the clinic loses money each year. Only a few individuals in the community (4 or 5) are qualified to receive Medicare benefits.

The APIA funds a community health representative who visits the elderly and does blood pressure checks. There is no longer a community health aide as the money provided by the Indian Health Service in the past has been withdrawn and distributed to communities with fewer health care

personnel and facilities.

The major problems of local health care are perceived in terms of a lack of qualified personnel and health care costs. The clinic recently lost its funding for a physician's assistant and the physician is now assisted by only one student PA. The physician himself has been the subject of some controversy because of his training as an osteopath and not as an M.D., as many individuals in the community are unfamiliar with Osteopathy. The wide range of the area served by the facility demands additional personnel. According to the resident physician, the clinic could use the services of two RNs, an LPN, and another technician. Because of the isolation of the region and the uncertainty of future funding, however, obtaining qualified personnel is expected to be difficult.

The high cost of existing health care is another major problem. Currently, the cost of medivac flights range between \$3,000 and \$6,000. In 1981 alone, there were 111 such flights to Anchorage from the Aleutian/Pribilofs Region (D.E. Raven Associates 1982:18). Despite the reliance on outside hospitals, however, there are no immediate plans to build a hospital in Unalaska. In April of 1982, D.E. Raven Associates and Providence Hospital published a report on the possibility of constructing a hospital in Unalaska. Despite the high morbidity and mortality rates of the region, it was concluded that such a project would not be feasible because of the lack of community support. Patients in need of medical care would continue to travel outside the community to Seattle or Anchorage for treatment and existing economic conditions could not guarantee that such a facility would be adequately funded (D.E. Raven Associates 1982:35). Nevertheless, the present facility will undergo some expansion in the near future. The city has allocated funds to construct a 20' x 30' addition to the facility and expand the laboratory. There are also plans to establish a blood bank and provide a facility for water quality testing.

Health and social services are a major concern in Unalaska for a number of reasons. Historically, contact with the West has created several health risks for the Aleut population, particularly in the area of infectious diseases. The rapid economic growth of the region has also resulted in a dramatic increase in stress-related disorders. This increase is reflected in high rates of mortality and morbidity.

Death rates in the Aleutian Islands appear to be higher than for the state of Alaska as a whole. In 1974, the crude death rate for Alaska was 418 deaths per 100,000 residents. The non-Native death rate in the South-Central Health Service Area (which encompasses the Aleutians and Pribilof Islands in 1974 was 350.4 per 100,000 while the Aleut death rate for 1970-1977 was 739.2 per 100,000 (APIA 1978:36).

Accidents constitute the highest single cause of death in the Aleutians followed by heart disease and cancer (D.E. Raven Associates 1982:11). The frequency of cause-specific deaths in the Aleut population for 1970-1977 are as follows:

Table 19

Cause Specific Deaths
Aleutian Islands Region: 1970-1977

Accidents		24
Drownings	(11)	
Fire	(7)	
Motor Vehicle	(3)	
Aircraft	(1)	
Exposure	(1)	
Poisoning	(1)	
Heart and Hypertension		21
Malignant Neoplasms		10
Vascular Lesions (of the)		
Central Nervous System		9
Alcoholism		7
Flu and Pneumonia		5
Diseases of Early Infancy		4
Homicide		3
Diabetes		2
Other Degenerative Diseases		2
Cirrhosis of the Liver		1
Inflammatory Disease (of the)		
Central Nervous System		1
Ill-defined		5
Other Causes		3
Total		<hr/> 97

Source: (APIA 1978: 36).

The accident death rate in the Aleutians for the years 1970-1979 was 102.8 per 100,000 population compared to a rate of 47.9 for the U.S. (1979) as a whole (D.E. Raven Associates 1982:12). Drownings account for a large portion of the accidental deaths in Unalaska and many of these are alcohol-related. A typical scenario is a crew member trying to return to his vessel after an evening of drinking at a local bar and falling between the boats tied to the dock. Due to the low water temperature and the diminished resistance to cold caused by alcohol, drownings occur quickly, greatly reducing the odds of self-rescue or rescue by others.

Unlike some other parts of the Aleutians or especially the Pribilof Islands, suicide is not perceived locally as a problem in Unalaska. However, there are numerous difficulties in determining the extent of the problem. One of the problems in determining the suicide rate is the lack of suicide reports. There is no way of determining, for example, how many of the accidental deaths in the community were, in fact, suicides. It may be argued that a good many of them, if not intentional at the conscious level, were sub-intentional acts of self-destruction. Deaths that are most likely to go unquestioned as accidental are drownings. How many of these incidents were in fact cases of successful suicides cannot be determined. Second, there is also the problem of the

accuracy of suicide reporting which is common throughout Alaska. Suicide is considered shameful by local residents. If a relative dies by his or her own hand, family members are reluctant to report the event as a suicide. Religious beliefs may also influence the willingness to report a death as a suicide among groups for whom suicide is considered to be a grave sin.

The morbidity rate among Unalaska residents appears to be higher than average, although no statistics are available. The major health problems among local residents are accidental injuries, alcoholism, poor dental health, gastrointestinal and skin diseases, mental health, and heart disease. Aleuts appear to have higher morbidity rates relative to their proportion of the population. In 1981, 37% of the individuals treated for major illnesses at the local clinic in Unalaska were Aleuts (D.E. Raven Associates 1982:15). One must use caution in interpreting this figure however. Aleuts are less likely to avoid the clinic than non-Aleuts because of costs of service, for example, as free health care is relatively easy to obtain for Aleuts. (As health care has traditionally been provided largely free of charge to Aleut residents in Unalaska, there is little likelihood that attempting to continue receiving free health care, at a time when clinic fees are beginning to be charged to all persons who use the services, will be strongly negatively sanctioned behavior.) Second, non-Aleuts are more likely than Aleuts to seek health care for major crises or disorders outside of the community.

Processing workers display numerous stress-related disorders as well as back and bone injuries. Among transients in the community, youth, dormitory-style living conditions, long working hours, inhospitable climate and easy access to drugs and alcohol contribute to a high incidence of accidents and trauma. Venereal disease is a problem and, with a recent influx of processing workers from Southeast Asia, there is an increased potential for local outbreaks of hepatitis and typhoid fever (Alaska Consultants 1981:66).

Among all segments of the local population, the major health-related problem resulting in hospitalization is accidental injury. This high rate is attributable in large part to the working conditions in the fisheries and the number of hours that people in the industry work per day. As the fisheries have become more competitive with the value of the product increasing, the fleet fishes in much worse weather conditions than it had in the past. Fishing under adverse conditions makes the work more dangerous as individual boats try to fish as quickly as possible to maximize their catch before the fleet quota is met. Under such constraints, there is little opportunity for the crew to sleep during the short seasons. The resulting fatigue is clearly a contributing factor to many of the accidents that occur.

Injuries at the processing plants also increase during the busy seasons, both because of the increased number of workers at the plant and the extended hours worked by each employee. As with the crew on the vessels, fatigue is a contributing factor to many accidents. Both on land and on sea, alcohol is seen as a contributing factor to many injuries as well.

While only ten residents of the Aleutian/Pribilof region were hospita-

lized for psychiatric illnesses in 1980, local officials, residents and health care personnel maintain that psychiatric illness is a major problem. Neuroses appear to be common among both Aleuts and non-Aleuts. Major psychoses usually appear among the Aleuts, perhaps because of the reluctance to seek outside assistance until the problem becomes acute or the fact that most non-Aleuts coming into the community go through a job screening process before arriving in Unalaska, which would catch some of the more acute disorders. The Aleut population is more representative of a random population sample. Depression is viewed as a common disorder in both Aleut and non-Aleut segments of the community, as is alcoholism.

Perhaps the most common as well as serious medical problem in Unalaska is alcoholism. It is not only related to certain psychiatric disorders as depression, but is also a contributory factor in such diseases as cirrhosis and infections, as well as accidents and homicides. Aside from the health hazards for those who abuse alcohol, excessive drinking is seen as affecting the quality of life in the community for non-excessive drinkers. In the recent debates before the City Council regarding the motion to increase the hours of operation of the local bars, several comments were made by residents concerning the unacceptable nature of drinking in Unalaska.

There appears to be three primary drinking patterns in the community among abusers of alcohol. First, there is the individual who is a steady drinker but is able to hold a job or otherwise earn a living. These individuals drink during the times when they are not working or engaging in responsible domestic activities. Second, there are those individuals who abuse alcohol sporadically. Although they do not drink regularly, they nonetheless create problems for themselves and others. These individuals are usually the ones who become violent when intoxicated though they are able to hold a job and maintain a relatively normal way of life when not drinking. Third, there are those who go on binges, during which time they are incapable of functioning in normal social situations or performing required duties at their jobs.

Alcohol is by no means the only drug that is abused, particularly among the transient and very short-term residents, with regularity in Unalaska. Marijuana use is common and when money is available in great quantities, especially during the end of the fishing season, cocaine is also quite common. The city has been characterized by local citizens and police officials alike as the "cocaine capital of Alaska" and the drug is especially common among fishermen. There are several stories in the community of enormous amounts of money spent on 'coke' and how the drug has ruined businesses and fishing ventures. The general impression is that, in the recent past when money was plentiful, a large percentage of fishing crew incomes were spent on drugs. Boredom, isolation from family and friends, work-related stress, and sizeable incomes earned in relatively short periods of time are frequently cited as contributing factors to this abuse. Fishermen, however, are by no means the only abusers of drugs. Drug abuse is also typically found among adolescents and young adults in Unalaska. Reasons for drug abuse among the stable resident population, where it does occur, differ somewhat from that of fishermen and include lack of self-esteem, perceived lack of alternatives, and peer pressure.

Infectious diseases are also a problem in Unalaska. Infections appear to be common to the region and, given the local climate, do not heal rapidly. Among children, upper respiratory infections are the most common complaint. Among adults, venereal disease is regarded as a problem but has diminished in intensity in the past decade. A common industrial ailment, particularly among processing line workers, was "crab asthma," an allergic reaction to shellfish. With pre-screenings conducted by the local processors in the past few years, however, this problem has decreased.

2.2.7 Social Services

Social services in the form of counseling, referral, and aid to the needy have been an important part of Unalaska society since pre-contact times. In its modern, westernized form, such services can trace their origins in Unalaska with the founding of the United Methodist Women's Home Missionary Society which operated a health clinic and operated the Jesse Lee Home from 1890 until 1925. The existing structure of social services in Unalaska was a direct result of the formation of the Unalaska Health Board in 1970 and the activities of Alaska Children's Services to implement a child and family welfare service in Unalaska. As noted in the discussion of the health care system, these activities led to the formation of Iliuliuk Family and Health Services.

Social services in Unalaska today can be broken into two separate components: legal services and counseling and family services. The major responsibility for legal services in the community is assumed by a local representative of Alaska Legal Services, Inc. a private, non-profit corporation providing legal assistance to low income families. There is also a fee agent, with the Public Assistance Division of the State Department of Health and Social Services, in the community who assists individuals with government documents, especially food stamps and AFDC applications, and income tax preparation. The major responsibility for counseling and family services is handled by the regional representative for state Department of Health and Social Services, Division of Family and Youth Services and by the clinical psychologist hired by the Aleutian/Pribilof Islands Association. In addition to these agencies, assistance to individuals and families are provided by other local residents in an unofficial capacity.

2.2.7.1 Facilities

The local representative of Alaska Legal Services has an office in the Unisea Mall complex while the state social worker has an office in the Unalaska Police Station. Although the facilities in the latter case are inadequate to meet the demands for service in the community, there are no immediate plans for a separate facility. The fee agent-works out of the clinic.

2.2.7.2 Personnel

The representative of the State Department of Health and Social Services is responsible for the entire Aleutian Islands chain and the Pribilof Islands. Her primary duties include individual and family counseling

and referral, particularly in cases of spouse and child abuse, crisis intervention, and referral. Although she does not hold a degree in social work, she has considerable experience in the field and is regarded as competent by local residents and other social service personnel.

The fee agent works in a part-time capacity and receives only nominal fees for her efforts. In fact, her work may be better viewed as a volunteer effort rather than as a position held by a paid employee.

The paralegal advisor works as a part-time public defender in criminal cases which appear before the local magistrate court and is employed full-time in civil case paralegal work. One of her chief tasks is to assist local residents with legal forms such as the drawing of wills. Although the advisor is not qualified to handle cases on her own, she is the only form of legal counsel available in the community, other than the local magistrate. In addition, her office is a regional one, stretching from Nelson Lagoon to Atka.

Another source of social services in Unalaska is the minister of the Unalaska Christian Fellowship. The minister is frequently called upon to provide counseling and advice, but for the most part services are limited to church members. Recently, the minister was approached by city officials to provide crisis intervention services to victims of spouse and child abuse.

The APIA Community Health Representative may also be viewed as providing social services. This individual is particularly involved with providing services to the elderly in Unalaska and conducts an informal "out-reach referral" program.

The level of commitment of existing social service personnel in Unalaska appears to be quite high. Despite the tendency of health and social service personnel to remain in isolated, rural regions of Alaska for relatively short periods of time, it appears that most of the existing social service personnel in Unalaska have made long-term commitments to remaining in the community.

The Aleutian/Pribilof Islands Association has contracted with a clinical psychologist to provide services including counselling and therapy. Although the psychologist would be responsible for the entire region, this individual would be based in Unalaska and thus devote the bulk of his or her time to providing services to local residents.

With the exception of this psychologist, all of the existing social service personnel in Unalaska could be classified as paraprofessional. None has had formal training the social work or law and their expertise in the field is based on experience. Nonetheless, these individuals are viewed as essential components of the community, given the degree and nature of many of the social and personal problems present.

In addition to these individuals who are acknowledged by the community to be responsible for providing social services, there exist several individuals who provide such services in a voluntary capacity. These include members of the Department of Public Safety, representatives of the Unalaska Aleut Development Corporation, the local representatives of

the Alaska Native Women's Statewide Organization, and the local crisis intervention team organized by the state social worker to deal with problems in her absence.

2.2.7.3 Social Issues

The social issues requiring professional involvement in intervention and treatment are numerous and varied. One of the major social problems in the community is that of domestic violence. This violence can be attributable to several factors, including the conflict between traditional and modern value systems, the increase in single-parent households, and alcohol abuse. Domestic violence is usually manifested in such forms as wife abuse, child neglect and abuse, incest, and abandonment. As noted above, it was community concern over the high level of domestic violence which led to the organization of the existing structure of health and social services.

Most of the social problems in Unalaska are related in one form or another to the problem of alcohol abuse. Alcohol abuse in Unalaska is as serious a social problem as it is a medical problem for it affects the very fabric of the entire community. It affects virtually all segments of the community, young and old, Aleut and non-Aleut, permanent resident and transient alike. It is usually involved in local criminal activity, particularly assaults, rapes, burglaries and acts of vandalism. It is often associated with the stress that comes with unemployment and poverty. It is behind much of the domestic violence among families in the community. Finally, alcohol abuse is usually associated with other psychological difficulties, particularly depression and schizophrenia.

Equally of concern to local residents is the problem of drug abuse. This is of particular concern among fishermen and adolescents. Although exact figures are unavailable, local residents maintain that the percentage of students who regularly use marijuana is very high. As noted above, Unalaska has also been referred to by some local residents and by law enforcement officials as the "cocaine capital of Alaska." Most of the drugs available in the community are introduced by transients, usually fishermen or processing workers.

Another serious problem in Unalaska addressed by the social service system is the level of misinformation. This problem is particularly acute among adolescents who know little of birth control or the hazards of alcohol and drugs. The chief aim in dealing with problems such as these is to educate the local population.

All of these problems are tied to the phenomena of social and personal disintegration among the residents of Unalaska. They are not unique to Unalaska and are usually associated with rural areas which undergo rapid social change. The issue of social disintegration is not a uniform one and affects each major segment of the community in different ways. In terms of the transient population, there has never been a high level of social integration on any but a temporary basis. This problem is particularly acute among ethnic minorities who work for the processors and are unable to speak English. They are culturally isolated and have difficulty communicating their needs to the larger community.

For many transients, **Unalaska** is perceived to create strains on marriage and **family** ties, an atmosphere that has been blamed for more than one divorce. The expectation of most transients is that the community is undesirable as a permanent residence. Many, therefore, explicitly come to **Unalaska** looking for an **atomistic** social environment, either because of their experience in other parts of the United States or the type of personality they possess. Whatever the incentive to work in **Unalaska** for brief periods of time, these individuals are regarded as 'loners' and prefer not to include themselves in community activities or social networks.

Among permanent residents in **Unalaska**, there is a different set of social problems. Many such residents remarked to the field researcher that the community has experienced considerable fragmentation and disintegration over the past few decades. Present-day **Unalaska** is seen as being **less** cohesive and integrated a community than **Unalaska** prior to the crab boom, and much less so than before World War II. With the economic growth and the large-scale influx of outsiders new social networks have emerged and expanded at the expense of the traditional networks. This is seen on the community level with the decline in importance of the church and **village** structure and on the **family** level with the breakup of **the traditional family structure**.

At the heart of this social disintegration is the conflict between traditional and modern values, a phenomena discussed earlier. This conflict is represented in distinctions between **Aleut** and **non-Aleut** segments of the population and between permanent and transient residents. In the family, this conflict is manifested in generational differences which often lead to **family** violence and alienation of children.

Concomitant with the high level of **social** disintegration is the phenomena of personal disintegration. Most visible in the form of **alcoholism**, the roots of this disintegration are varied. For the **Aleuts** in the community, personal disintegration seems from identity conflicts and a lack of self-esteem. Although the Alaska **Native Claims Settlement Act** has had a significant positive effect on the ethnic identity and self-esteem of **local Aleuts**, recent political and economic gains have only begun to address the psychological problems associated with decades of discrimination, **poverty**, and feelings of inferiority.

For new residents, personal disintegration may result from a lack of preparedness to the community. For those used to the amenities commonly found in urban areas in other parts of the United States, the lack of certain goods and services, forms of entertainment, etc., can be disheartening. This contributes to a feeling of isolation and despair which eventually manifests **itself in** depression, anxiety neuroses, and alcoholism.

Finally, a potential source of personal disintegration is unemployment and economic decline. As a chief incentive for moving to **Unalaska** for most of the **non-Aleut** residents was the recent crab fishery boom, the prospect of a decline in the local economy and a scarcity of jobs is a potential source of stress. For those who do not move out of the commu-

nity or who are unable to adapt to the changing economic opportunities, the economic situation may contribute to the level of personal disintegration.

Most of the social services provided in Unalaska occur in the form of counseling and referral. As noted above, the state social worker lacks the expertise to conduct therapy or prescribe medications and the paralegal representative is unable to serve as a lawyer in court. While each of these individuals provides numerous valuable services, they are limited by the lack of formal training and licensing.

The state social worker, as noted above, has formed crisis committees in each of the communities she serves. Usually composed of four local residents, these committees handle primarily cases of child abuse. In St. Paul, the committee is particularly involved in crisis intervention for attempted suicides. The committees help to find foster homes for children on short notice and assist local families with crisis management and planning. Committees are usually highly motivated because they are perceived as preventing the removal of children by outside authorities to other parts of the state.

In the past year, city officials have approached the Unalaska Christian Fellowship with the proposal to house victims of spouse and child abuse on a temporary basis at the Jesse Lee Home. The idea is to have the Home used as a temporary refuge for these individuals until more permanent arrangements can be made. While no official policy regarding the use of this facility has been made by either the city or the Unalaska Christian Fellowship, the Home has already been used on occasion for such a purpose.

There is also a local Alcoholics Anonymous program in Unalaska. Currently, there are ten residents participating in the program who meet three times a week during the winter and spring and once a week during the remainder of the year. Although the number of residents attending the program is small compared with the number of alcoholics in Unalaska, the program is generally regarded to be very successful.

2.2.8 Recreation

The recreational subsystem of Unalaska is comprised of numerous activities which may be classified along several different dimensions. One such dimension is based on the distinction between traditional and modern forms of recreation; another dimension distinguishes between those activities which require a cash income and those which do not; a third distinguishes between urban and rural-oriented activities; and a fourth is based on the location of such activities. While there is a considerable amount of overlap between each of these dimensions, there are nonetheless certain activities which may usefully be classified differently along each dimension. For instance, use of a motorcycle in Unalaska may be considered an activity that is rural-oriented, internal (as opposed to taking place outside the area), and cash-based.

The major recreational activities in Unalaska are similar to those found in other small communities in Alaska. These activities can be divided

into those involving the use of vehicles, home entertainment, outdoor activities including hunting and fishing, athletics, social events, and vacations. In addition, given its size and resources, Unalaska provides recreational opportunities not found in smaller communities. These activities include restaurants and bars, adult extension classes, and special events such as festivals and musical concerts.

2.2.8.1 Activities Involving Vehicles

In many rural Alaskan communities, flying is a common form of recreation. Privately-owned planes enable their owners to visit other communities or travel to remote areas for hunting, fishing and camping. Recreational flying is not a particularly popular form of recreation in Unalaska even among those in a position to afford it, due in large part to the poor flying conditions in the area. At the time of the field data collection there were two aircraft owned by local residents that were used, although not exclusively, for recreational purposes.

Perhaps the most common vehicle in use for recreational purposes in Unalaska is the small boat or skiff. In addition to the commercial vessels in Unalaska, there are quite a number of small boats that are used for subsistence and sport fishing. Some of these small craft are used on occasion for purely recreational purposes, and even when used for subsistence fishing there is often an element of recreation that is considered to be an indispensable component of the activity. There are at least two sailing craft that are used for recreational purposes in Unalaska, despite air and water temperatures that make this sport less attractive than it is in other climes. With the coming of the bridge between the two sides of the community, the prestige associated with owning a fast skiff has lessened considerably, though it has not disappeared. Besides fishing, skiffs are used recreationally for the transport of individuals to places that are difficult if not impractical to reach by land for day outings, camping, hiking, and picnics.

Trucks are also a popular recreational vehicles used for driving to the back country of Unalaska Island. Usual destinations include Summers Bay, Morris and Humpy Coves, and Captains Bay. In addition, four wheel drive cars are popular for back country excursions. The purposes of such trips are camping, fishing, hiking, picnicing, or just enjoying the ride.

Unlike other communities in Alaska, snowmobiles are not popular in Unalaska as snow conditions are not often favorable for their use. Similarly, three-wheelers, which enjoy considerable popularity in other parts of the state, have declined in use due to the fact that with the growth of the city, the enforcement of traffic laws has precluded their use on city streets. There are still several in the community however. There also has been a recent increase in the popularity of off-road motorcycles in Unalaska. With this increase there has been an problem with the destruction of tundra on Ounalashka Corporation lands around the city proper. The Department of Public Safety is virtually incapable of apprehending individuals on off-road motorcycles due to the terrain where motorcycles enjoy a great advantage over other types of vehicle.

2.2.8.2 Home Entertainment

One of the most popular recent forms of home entertainment in Alaska today is the home video system. There has been a marked growth in the number of videotape and videodisc machines in the community over the past several years. Even some families that are in low income categories own video machines, as this is a high priority recreational item. Video machines are the focal point of many social gatherings, and it is a popular pastime, especially among younger people, to watch movies into the late evening. Individuals purchase tapes or rent them from commercial outlets in town. Individuals also borrow tapes from other machine owners and either watch and return them or make copies for their own use.

Another form of home entertainment which has become very popular in Unalaska in the past ten years has been television. Television has been available to local residents since the early 1970s. At that time, the local school had a broadcast system and programming was handled by the school board. Satellite programming via Alascom arrived in April of 1979. The local Alascom Earth Station provides two television channels, one featuring educational programming and the other being entertainment oriented. These are the same two channels that are available throughout the bush in Alaska. Of interest to those concerned with issues of social and cultural change is the content of this programming: much of it shows life that is quite alien to the Unalaska environment. Of course, this effects different individuals in different ways. For those that have moved into the community from the outside, such contact is often a pleasant reminder of the outside world. For those that were raised in a relatively isolated social environment, such programming provides instant perceptual access to varying lifestyles, expectations and value systems. For example, one of the regular features on the network is local news taken from a southern California television station. One may watch the freeway traffic jams in Los Angeles while sitting in a cabana in Unalaska.

In addition to satellite programming, there is a local television station that broadcasts features such as area news and events of local interest along with entertainment selections on tape. Unalaska community television operates during the evening hours on weekdays from 4:30 p.m. until midnight and has a full day of programming on Saturdays and Sundays.

Television, beyond its particular programming content, has affected life in Unalaska in two major ways. First, it has brought the community, particularly the Aleut segment, into closer contact with the outside world. Second, television has had a significant influence on the patterns of social interaction of those having access to it. Prior to the arrival of television in Unalaska, a popular form of entertainment was attending movies shown at the processors. Visiting family and friends was also a popular form of entertainment. Although both forms of entertainment still exist, it is now not unusual for evenings to be spent in front of the television set. Though there is not adequate baseline data to make a valid comparative analysis of socializing patterns before and after the advent of television, many people agree that there has been a significant change.

In addition to television, Unalaska receives one radio station over the satellite reception system. At the time of the field data collection, this station was part of the (United States) Armed Forces Radio Network. The programming on the station attempts to cover a broad range of musical tastes, and provide information relevant to service members around the world. There are frequent spots throughout the day that have to do with military issues, which cannot help but add to the flavor of the "tour of duty" attitude toward the town that some of the transients hold. Recently, however, local efforts resulted in a change in radio stations and the community now receives daily broadcasts from KDLG, a station located in Dillingham. This switch occurred in November of 1982 and is only on a trial basis. However, it is hoped by some members of the community that the programming of this station will provide a meaningful regional communication link between Unalaska and Dillingham, and that the content of the programming will prove more relevant to Unalaska residents. Of particular interest to local residents are such programs as the "Trading Post," "Bristol Bay Messenger,"* community bulletin boards and "Job Opportunities," a weekly announcement of jobs available in the region.

2.2.8.3 Outdoor Activities

In addition to the recreational activities which are associated with an income (vehicles, home video systems), and those associated with the larger sociocultural system (television, radio), outdoor, rural-oriented activities are very popular among all segments of Unalaska society. Camping and hiking are especially popular but the most common forms of outdoor, rural-oriented, and traditional activities are subsistence-related. Given the scarcity of land mammals, such activity is usually limited to fishing for salmon and Dolly Varden, hunting for ducks and geese, collecting marine invertebrates, and gathering berries. As mentioned above, the recreational component of subsistence activities is widely acknowledged. Some subsistence activities, such as berry-picking are often the focus for social interaction and looked forward to by many. In addition to the collecting of the resources themselves, the sharing of subsistence resources also provides a focus for social interaction. For example, jams are often made from the berries, and then shared at a later date over coffee, etc.

As noted earlier, there is a great deal of affect associated with subsistence activities that goes far beyond the nutritional needs that subsistence resources provide. For the Aleuts of the community, subsistence pursuits are often taken as markers of an Aleut identity. For non-Aleuts, subsistence pursuits are often thought of as an essential aspect of the Alaskan experience, a part of the adventure or lifestyle for which many came to Alaska. In these and other ways, engagement in subsistence pursuits provides emotional gratification, making such activity truly recreational in addition to pragmatic.

2.2.8.4 Local Bars and Restaurants

A popular form of entertainment generally unavailable in smaller communities of Alaska is the frequenting of local bars and restaurants. Bars are particularly popular, given the importance of and problems asso-

ciated with alcohol in this community. Unalaska has three bars, with the possibility of a fourth opening in the near future. The present bars are: the Unisea bar on the Amaknak side, and the Elbow Room and Stormy's on the Unalaska side. In addition, alcoholic beverages may be ordered in the Unisea restaurant. There is presently an application for a license to dispense alcoholic beverages at the airport restaurant, which is owned by Universal Seafoods, the owner of the Unisea complex.

The Elbow Room is the oldest of the bars in Unalaska, and is locally owned by two permanent residents. It does not feature food service but draws its clientele from a broad spectrum of the community. It has a reputation for being a rowdy bar, and has been described in a local guide book as "probably the most despicable bar in Alaska" (1981:15). It stays open later in the evening than Stormy's, the other bar located on the Unalaska side, and thus is the only public place on the Unalaska side to go in the late evening most nights. The percentage of the bar patrons that are Aleut is much higher in the Elbow Room than in the other late night bar, the Unisea. Part of this is undoubtedly attributable to the fact that the Elbow Room is located within downtown Unalaska where the bulk of the Aleut population resides. There is sporadic dancing in the bar to music provided by a juke box. With prices at \$2.00 per can of beer, an evening of drinking can become an expensive undertaking.

The Elbow Room is both a meeting place for many people and a place where conflicts take place. Fights are not uncommon in the bar and there is some controversy in the community over a perceived lack of willingness on the part of the bar management to control fighting. There are no "bouncers" hired by the bar, so that when a fight does break out the police are called, which means that the fight will go on for some minutes before the police arrive. This same situation also exists at the Unisea bar. Public attention was focused on this situation during the field data collection period when an individual eventually died of injuries sustained during a fight in a bar,

The Unisea bar is located in the Unisea complex on the Amaknak side of the community. It is a relatively new bar, having been built in 1980. Because of its proximity to the Unisea Inn and the Unisea Restaurant, there is no food service available in the bar itself. The bar overlooks a portion of the inner harbor, and is the largest bar in town. The clientele of the bar is a diverse group of individuals, though there appears to be a higher percentage of seafood processors and fishermen frequenting the bar than frequent the Elbow Room. Another marked contrast is the far smaller percentage of Aleuts among the bar patrons than is the case at the Elbow room. The two bar markets are by no means exclusive, as it is common for individuals to drink in both places during the course of an evening. In addition to drinking, the Unisea bar offers pool tables and video games for entertainment. As is the case with the Elbow Room, fights between customers at the Unisea Bar are a common occurrence.

Stormy's, like the Elbow Room, is located on the Unalaska side in downtown Unalaska. It was recently purchased by Universal Seafoods from individuals who came to town with the crab boom. Unlike the Elbow Room, Stormy's is also a restaurant in addition to being a bar. Stormy's

serves as a meeting and socializing place for some residents during the day-time hours, and is a popular spot for dinner. For entertainment, there are several video games in the the bar, and on occasion, there is live entertainment in conjunction with a special event. The clientele of Stormy's is composed of representatives-of a broad range of ethnic groups.

The Unisea Restaurant, owned by Universal Seafoods, is located in the Unisea complex, and is striking to the outsider. In contrast to the spartan and well-worn furnishings of the Elbow Room and the rustic atmosphere of Stormy's, the Unisea restaurant is the type of restaurant one would expect to find in any city in the "lower 48." It is carpeted, and has modern furnishings throughout. It looks out of place to many people, and pleasantly so to most. The menu is quite extensive, featuring many items not available elsewhere in town. Prices are quite steep, though not excessively so by Alaskan standards. It has a high recreational or entertainment value for many in Unalaska, in that it is the only place where one can get "dressed up" and go out for the evening. It is much more professional or formal in its approach to service than are the other restaurants in town, with its waitresses wearing uniforms, and so on. It is also a place where private parties and special events are held.

The restaurant located in the airport terminal on Amaknak Island is owned by Universal Seafoods and features a menu that specializes in sandwiches and hamburgers. It is relatively small, and there are plans to obtain a liquor license. Universal's lease on the facility, however, expires in two years and it is not expected that it will be renewed.

The Unisea game room, also owned by Universal Seafoods, is located in the Unisea complex and has several video games. Along with the games there is also some food service there: hot dogs, potato chips and the like. It is a popular spot with some of the younger people in town. Video games are also available in the Community Center and in Carl's Commercial Company.

2.2.8.5 Visiting and Vacations

Visiting and vacationing are also popular forms of entertainment and may usefully be divided into intracommunity and intercommunity activities. For many of the older permanent residents intracommunity visiting makes up the bulk of their social world. There is an informal information network among many of the older residents, and along its line passes much information about the community in the form of gossip. For the more transient members of the community, visiting takes a lesser role to such activities as going out of the homes to bars or the restaurants. For a large portion of the short-term transients visiting is effectively restricted to the companies by which they are employed.

Visits to other communities in the region are not frequent for most of the people living in Unalaska. Among the Aleuts, however, there is a greater degree of visiting, either on Native corporation business or just to visit relatives and friends in the neighboring villages. Events that commonly draw intraregional visits are weddings and funerals. For the population at large, there is some visiting in connection with

sporting events between high schools in the region and sports competition involving players from the recreational leagues.

By far the most common intrastate travel destination for individuals from Unalaska is Anchorage. Anchorage is seen as the closest "outside" destination, and for individuals that do not have a lot of time to spend but want to get outside, Anchorage is the destination of choice. Many individuals do a good deal of shopping there and take advantage of the entertainment opportunities available. Most people who have enough time and money do not end their vacation in Anchorage, but continue on to an out-of-state destination. Anchorage is often the destination for individuals that are in need of medical care of a type not available in Unalaska.

The most common out-of-state destination from Unalaska appears to be Seattle. Unalaska is often referred to as a "suburb of Seattle" due to the many business and personal ties with that city. The vast majority of the vessels in the fishing fleet that frequent the waters around Unalaska are from the Seattle area, and most of the crew members for the boats and the processors for the seafood plants are hired out of the Seattle area. As a result many of the transient workers return to Seattle for their vacations, and a good number of the semi-permanent residents do also as they often are originally from that area. Another popular destination for vacations is Hawaii. It seems that due to the typical weather in Unalaska, many people prefer to go to warm-weather destinations for their vacations, and do so when they are able to afford it.

2.2.8.6 Community Activities

In addition to the activity discussed above which are usually undertaken either singly or in small groups, Unalaska also provides numerous recreational opportunities in the form of community activities. Such activities largely take place in the churches, schools, and community center.

Church recreational activities vary widely by denomination. The Unalaska Christian Fellowship has by far the most recreational activities for its members. The Fellowship sponsors picnics or lunches after church services (depending upon the weather) that often include recreational activities. In addition, there are Wednesday evening dinners at the Jesse Lee Home that also include sporting activities, and the church informally sponsors hikes, picnics, softball games, evenings at the pool, and boat trips, along with fielding a softball team in the recreational league.

The most popular school recreational activity, basketball, draws large numbers of participants and spectators. It is by far the most popular extracurricular activity among students and local games are well-attended by Unalaska residents. The city basketball league, of which the school was a part, has enjoyed greater popularity in the past few years than it does today, though it appears to be making a recovery. In 1982 there were seven teams and games usually drew an average of 50 spectators per game.

The new pool at the school is quite popular with many residents citing the construction of the pool as one of the positive changes in the town in the last several years, though participation levels are down from what the school administration had hoped. After an initial period of heavy use after the pool first opened in October of 1981, swimming attendance has dropped off to a low but steady level.

The city department of Parks, Culture, and Recreation sponsors a wide range of activities at the community recreation center. These include open recreation hours, classes, movies, and special events for holidays. In addition, the center is utilized by other groups. For example, the Unalaska Aleut Development Corporation hosts a weekly evening bingo game in the center. Different activities attract different segments of the population. For example, the percentage of participation of Aleuts is much higher for open recreation, as opposed to low Aleut participation levels for city sponsored classes. Bingo is one of the few public secular activities that is predominantly Aleut.

As noted above, the University of Alaska, in cooperation with the city department of Parks, Culture, and Recreation sponsors a number of classes in Unalaska through an extension office located in the community center. The classes cover a wide range of subjects from first aid to fine arts. In addition to the educational value of these classes, they also provide recreational opportunities. In the Spring of 1982, the most popular recreational classes were: Drawing (16 students), Aleut Basketmaking (14 students), and breadmaking (10 students). During the summer of 1982, the most popular classes were Aleutian History (22 students), Mexican cooking (14 students), and Watercolors (11 students) (Fourth Quarter and Annual Report 1982:9-10).

The Aleutian Slow Pitch Softball Association is widely popular in the community. During the summer of 1982, there were twelve teams. Several of the seafood processors sponsor teams, as do some of the smaller businesses, the Ounalashka Corporation, and the Unalaska Christian Fellowship. The softball league is one of the few steady activities that draws from a wide population range. Several people have indicated that this is a positive thing in the community one of the few activities that draws people from different backgrounds together, which helps to create a sense of community and get people talking to each other who might not normally be in contact.

The Aleutian Allemandes is a social square dance group that enjoys some popularity. The group, consisting largely of married couples, entertains at the major community functions and hosts pot-luck dinners.

There are several holiday special events that draw well in Unalaska. During the period of field data collection, the Fourth of July celebration which featured a parade, an arts and crafts exhibition, a dance and a fireworks display drew a large and diverse crowd. The Labor Day weekend King Crab festival which featured the playoffs of the softball league in conjunction with other entertainment and competitive events also drew quite well, in spite of less than optimal weather. Such events differ from activities such as the softball league in their fostering of "community spirit", in that they are episodic and do not offer the opportunity for the establishment of continuing dialogue.

3. FORECAST SCENARIOS

3.1 Introduction

In this section of the report we present an analysis of projected levels and directions of socioeconomic and **sociocultural** change in the community of Unalaska. This analysis is based on the data contained in the ethnographic baseline study and is predicated on a set of assumptions provided by the MMS Social and Economic Studies Program of probable scenarios based on varying levels of development in the groundfish industry and oil-related activity.

This section will begin with a brief introduction describing the impact categories and forecasting methods. Then, forecasts of the varying levels of development will be constructed in one primary and three secondary scenarios. Within each scenario, the analysis will proceed by discussing the possible impacts of these levels of development on the community subsystems or impact categories outlined in the "Methods, Standards and Assumptions" section of this report (see Appendix A).

Our objectives in this introductory discussion of the forecast scenarios are fourfold. First, we wish to summarize the systems and options models providing the theoretical foundation of our impact analyses. Second, we wish to review the assumptions upon which the scenarios of change will be developed. Included in this review will be a brief discussion of the sources of likely change in Unalaska. Third, we will present a brief description and explanation of the relevant impact categories which will comprise our projections. Finally, we will discuss our methods of assessing the relative ranking of these impacts and how this ranking will be employed in analyzing which aspects of the community organization are most and least susceptible to change.

3.1.1 Models of Analysis

Briefly, our analysis is based on a combined use of a systems model, designed for social impact studies, and an "options model," based on cognitive theories of decisionmaking and the exercise of choice. We will only briefly summarize these models here; a more detailed discussion is provided in Appendix A.

The systems model of social impact analysis is based on the concepts of input, structure, output and feedback. In applying this model to the study of social change, input is defined as relevant independent variables which constitute the **sociocultural** environment of the community under study. This environment refers to external government agencies, businesses, the larger **sociocultural** system, and certain **intrasocietal** forces such as demographic characteristics and community infrastructure, as well as available natural resources. Structure refers to the community itself, its values and its social organization. Output refers to the community's response to environmental input, usually represented in the behavior of the members of the community. Feedback is used to describe the effect that alterations in behavior may have either on the structure of the community itself or on the environment. These key notions of a system are integrated with four major concepts of a social

system: 1) the interaction between a social system such as a village community, an ethnic group, or a state or nation, and its environment; 2) the interrelationships between a set of individuals and the roles they perform to form a viable social system; 3) the regulation of these interrelationships by a set of goals or motives; and 4) the definition of these goals and the means for obtaining them by a set of rules embodied in the value structure of the community.

As an abstract model, systems analysis can reduce the impacts of projected changes in the environment (i.e., development of a groundfish industry or OCS development) on the community under study to mathematical formulations. As a method of analysis, it can aid in presenting the community as it will exist within certain defined parameters (the standards and assumptions). In this analysis, these parameters are twofold. The first are represented by assumptions of varying levels of groundfish industry and OCS development activity which underly the scenarios to be presented. The second set of parameters are contained within the baseline sociocultural data of Unalaska.

Systems analysis enables us to project changes in the community's response to its socioeconomic environment and to describe the systems output in terms of indices of behavior among existing and anticipated residents in the community. The analysis also enables us to discuss how these changes in the community's response to its environment will in turn affect the value structure and social organization of the community (the sociocultural system) and its environment--local resources, relations with other communities, contact with external government agencies, and so on.

The options model is a straightforward way of supplementing systems analysis by providing the perspective of local residents in Unalaska. Specifically, the model injects into the analysis of the projected impacts of groundfish industry and OCS development within the proposed scenarios an evaluation of how these varying situations would be perceived by the local residents, what decisions would be based on these perceptions, and how these decisions in turn will affect their response to the environment and perhaps the structure of the community itself. Although the options model plays a vital part in the analysis of projected change within each output category, this role will not always be evident as the organization of the report is based on the format provided by systems analysis. Nevertheless, the analysis of the perception of available options and the exercise of choice among local residents will be implicit in the discussion of projected sociocultural impacts.

3.1.2. Scenario Standards and Assumptions

The standards and assumptions relate to existing ethnographic parameters of Unalaska, such as the dependence of the local economy of Unalaska on local resources, primarily fish. They also relate to trends which are projected to exist in the future but are not directly related to either groundfish industry or oil-related development. An example of such an assumption is the projected decline in available state revenues in the next ten to twenty years, the decline of the crab fishery, and a decline in higher order governmental support for Unalaska. A review of these standards and assumptions are contained in Appendix A.

Our projections for **sociocultural** change in the community of Unalaska are based on one primary and a series of secondary scenarios. In the primary scenario, we examine the likely consequences of groundfish development at levels consistent with population and employment projections provided by the Alaska OCS Region. Included in this scenario is an acknowledgement of an already existing and relatively fixed oil-related development in Unalaska. This primary scenario serves as our baseline projection of change for Unalaska.

The secondary scenarios for Unalaska are based on our experience with and data on existing trends and patterns of change in the community. These scenarios examine the sequence and timing of events, levels and thresholds of development which either appear most probable or highly likely given current trends or conditions. Specifically, we examine the consequences of change based on a series of hypothetical propositions relating to the timing and sequence of groundfish industry development and oil-related development. These scenarios include the prospects of a co-occurrence of groundfish industry and oil-related development at levels already projected by the Alaska OCS Region (Alternate Scenario 1) of variations in the sequence and timing of groundfish industry and oil-related development such as initially high levels of OCS development and delayed groundfish industry development (Alternate Scenario 2), and OCS development with no development of the groundfish industry (Alternate Scenario 3). Each of these scenarios focus on the importance of the community's perception of these differential forces and how this perception in turn will affect local decisionmaking processes which will determine the magnitude and direction of change in Unalaska.

3.1.3 Impact Categories

The impacts of groundfish industry or oil-related development examined in the projection scenarios are intimately related to categories of **sociocultural** input and structure used in the ethnographic study of Unalaska, and are, in fact, based on the findings of this study. The categories of **sociocultural** input include population, community facilities, private development, and regional relationships. The categories of **sociocultural** structure include: the economic, social, political, religious, educational, health, social services, and recreational subsystems and the value system.

3.1.3.1 Categories of Sociocultural Input

Sociocultural input refers to those aspects of a community's environment and infrastructure which determine or influence the behavior, values and forms of social organization of local residents. In essence, they comprise a set of independent variables in a systems model of Unalaska. In turn, these aspects may be influenced by changes in behavior, values, and forms of social organization.

Four specific impact categories of **sociocultural** input--population, community facilities, private development, and regional relationships--will be subjected to analysis in this report. Projections of change in these categories will be examined after the economic subsystem forecasts, primarily because many of the changes in these impact categories

of **sociocultural** input are dependent upon projected changes in the economy. The effects of these changes on the impact categories of **sociocultural** structure will be considered **within** the analysis of each subsystem (e.g., the effect of changes in population or regional relations on social relations, education, health care, and so on).

Projections of population changes throughout the forecast period include consideration of numbers of residents, **ethnicity**, age and sex distributions, and location of residence. Changes in community facilities include projections of alterations in **water** and sewerage system, power system, roads and docks, and the airport. Changes in private development refer to efforts by the **Ounalashka** Corporation and other commercial interests to develop property in **Unalaska** for commercial or residential purposes. Changes in the existing pattern of relationships between **Unalaska** and other communities in the region will be examined along economic, social and political dimensions.

3.1.3.2 Categories of **Sociocultural** Structure

In our examination of the impact categories of **sociocultural** structure, two types of impacts will be distinguished. The type of impact is founded on the notion of the systems **model output** component. output represents the **community's** response to fluctuations in the socioeconomic environment. They represent certain patterns of **social** and cultural activities which govern community life as well as certain psychological responses to perceived changes in the **sociocultural** system and its environment. The second type of impact is a specific form of systems response referred to as "feedback." This term refers to changes in the structure **itself**, changes **in** the values or the forms of **social** organization which **regulate** life in the community. The assessment of impacts on the **sociocultural** system is based on a comparison of projected changes in values and social organization with the existing baseline data.

3.1.3.2.1 Output

Under the economic impact category, four major aspects of economic activities or output are examined. Pattern of employment constitutes the first aspect of economic activities examined in the analysis of community response to the proposed changes in **groundfish** industry and OCS development. An assessment is made of the number of jobs in commercial fisheries, consisting of the harvesting, processing and marketing sectors, projected to exist under the different scenarios. Other commercial employment opportunities examined include service support industries, small retail businesses in each community, transportation, construction, and petroleum production. Non-commercial employment opportunities, largely represented by the government sector or native corporations, and level of subsistence activities, are also discussed. Coinciding with the projections of employment opportunities during the forecast period are projections of the rates of labor force participation in the community and the numbers of unemployed residents.

A second aspect of economic activities examined is the change in income levels among local residents resulting from the projected developments or lack of development in the groundfish industry and/or oil-related activities. Our analysis of this aspect of community economic activities

considers both the levels of income as well as the distribution of income among the various segments of each community.

The third aspect of economic activities is the pattern of consumer behavior projected to occur in the various scenarios. This pattern is, of course, intimately tied to both income level and employment opportunity in the community. However, it is also a reflection of consumer choice, consisting of a series of decisions about which items to purchase, when, and in what manner (cash or credit), which in turn are governed by the values held by local residents. Assessments of the impacts in the defined scenarios, therefore, include an analysis of the projected changes in consumer activity.

Finally, an important aspect of economic activity included in the scenario projections is the anticipated change in availability and use of housing and real estate. This involves the impact the assumed developments in the groundfish and oil industry will have on property values, land speculation, construction and land zoning.

Social activities examined as community responses to assumed developments in the groundfish and oil industries are tied to the extent of social cohesion within each community. This social cohesion can be examined in three separate components. One component is that of social relations among kin groups. This component includes changes in family patterns such as the number and type of family units and marriage and divorce rates. The size and distribution of extended family networks within the community, region, and state, are also examined.

A second component of social cohesion is that of social relations among local residents not linked together by consanguinial or affinal ties. These relations are based on locality (neighborhoods), social class, ethnicity, and employment. Each of these bases for non-kin relations in Unalaska are used to determine the quantity and quality of such relations projected to exist under each of the defined scenarios. Such an assessment requires an appreciation of the relative importance of social class status, ethnic ratio of the local population, the character and utility of ethnicity in various social, economic and political contexts, and the extent of friendships and intermarriage among ethnic groups in each community.

Finally, an understanding of the impact of the proposed changes on the cohesivity of the social networks in Unalaska requires an analysis of the community as a whole. This analysis involves a determination of the extent to which local residents adhere to one or more value systems, the levels of social interaction based on identification as a resident of a particular community, and changes in the demographic structure of the local population. With respect to this latter consideration, changes in certain aspects of the population such as the age distribution or sex ratio can have important implications for the character of social cohesion within the entire community.

Political activities in Unalaska are examined from the perspectives of local administration, levels of political conflict, measures of bureaucratic efficiency, and extent and nature of social control. An analysis of local government includes such facets of administrative activity as

participation in community development from the standpoint of new services demanded, new facilities **required**, investments shared with other government agencies, planning priorities, and projected tax revenues and other funding sources. The extent of local government participation in future community development is determined by a combination of these factors.

The level of political conflict in Unalaska is also important when gauging the possible impacts projected to occur within the defined scenarios. Such conflict involves an understanding of the issues which are responsible for community fission, the nature of local interest groups, and the activities they engage in to promote their causes. The character of political conflict between permanent residents and transients or between Aleuts and non-Aleuts, for instance, are discussed in relation to the projected impacts under the proposed scenarios.

A third aspect of local political activity examined as a response to proposed developments in the groundfish and oil industries is the measures employed by the community to assess the level of efficiency of local governments. Such measures include administrative budgets, deficits, levels of community satisfaction with the structure of local government and expectations of the role of local government in all spheres of community life.

Social control is another aspect of political activity examined in the context of the defined scenarios. Social control is both formal and informal. Formal social control is defined in terms of criminal activity and quality of police protection. Criminal activity is measured by projected crime rates in all major categories (i.e., homicides, assaults, burglaries, petty theft, and traffic violations). Police protection is measured by the projected numbers of available personnel and the quality of services offered by local law enforcement officials. Informal social control is defined by the number and use of moral constraints such as guilt or shame to enforce acceptable norms of community behavior. The proposed changes in the nature of these constraints and their effectiveness in regulating behavior within the community are examined.

Our assessment of changes in religious activity in Unalaska throughout the forecast period consists largely of projections of levels of participation in established churches. Such levels are measured by size of congregation, numbers of members regularly attending weekly services, holiday services and social gatherings, and extent of member contributions to the church. When possible, an attempt is made to determine the extent of any changes in the belief system of the community as a whole, especially as that belief system influences social behavior in non-religious spheres of community life. For example, we consider the emerging political role of religious groups in Unalaska.

Changes in educational activities in Unalaska are viewed largely in terms of students, teachers, facility construction, extracurricular activities, and achievement levels. With respect to students, the impact of the assumptions in the defined scenarios on student participation levels are analyzed. Such levels are indicated by measures of student enrollment, dropout rates, and numbers of students who pursue

higher education, vocational education, or adult education. The number of teachers and the turnover rate for academic personnel are also taken into consideration when viewing educational activities. Facility construction takes into account both the number of students served by proposed or needed facilities as well as the effect of such facilities on the quality of educational programs throughout the forecast period. The involvement of students and the community in general in extracurricular activities offered by educational institutions in Unalaska is also subject to analysis. Finally, where possible, an analysis of the effects of increased population and available revenues brought about under the proposed scenarios for groundfish industry and oil-related development on student achievement levels, on student goals, social organization, and so on, is made in the attempt to provide a complete picture of educational impacts throughout the forecast period.

Community impacts on health and social services resulting under the various scenarios are also analyzed as community response to groundfish industry and/or oil-related development. This response is analyzed through rates of illness and mortality and nature and extent of social problems such as alcoholism, psychological disorders, and domestic violence. An analysis of the effects of such illness rates and social and personal problems on existing or proposed facilities and personnel and how this in turn affects the cost and quality of care and service are both discussed in the analysis of health and social service response.

Finally, the impact of the proposed development of local groundfish and/or oil resources on the patterns of recreational activity is also analyzed within each of the assumed scenarios. How recreational tastes and preferences will be altered with increased or decreased population and revenues, where such activity will take place, and how often, is examined in this analysis.

3.1.3.2.2 Feedback

As noted above, feedback refers to the impact changes in activities have on a community's structure and its environment. It is possible, for instance, that changes in economic activity among Aleut residents of Unalaska will result in certain fundamental changes in their value system and also have an impact on the available natural resources they utilize. It is also conceivable that changes in the activities of the city government of Unalaska could result in an alteration of the relationship between the city government and the Ounalashka Corporation or between Unalaska and other communities in the region. These are examples of how activities could have important reverberations for the community's social structure as well as its environment.

In considering the feedback impacts in the categories of sociocultural structure, we shall examine values and organization. The analysis of changes on the community's value system includes a discussion of belief systems world views held by different social groups within the community. Organization, in turn, is subdivided into categories of economic organization, social networks, political organization, religion, education, health care, social services, and recreation. As already noted, this analysis is organized along the same lines, and in related categories, as the ethnographic baseline data.

3.1.4 Ranking of Impact Categories

Because not all impact categories are equally susceptible to change, our analysis gives greatest emphasis to those categories most likely to change throughout the forecast period under the different scenarios for groundfish industry and OCS development. This requires a determination of those aspects of community life most, and least, susceptible to change. Our method for making such a determination is to rank the impact categories hierarchically. Our procedure for constructing such a hierarchy is based upon the scenario assumptions, the ethnographic baseline data of Unalaska, and the conclusions of cross-cultural studies.

Our ranking system distinguishes between the impact categories of socio-cultural input and the categories of sociocultural structure. The first set of categories, including population, community facilities, private development, and regional relationships, are ranked according to the degree to which existing patterns will be altered by the varying levels of groundfish and oil industry development. The second set of impact categories are placed within three major divisions. The first is that of universal categories. It includes those components of community life most susceptible to change and having the greatest impacts on community life. These categories exhibit the primary effects of environmental change. Within this division we place the impacts of environmental changes on the local economy, social relations, and value system.

The second division is labelled context-specific categories. These are categories which may be of major or minor importance in the analysis of projected impacts depending upon the nature of the environmental input and the importance of the category in the social structure of the community. Change in these categories are usually secondary in nature when compared with changes in the local economy, social relations, and system of values. These categories include the political and religious subsystems.

Within the third division are the minor categories. Changes in these components of the social system comprise tertiary effects of environmental changes; they are more directly influenced by changes in the secondary categories. Health care, social services, and recreation are included within, but not necessarily limited to this category. These impact categories could also conceivably be labelled as context-specific because particular environmental changes may have potentially significant impacts on these categories. In general, however, these categories tend to display the least amount of change.

3.2 Primary Scenario

3.2.1 Assumptions

The population basis for the primary scenario of social change in **Unalaska** throughout the forecast period is provided in Table 20. This table contains an estimate of potential changes in residence and employment in the Bering Sea/Aleutians Region which are based on projected groundfish harvest levels. The estimates of employment and residence are based on a set of assumptions derived from two previous OCS studies and modified to correspond to actual levels of development and updated population estimates: OCS Technical Report Number 51: Western Alaska and Bering-Norton Petroleum Development Scenarios, Commercial Fishing Industry Analysis, August 1980, prepared by the Alaska Sea Grant Program, University of Alaska; and OCS Technical Report Number 60: St. George Basin and North Aleutian Shelf Commercial Fishing Analysis, prepared by Earl Combs, Inc (1981).

Table 20

*Projected U.S. Groundfish Harvest and Related Employment
Bering Sea/Aleutians Region*

Year	<i>Total U.S. Catch, Including Joint (Foreign/U.S.) Ventures (in 1000's of metric tons)</i>				<i>Number of U.S. Groundfish Workers By Residence Status In Aleutian Islands Census Division</i>			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1981	87.3	78.5	0.4	8.4	212	3	25	240
1982	111.4	100.0	0.5	10.9	269	4	31	304
1983	174.7	160.0	0.7	14.0	406	5	47	458
1984	259.1	240.0	1.0	18.1	588	7	69	664
1985	344.8	320.0	1.4	23.4	775	10	91	876
1986	432.1	400.0	1.9	30.2	969	13	115	1097
1987	521.7	480.0	2.6	39.1	1172	18	140	1330
1988	614.1	560.0	3.6	50.5	1384	24	168	1576
1989	670.1	600.0	4.9	65.2	1530	32	191	1753
1990	690.9	600.0	6.7	84.2	1611	43	200	1854
1991	718.0	600.0	9.2	108.8	1711	57	232	2000
1992	753.2	600.0	12.6	140.6	1835	77	263	2175
1993	798.9	600.0	17.3	181.6	1987	103	305	2395
1994	858.4	600.0	23.7	234.7	2175	139	361	2675
1995	935.6	600.0	32.4	303.2	2405	185	436	3026
1996	1036.1	600.0	44.4	391*7	2685	248	537	3470
1997	1166.9	600.0	60.8	506.1	3027	331	673	4031
1998	1337.0	600.0	83.2	653.8	3441	442	857	4740
1999	1558.6	600.0	113.9	844.7	3942	590	1107	5639
2000	1559.0	311.8	155.9	1091*3	3968	787	1382	6137

- (1) *Total U.S. Catch*
- (2) *Harvested by U.S. Trawlers for Joint Ventures (foreign/U.S.)*
- (3) *Harvested by U.S. Trawlers for Onshore Processing*
- (4) *Harvested by U.S. Catcher Processors*
- (5) *Non-Resident Workers on Vessels*
- (6) *Non-Resident Onshore Processing Employees*
- (7) *Resident Workers on Vessels or Onshore*
- (8) *Grand Totals: All Workers in Region*

Also implied within this scenario is an existing and stable level of OCS development in the region. The nature of that development and its current impact on the community of Unalaska are detailed in the ethnography itself.

In utilizing the figures provided by the OCS Region, several caveats are in order. First, we do not believe that the number of non-resident processing employees in the shellfish industry will remain constant, as these figures seem to imply. Given the already drastic reductions in the annual harvests of crab for the past two years and the withdrawal or announced plans for withdrawal of processors from the area, it is more realistic to assume that for the next few years at least, and more likely until the 1990s, there will be a continual reduction (at least major fluctuation) in the number of employees in the crab processing sector. Many of those formerly employed on the crab processing lines will be hired to process groundfish but, for reasons to be outlined below, this will not occur immediately.

Second, we anticipate that growth in the groundfish industry will be relatively slow in the 1980s and then pick up considerably in the next decade. This assessment is based on several factors. One, as the market for groundfish and groundfish products is currently organized, there is no guarantee that the projected increases in the annual harvest of groundfish by American fishermen will be profitable, economically feasible, or even processed in Alaska. In a recent study, R&M Consultants (1981) concluded that the high relative cost of Alaska harvesting and processing compared with prevailing world market prices was a major impediment to groundfish expansion in Alaska. The R&M report cited several examples of recent groundfish processing experiments in Kodiak (New England Fish Company), Petersburg (Icicle Seafoods), and the Aleutian Islands (Icicle Seafoods) which terminated after short periods of operation despite sizeable subsidies to underwrite losses.

Third, as Rogers (1979:8-9) noted in his critique of Arthur D. Little's analysis of the prospects for growth in the U.S. groundfish industry, any projection of increased catch, processing and employment is dependent upon interrelated costs which are external to the industry itself. Such costs include local community expenditures for improvement of harbors, docks, storage facilities, transportation, and so on. To date, it does not appear that these factors have been taken into consideration in evaluations of the impact of groundfish industry development on Unalaska in particular. Such considerations are especially important in the assessment of Unalaska's potential as a center of groundfish processing because of existing limitations in utilities and infrastructure. Such limitations were outlined in the 1979 study of the Alaska Department of Community and Regional Affairs, "Community Planning and Development for the Bottomfish Industry." These limitations include: inadequate community water distribution, electrical, and sewage systems, lack of land suitable for plant expansion and worker housing. Local officials also point to the existing limitations of the Unalaska Airport as an impediment to the development of the commercial economic sector. The Unalaska municipal government is aware of these limitations and is working explicitly to correct them. According to city planners the city is attempting to provide the proper environment, from the perspective of facilities and utilities, in advance of largescale groundfish industry

development, thereby insuring a smooth transition when such development occurs.

These concerns were also voiced in a recent study conducted by the U.S. Army Corps of Engineers (1982), which found that, while Unalaska is a more attractive locale for groundfish processing facilities than many other communities in Alaska, it is still faced with several limitations. They state, for example, that:

This reconnaissance investigation analyzed harbor sites for Akutan for an annual capacity of 200,000 metric tons, but it is possible that the already crowded port at Unalaska/Dutch Harbor, which is one of the Nation's top fishing harbors, may be unable to handle its projected bottomfish yield without substantial additional development there. Some of that projected yield may in fact be displaced to Akutan or go unrealized. The State of Alaska, concerned about the prospects of demand exceeding capacity at Unalaska/Dutch Harbor, is actively pursuing community and port development plans at Chernofski, further west along the island of Unalaska (1982:69).

On the other hand, the decline of crab was not anticipated and may well have provided sufficient capacity for processing in Unalaska during the initial stages of development of the groundfish industry.

Fourth, the current trend for American involvement in the groundfish industry is in the form of joint ventures. "The processors guarantee markets and prices and the fishermen guarantee catch--all within guidelines established by the North Pacific Fisheries Management Council (NPFMC), which allocates fisheries resources among domestic and foreign producers and monitors their performance" (Nebesky, Langdon and Hull 1983:III-114). As was noted in the Bristol Bay Cooperative Management Plan report of 1983, because of the limited number of vessels in Alaska currently available for such joint ventures, any expansion of the form of groundfish industry activity will probably involve fishermen from outside Alaska. Moreover, in the event that most of the groundfish harvest is undertaken by American fishermen in joint U.S./foreign ventures, the processing will be handled by foreign floating processor vessels and there will be little community-level development or effort.

Fifth, there is currently a movement to explore the possibility of limiting entry to the halibut fishery in Alaskan waters. Should legislation be enacted for this purpose, the result could well be to favor outside fishermen at the expense of local fishermen. A similar consequence is associated with the enactment of limited entry legislation in the salmon fishery (Pettersen 1982). If this were to occur in the halibut fishery, it could serve to act as a restraint on the number of fishermen expected to reside in Unalaska throughout the forecast period.

Finally, and perhaps most importantly, groundfish industry development hinges upon local perceptions, and while most Unalaska businessmen and residents see such development as both desirable and vital to the community's future, many are unwilling to commit themselves to it. Some of the local fishermen have begun to convert their vessels for groundfish

but most are uncertain whether the conversion is worth the cost or the effort because of the expense in refitting vessels, the degree of foreign dominance in the market, and the uncertainty of success. Many of the existing processors in Unalaska have examined the possibility of conversion to groundfish processing and all but one or two have determined that the effort is not warranted at present. Even with the recognition that groundfish industry development is important to the community's future, it may be some time before processors and local fishermen alike are willing to commit the time, energy, and financial resources necessary to make such development anything but experimental.

3.2.2 Summary of Effects

Changes in the socioeconomic system of Unalaska depend on a variety of factors. The two most important are anticipated population growth and the ability of the local infrastructure, especially housing, transportation facilities, and public utilities, to meet the demands of both economic and population growth. In turn, economic growth will be the primary factor in determining the character of growth in population and community infrastructure. The three features of the community which are expected to change the most, and have the greatest effect on the character of change in other features or subsystems, are the local economy, the value system and social networks. Economic growth, population size and development of community facilities are interrelated such that changes in one affect the course of change in other subsystems. The local political administration will also experience some change, but these changes in turn will be dependent upon projected changes in the local economy, value system, and social networks. Other features of the socioeconomic system of Unalaska, such as the subsystems of education, health care, and social services, are dependent, in turn, on the state of the economy and local government as well as population size. The local religious and recreational subsystems are dependent upon projected changes in population size, values and social networks. Intraregional relationships will be dependent upon the degree of economic growth in each of the communities within the region.

In general, we expect that the sociocultural system of Unalaska will experience some consolidation during the 1980s. What changes do occur will result from an expected leveling off and slight reduction in the rate of growth in the local economy, even though groundfish industry development is expected to occur during this period. Significant change in all facets of the sociocultural subsystem is expected to occur during the 1990s when levels of groundfish industry activity and population growth is expected to increase dramatically. While Unalaska will retain much of its "frontier" or "boom town" character during the latter part of the forecast period, it will slowly acquire the permanent features of a growing community which is more closely integrated with the outside world. Intraregional relationships will be characterized by an increased level of economic competition between the communities of Unalaska, Akutan, and the Pribilof Islands, especially as these communities develop their own facilities for groundfish processing. The use of Unalaska's port facilities for transshipment of processed seafood products, however, will involve a certain degree of economic cooperation between communities as well as a possible expansion in Unalaska's role as hub of regional air transport.

3.2.3 Economic Subsystem

3.2.3.1 Output

3.2.3.1.1 Employment

With the increase in employment opportunities at levels stipulated by the scenario assumptions of projected U.S. groundfish harvest in the Bering Sea/Aleutians Region, the sector of the community of Unalaska which will represent the most significant level of change in output activity will be the local economy. The bulk of this change, however, will come in the 1990s, particularly after 1995. For the immediate future, given the community's present reliance upon the fishing industry for employment and income and the current decline in the crab fishery, the projected increase in groundfish harvest would, at best, only fill the vacuum.

Certain limitations must be kept in mind when viewing the projected levels of employment in the groundfish industry in Unalaska. First, not all of the anticipated employment positions will be available in Unalaska. As was noted in the earlier report, Akutan is emerging as a major port for processing vessels and a clear trend exists for groundfish processing to be handled by large vessels rather than shore-based plants. Second, most of the employment opportunities will be seasonal and not, provide sufficient incentive for permanent residence. Even though groundfish processing will occur on a year-round basis, non-resident employees will more than likely continue to be hired on six-month contracts for a number of reasons. One is the fact that the labor pool from which non-resident workers are drawn may not be available year-round because of participation in other economic activities in other parts of the United States (e.g., Filipino or Mexican workers who are employed in the agricultural activities in California or Washington).

Another reason for a continuation of the six month contract is the potential continuation of the policy of giving lower wages to processor workers in Unalaska than to workers in other parts of Alaska. With relatively low wages as an incentive, and the fact that groundfish processing has a lower profit margin than crab or salmon processing, processors may find it financially desirable to continue the current contract system. This conclusion was also reached by the Alaska Department of Community and Regional Affairs study in 1979. According to this report, "unless current hiring practices by processors change, the advent of bottomfishing may lengthen the period of sustained plant operations but will not contribute to the establishment of a permanent resident work force" (1979: 11).

Thus, while the employment opportunities in the fishing industry are expected to replace job opportunities lost in the declining crab fishery for existing residents, it is not expected that these opportunities will attract a significant increase in permanent residents in Unalaska in the near future. From 1990 onward, however, the assumed growth in the groundfish industry may provide enough jobs to result in a significant rate of growth in this segment of the population. Combined with a possible resurgence in the crab fishery in the next decade, the seafood

processing sector in Unalaska will become a major factor in the course and direction of sociocultural change in the community.

On the basis of this information, it is assumed that under this scenario, non-residents will comprise a decreasing proportion of the total work force in the commercial harvesting and processing sectors of the Unalaska economy, declining at a rate indicated in Table 21.

Table 21

Proportion of Residents and Non-Residents in Commercial Harvesting and Processing Sectors, Unalaska
1980-2000

<u>Year</u>	<u>Residents</u> %	<u>Non-Residents</u> %
1980	1	99
1985	5	95
1990	15	85
1995	30	70
2000	50	50

Table 22 provides a representation of the employment opportunities by economic sector in Unalaska throughout the forecast period. The number of jobs available and the rate of growth in each sector is based on three specific sets of assumptions. First, population projections assuming groundfish development provided by the OCS Region were used to establish a baseline rate of growth in the commercial harvesting and processing sectors of the Unalaska economy. Second, assumptions regarding the changes in the employment multiplier used by Alaska Consultants in their groundfish forecasts (1981:223) were incorporated. The employment multiplier is estimated to increase from a 1980 level of 1.1 (meaning that for every ten jobs in the primary sector, there is an additional job created in the secondary sector), to 1.2 in 1985, 1.3 in 1990, and 1.4 from 1995 to the year 2000. Third, the percentage of the total increase in new secondary employment in each economic sector is also taken from assumptions provided by Alaska Consultants (1981:227). Specifically, 30 percent of new secondary employment is allocated to the government sector, 24 percent to trade, 16 percent to services, 15 percent to construction, 10 percent to transportation, communications, and public utilities, and the remaining 5 percent to finance, insurance and real estate.

Under the assumptions of this primary scenario, total employment in Unalaska is projected to grow from the 1980 estimate of 1,600 jobs (Alaska Consultants 1981:216) to an estimated 3,855 jobs in the year 2000 (see Table 22). This represents a total increase of 140.9 percent within a twenty year period or an average annual increase of 7 percent. It should be noted, however, that the significant growth in all sectors of the commercial sector of the local economy will come after 1995.

Table 22

Estimated Total Employment
 Primary Scenario
 City of Unalaska
 1980-2000

<u>Employment Sector</u>	<u>1980a</u> (actual)	<u>1985</u>	<u>Year</u> <u>1990</u>	<u>1995</u>	<u>2000</u>
Commercial Fishing	150	141	165	232	456
Mining	2	2	2	3	3
Contract Construction	12	54	71	100	162
Manufacturing	1,166	895	912	1,206	2,337
Transportation, Communications and Public Utilities	57	45	49	70	150
Trade	60	72	84	127	260
Finance, Insurance and Real Estate	27	21	20	28	54
Services	44	52	59	89	184
Government	82	65	81	127	259
Total Employment	1,600	1,347	1,442	1,982	3,855

a, 1980 figures are from Alaska Consultants Inc. 1981:217.

Table 23 provides an estimate of the contribution of the projected development of the groundfish industry to the Unalaska economy in terms of basic employment. Included in these estimates are assumptions regarding growth in basic employment taken from Alaska Consultants (1981:219). This table notes the number of jobs in three specific sectors to be directly affected by such development: commercial fishing; contract construction; and manufacturing. From this table, it is evident that the developing groundfish industry in Unalaska will gradually supplant the traditional crab processing industry, but not until the end of this decade. .

Table 23

*Estimated Basic Employment in Selected Sectors
Primary Scenario
City of Unalaska
1980-2000*

Employment Sector	Year				
	1980 ^a (actual)	1985	1990	1995	2000
Commercial Fishing	150	141	165	232	456
Traditional	(150)	(80)	(50)	(46)	(78)
Groundfish	(0)	(61)	(115)	(186)	(378)
Contract Construction	5	24	32	38	40
Traditional	(5)	(3)	(2)	(2)	(3)
Groundfish	(0)	(21)	(30)	(36)	(37)
Manufacturing	1,166	895	912	1,206	2,337
Traditional	(1,166)	(620)	(388)	(361)	(612)
Groundfish	(0)	(275)	(524)	(845)	(1,725)

a. 1980 figures are from Alaska Consultants, Inc. 1981:219.

In 1980, only twelve local residents were involved in the harvesting sector of the commercial fishing industry. A few of the local fishermen have already begun to harvest groundfish, particularly halibut, and others have made plans to convert their crab fishing vessels for groundfish harvesting. With the projected declines in the crab fishery, it is doubtful that more of the existing Unalaska residents or new residents will become involved in harvesting crab, shrimp or salmon for the next five to seven years. If the number of resident fishermen does increase, it will be those involved in the harvesting of groundfish. Because this fishery is active throughout the year, it is possible that some of those fishermen from outside the region who participate in the Bering Sea and Aleutian Islands groundfishery will relocate in Unalaska and reside there as long-term transient or semi-permanent residents. Initially, this number will be small, as the expected amount of fish processed by local businesses will be small. In the 1990s, however, as existing processors expand their capacity for processing groundfish and new processors move into the community, more fishermen will reside in Unalaska. With a potential resurgence of the crab fishery in the 1990s, this segment of the local economy will be proportionately larger than it is today.

The number of workers in the seafood processing sector depends on the number of processors, their interest in and capacity for processing groundfish economically, and the improvement of local facilities and community infrastructure which would encourage other processors to locate in Unalaska. For the next few years, the overall number of jobs in this sector is expected to decline, perhaps by as much as ten to fifteen percent of existing jobs. This is a result of the expected closures of some of the smaller processors in Unalaska, such as Pacific Pearl,

Whitney-Fidalgo, and Sea Pro. The growth of jobs that does occur with expansion of groundfish processing will offset the anticipated reductions in workforce and planned sale or closure of some facilities because of the decline in the crab fishery. In the 1990s, however, the number of jobs is expected to rise significantly. The seafood processing sector will continue to be the largest source of employment in Unalaska throughout the forecast period.

The transportation sector is expected to provide fewer employment opportunities in the short term. While certain employment opportunities will be created with the initial expansion of the groundfish industry in Unalaska, this may be offset by both the decline in the crab fishery and the withdrawal of Foss Shipping Lines from the area. In the 1990s, however, this sector will experience a rate of growth commensurate to the anticipated growth in the seafood processing sector.

The number of employment opportunities associated with construction is expected to remain at constant levels for the next five years at least. This is for two reasons. First, assuming new processors do move to Unalaska as part of the projected developments in the groundfish industry, these companies will probably occupy facilities vacated by processors currently confined to the traditional seafood industry (i.e., crab and salmon). This is indicated by an already growing increase in the vacancy rate in Unalaska associated with the declining crab fishery. The anticipated increased number of non-resident workers will be housed in existing facilities or in a few additionally constructed dormitories. Second, the current number of construction workers in Unalaska appear to be capable of meeting both existing demand and the projected demand for new housing in the near future. While construction of new docks or facilities may increase slightly in the next few years or remain constant, the number of construction workers will remain constant or will increase by drawing from other employment sectors.

In the 1990s, the number of construction workers in Unalaska is expected to increase significantly, both as a result of changeovers from other employment sectors of existing residents and the immigration of new residents for construction purposes.

Government employment is not expected to increase until the 1990s and may, in fact, decrease slightly due to attrition. The government employment sector is currently divided into two components those employees hired from outside the community and who occupy a position for a limited period, and those who are hired locally and occupy a position for extended periods. With a projected decline in municipal revenues and a corresponding decline in the number of individuals hired from outside the community, the overall number of positions held by this group will diminish as current employees leave the community to pursue opportunities elsewhere. The number of employees belonging to the second group, mostly clerks and public works employees, will remain constant or decrease slightly over the next five to seven years.

By the 1990s, the government sector should begin to exhibit a rise in the number of available employment positions, particularly as government revenues are expected to increase as well as local demand for individuals with bureaucratic and managerial expertise. As Table 22 indi-

cates, the number of positions will have increased by 298.5 percent in the year 2000. Most of this increase will come from outside hires with a smaller increase coming from local hires, and mmuch of it will be a result of the increase in the number of teachers as the school expands or new schools are constructed.

Throughout the forecast period, one of the greatest increases in employment opportunities will occur in the support services and retail sales sectors. This growth will occur with the increase in the number of fishermen in the region and current levels of OCS development. Retail sales to non-resident fishermen and crews of seismic vessels will increase as will the demand for boat repairs and engineering services.

3.2.3.1.2 Income

In the next ten years, income levels will increase throughout the community, but the rate of increase will not be as great as in the past ten years. There will also be a noticeable discrepancy between in the rate of growth in different income groups. For those local residents involved in support businesses and industries such as transportation, wholesale sales and ship repair, income levels will rise most dramatically. A second rate of increase will affect those directly involved in the seafood processing industry (i.e., processor managers, local fishermen). A third rate of increase will affect the small retail businessmen and individuals providing particular services (i.e., bars, cab companies, etc.). Those not directly involved in the fishing industry (i.e., those receiving public assistance, certain non-employed or marginally-employed segments of the local population) will experience the smallest rate of growth in income.

At the same time the increases in income levels begin to diverge among certain segments of the local population, certain economic class distinctions will begin to emerge. For example, distinctions are already becoming apparent with respect to housing. These socioeconomic distinctions will be particularly evident in the ways income is spent and/or invested.

3.2.3.1.3 Consumer Behavior

Consumer activity in the short-term is expected to reflect reduced spending on certain luxury items such as new automobiles, vacations, home entertainment systems, and dining out. The market for used automobiles and motorcycles will develop during this period. With the projected downturn in the economy in the next few years, greater reliance upon credit for consumer purchases may become evident. Given the expectations of the different social groups in Unalaska and their resources for adapting to this downturn, consumer behavior may become more homogeneous for a few years.

Once the economy begins to grow with expanded levels of groundfish industry development, however, differences in consumer activity will begin to emerge as those residents making more money purchase more luxury items and those making less money rely more extensively on subsistence activities. The types of items purchased will conform to the dominant influences of an urban-oriented, "modern" value system. Such

behavior will magnify existing differences in socioeconomic status of local residents to a greater degree than at present.

3.2.3.1.4 Housing and Real Estate

At the proposed levels of groundfish industry development, perhaps the most dramatic shift in economic activities will be the increase in housing and real estate indices. With the decline in the traditional seafood processing industry, the vacancy rate in Unalaska is beginning to rise. Improvements in local utilities such as electricity, water and sewerage, could help to ease the average residential density, reducing housing costs and expanding the supply of available housing. This, in turn, would help to attract more outside fishermen to live in the community as semi-permanent residents and more long-term transients and semi-permanent residents working year-round for groundfish processors. As more processing employees move into permanent housing throughout the community, the use of processor bunkhouses for employees will diminish.

Construction and development of land is expected to remain at current levels of growth for the next ten years and then increase significantly in the 1990s. However, one of the major limitations to such development is the lack of available land. Both because of the local terrain and market conditions, relatively little land within the city limits of Unalaska is usable or available. The value of existing property, both commercial and residential, will increase significantly. This will have the result of increasing the total assets of existing residents, particularly the Aleut segment of the local population at the expense of newcomers. In fact, the shortage of available land for development may work to encourage greater reliance on floating processors and dormitory arrangements for transient and semi-permanent processor employees.

In the next ten years, land speculation is expected to increase, both because of the possibility (if not the actuality) of increased OCS activity in the region which may affect Unalaska directly, and because of projected increases in groundfish industry development. Most of the land available for speculation is in the hands of the Ounalashka Corporation. The value of the small amount of land available for housing will rise to levels out of the range of most incoming residents. If fishermen do move to Unalaska, they will be among the few newcomers capable of purchasing the developed lots in Unalaska Valley.

3.2.3.2 Feedback

3.2.3.2.1 Cash Economy

The economic organization of Unalaska is expected to undergo changes immediately. The number of local residents involved in the commercial fishing industry is expected to increase, slowly at first and then dramatically during the 1990s as the 12 month groundfish harvesting season requires fishermen and processing employees to be in the area for most or all of the year. The anticipated rate of increase in the proportion of local residents in the harvesting and processing sectors of the commercial fishing industry is indicated in Table 21 above. As noted above, the novelty of this situation for most American fishermen

prevents this phenomenon from occurring sooner. However, the desire for larger incomes and the increasing attractiveness of Unalaska as a permanent residence could attract more outside fishermen to reside in the community, either as long-term transients or semi-permanent residents.

The commercial fishing industry will continue to exploit the crab fishery, but this will begin to diminish as greater effort is placed into groundfish industry development. This effort will include refitting of existing fishing vessels, changes in equipment on the processing lines, and allocation of personnel for specific tasks. We remind the reader, however, that a shift from crab-fishing to year-round ground-fishing will be an extremely difficult one for many fishermen to make. Local fishermen will undoubtedly continue to invest much of their efforts and resources on the crab fishery, although many will begin to spend greater amounts of time and investment on groundfishing. As this occurs, it is possible that a decrease in effort in fishing for other species, such as salmon, shrimp and herring will occur.

With respect to the modernization of vessels, it is believed that significant changes in the existing local fishing fleet will not occur until the 1990s. Improvements are tied to income which, in turn, is tied to markets, resource availability, and operating costs. Because of the decline in the crab fishery, income necessary to upgrade or change equipment will be in short supply, and there will be less willingness to commit oneself to longterm debt for such modernization. Moreover, because of the competition with foreign processors for existing markets, the price for groundfish will be low while the initial startup and changeover costs will be high, further discouraging vessel modernization.

Changes in the processing sector will occur in one of two ways; either changeovers in processing lines and equipment will be made by existing processors in Unalaska or those processors which currently handle mostly crab will close down and sell their facilities to new companies specializing in groundfish processing. Current indications are that both of these changes are occurring. Some of the existing processors are already leaving or have announced their intention to leave the community. The Pan Alaska, Pac Pearl, and Sea Pro plants are for sale and Pac Pearl and Sea Pro have already discontinued operations. Whitney-Fidalgo has announced plans to close down for a minimum of two years.

Attempts have already been made to experiment with groundfish processing but with results too inconclusive to warrant full-scale operations. The processing sector, therefore, will probably be assumed by companies which make a greater commitment to groundfish than do existing processors and which are large enough to handle the initially high overhead costs for processing groundfish. Sea Alaska and Universal, currently in Unalaska, appear to meet both of these requirements. Johanson, the Norwegian firm which had contracted with Sea Pro to process cod, is looking for another processor to take the place of Sea Pro. It is expected that an arrangement will be made with one of the two remaining large-scale processors in Alaska, in all probability Universal. Of those companies remaining in Unalaska, most will begin conversion to groundfish processing in the 1980s while retaining the capacity for processing crab on a reduced scale. Sea Alaska already has begun to process fresh frozen cod fillets for the domestic market and Universal

has one of their floating processors processing groundfish. The processing of other species of such as salmon or herring will help to fill the gap between declining stocks of crab and the emerging groundfish industry. Nevertheless, the proportion of these species processed will also decline as the effort devoted to groundfish processing increases.

By 1990, there should also, according to OCS assumptions, be a change in the contract period used by Unalaska processors to hire employees from a six-month to a twelve-month contract. It is also likely that the wage scale will increase, particularly as the competition for labor throughout the state will increase if the industry does grow at the anticipated rate. Raising the wage level will also attract more long-term transients, changing the population structure of Unalaska as well as affecting the growth rate of other commercial businesses in the community. The processor workforce will continue to be mostly Filipino, Mexican, and Vietnamese with perhaps a small increase in the number of current local residents. The rate of worker return among seasonal transients throughout the forecast period will continue to increase, but actual levels will be tied to two major factors: economic conditions of the "lower forty-eight" and wages paid by the processors in Unalaska.

Large scale enterprise will continue to flourish through the forecast period, even as the overall level of economic growth in the community is expected to level off and remain constant for the next five years. Existing size and current or potential contracts with oil companies or local processors are factors underlying this assessment. Carl's Commercial and the Unisea Complex, in particular, are expected to weather the 1980s quite well and experience moderate levels of growth.

In contrast to the optimistic forecast for large-scale businesses, smaller businesses in Unalaska may not fare so well in the short-run. The 1980s will be difficult for certain small businesses, particularly those relying on permanent or semi-permanent residents for customers. A few of the smaller operations may even go out of business; the major exception to this assessment will be businesses such as marine engineering or ship repair which will benefit from the growing number of outside fishermen in the area. Moreover, unlike the larger operations which currently have contracts with some of the oil companies in the region, the small-scale businesses are less capable of handling the demand from oil-related activity and hence will not be able to compensate as well for the loss of processor-related business.

Hotels, bars and restaurants currently operating in Unalaska will remain at least for the next five to seven years and, more than likely, throughout the entire forecast period. A few of the less prosperous businesses may, change ownership, particularly in the next few years, if the local economy does experience a downturn.

One major business concern which will play a key role in the forecast period is the Ounalashka Corporation. The ability of the corporation to survive a possible takeover by larger, non-Aleut corporations after 1991 will largely depend on its ability to formulate clear policy objectives, ability to compromise with the city and with non-Aleut corporations, and the economic success of its existing financial ventures. Some current

investments such as the ship repair facility, gas station, and truck rental company will grow moderately during the 1980s and then at accelerated levels in the 1990s. Other investments such as the laundromat and the duplex rentals on Standard Oil Hill may lose money in the 1980s as the rate of population growth drops and vacancy rates begin to climb, and the Corporation is faced with the choice of either lowering rents or accepting a larger percentage of vacant units for extended periods of time. The corporation will also be faced with decisions regarding the value of its property and determining the criteria on which that value is to be placed. If exorbitant prices are charged for corporation property, the Ounalashka Corporation faces a greater possibility of takeover by non-Aleut interests.

Any growth in banking operations through the remainder of the 1980s will come in the form of credit unions. The need to invest money and secure loans will remain high and dealing with offices in Anchorage will increasingly be seen as an inconvenience. The existing branch of the Alaska State Bank will continue at present levels of service until the 1990s, when anticipated economic growth will encourage local investment, increased local incomes, and the continuation of the current trend toward a "modern" system of banking. The demand for business and personal loans will require that banks become a full-service institution if they are to prosper in Unalaska.

In short, all forms of entrepreneurial activity are expected to grow significantly during the 1990s under the assumptions contained in this scenario. There are certain factors acting as limits to growth in this sector of the cash-based economy which may continue to be implicit throughout the forecast period, particularly in the next few years. These include the lack of both adequate transportation and motivated help. Nevertheless, by 1991, the factors promoting growth of local business should outweigh the disincentives. Among these factors are the development of a uniform electrical power system for the entire community and an anticipated reduction in the level of conflict between local entrepreneurs and the Ounalashka Corporation. The use of local businesses (primarily large-scale commercial firms) for the supply of certain goods and services to oil companies in the area will also contribute to growth in this sector, even assuming that oil-related activity remains at current levels. With the anticipated increase in population during this period, there will be new entrepreneurs as well as new customers in Unalaska. This increase will also be promoted by the increase in income levels associated with groundfish industry activity and the potential sale of some of the property currently held by the Ounalashka Corporation. Large-scale businesses will be forced into increasing levels of competition with one another as demand increases. This competition, in turn, could help to promote better service and lower prices for local consumers. It is also expected that a few new businesses designed to cater to the needs of long-term Filipino, Vietnamese or Mexican transients will emerge in Unalaska during this period.

In the 1990s the service sector of the economy will emerge as a significant portion of the entire economy. This sector will grow with an increase in the number of trained professionals who will provide services on a fee basis. These professionals will include lawyers, accountants, and health care providers.

Many of the alternative forms of employment have already been discussed in the analysis of economic output. It is only noted here that certain changes are expected to occur in the organization of government employment during the next few years. The trend toward dichotomization of employment as professional or non-professional will continue. Salaries designed to attract qualified professional administrators from outside the community will continue to increase at levels greater than those for non-professional employees. This will lead to an increasing disparity in income throughout the forecast period. Despite this increase in professional salaries, however, it is likely, given the prospect of limited economic growth in the next few years, that the vacancy rate among qualified administrative personnel will increase throughout the 1980s and then begin to level off and decline in the early 1990s.

Among external commercial agencies, the two major areas of growth will be the oil companies, which plan to use Unalaska as a base for certain activities, and outside construction companies. ARCO's presence in the community will increase slightly with the completion of the new dock in Captains Bay providing the foundation for a support base in Unalaska for ARCO's offshore operations. The facility includes a dock, a 500,000 gallon fuel storage tank, a warehouse and a small employee camp. A second dock is also planned for the facility. Chevron has announced plans for expansion of its activities in the community, probably in the late 1980s or early 1990s. Exxon will also increase its level of activity in Unalaska to match that of ARCO. While these operations assume only current levels of oil-related activity and are not expected to grow at the levels stipulated in some of the secondary scenarios outlined below, they will increase over current levels and make greater use of the local support and service sector. The real question will be the extent of their interaction with the rest of the community. By attempting to maintain a relatively low level of visibility in the community so as not to attract public concern, oil company employees will have less effect on the social fabric of Unalaska than will the seafood processors. The use of outside contracting firms for construction projects in Unalaska will also increase, particularly during the 1990s. While an effort will be made to employ local workers in these projects, the number of outside, transient construction workers is expected to increase in the 1990s.

Other external businesses are expected to maintain their current level of organization with some potential for reorganization in the next five years, to accommodate to the reduced levels of growth, and probable expansion of organization in the 1990s to handle increased demand for services. The existing structure of air transportation services will remain essentially the same in the short-run, with a possible reduction in the number of flights as the demand for service diminishes slightly. Air Pac and Reeve Aleutian Airways will remain the two major carriers providing service to Unalaska. Growth in the 1990s will be induced by the projected increases in population, economic activity, and the completion of certain essential airport improvements.

Some change is expected in the organization of shipping and container companies which provide service to Unalaska. As noted above, Foss Alaska Lines is expected to discontinue operations in Unalaska with much

of their operations being handled by Sea Land. Each of the shipping and container companies will expand operations in the 1990s as the demand associated with groundfish industry activity increases. Even if much of the groundfish processing were to be done elsewhere in the region, the economics of containership operation providing the most efficient means of transport of seafood products outside the region would suggest the use of Unalaska's facilities as a transshipment center. The construction and increasing use of cold storage facilities in Unalaska will also have an impact on the organization of these companies and the way items are exported from the community, allowing for larger shipments of processed products at reduced costs.

The economy of Unalaska will continue to rely primarily on external markets, both for distribution of local seafood products and as a source of necessary goods and services for the community itself. In the 1990s, however, a trend toward the development of local markets will emerge. This will help stabilize the local economy and reduce its dependency on cyclic variations in the national or international value of local resources and consequent economic effects. The increasing reliance of oil companies and groundfish processors on local businesses for goods and services and the increase in population will be largely responsible for this trend. Small businesses may come to rely upon one another, helping to integrate and expand the local market for their goods and services, but they will still rely heavily on external markets for goods, services and labor supply.

The organization of the distribution of goods and services in Unalaska is not expected to change significantly during the forecast period. In the short-run, the larger distributors will capture a greater share of the market, but the internal network of distribution will remain unchanged. However, with the projected increases in economic and population growth in the 1990s, the network of distribution will undoubtedly begin to expand and diversify.

3.2.3.2.2 Subsistence

The subsistence sector of Unalaska's economic organization is expected to remain unchanged with one important exception. A distinction will emerge between Aleut and non-Aleut subsistence strategies beyond merely the quantity of items harvested. For some Aleut residents, subsistence will continue to be based on economic need. It is possible that with the projected downturn in the economy in the next few years, the limits for subsistence-caught salmon will increase or there will be an increase in the number of salmon caught illegally. While some items or activities will diminish in frequency because of the level of effort involved or possible reductions in the resource, they will continue at reduced levels because of their importance in retaining a sense of Aleut identity (Veltre and Veltre 1982). In general, however, subsistence activities among the Aleuts will increase in the 1980s, then level off or decline in the 1990s. The increased pressure on local resources resulting from projected growth of the non-Aleut population may result in the enactment of regulations limiting the number of resources harvested. Illegal subsistence activities may increase and competition for existing resources with non-Aleuts may lead to some conflict between Aleuts and non-Aleuts.

Non-Aleut subsistence organization is expected to remain constant throughout the forecast period. Subsistence activities among this segment of the community are more recreational than economically necessary. Salmon fishing, duck hunting, and berry picking are expected to remain important aspects of subsistence activity for this group.

Fur trapping on Unalaska Island is expected to retain its current organization. It will involve relatively few individuals and experience the traditional fluctuating levels of activity dominated by external market demand.

3.2.3.2.3 Non-labor' Force

The organization of unemployment in Unalaska is expected to remain the same throughout the forecast period, with the possible exception of the next few years when limited economic growth may increase the importance of unemployment benefits and public welfare for local residents. With the anticipated growth in the economy in the 1990s, however, the community could well return to the current organization of the non-labor force, with unemployment often being a condition of choice and not one of necessity.

3.2.4 Population

Based on the levels of growth projected by the Minerals Management Service for the entire Aleutian Islands region, contained in Table 20, and keeping in mind the caveats to these projections outlined above, the population of Unalaska for the next seventeen years is described the following tables. Table 24 provides a comparison of the rate of growth in the number of residents and non-residents in Unalaska and the entire Aleutians region. As this table indicates, Unalaska will represent an increasing proportion of residents in the Aleutians region through the forecast period, rising from 25 percent in 1981 to 51.2 percent by the year 2000. At the same time, the proportion of non-residents in the region working in Unalaska will decline from 37.5 percent in 1981 to 20.2 percent in the year 2000. This is largely due to the assumed increase in the number of residents in the groundfish industry.

Table 24

Projected Population of Unalaska
Primary Scenario: 1981-2000

<u>Year</u>	<u>Residents</u>		<u>Non-Residents</u>		<u>Total</u>	
	Number	% of Region	Number	% of Region	Number	% of Region
1981	1054	25.0	890	37.5	1944	29.5
1985	1272	26.0	985	31.8	2257	28.3
1990	1530	28.0	916	24.0	2446	26.4
1995	2129	33.9	1007	21.2	3136	28.4
2000	4521	51.2	1397	20.2	5918	37.6

The annual rate of growth in total population (residents and non-residents) throughout the forecast period is expected to be 10.2 percent. Most of this growth will come after 1990, when the groundfish industry is expected to increase its rate of growth by 14.2 percent. The number of non-residents will decline through the 1980s, even as the ground fish industry develops, because of the continued decline in the crab fishery. This segment will begin to grow again in the 1990s, but not as high a rate as occurred during the expansion of the crab fishery in the 1970s.

These forecasts are based on five sets of assumptions. First, of the population increases projected for the entire region, outlined in Table 20, only a certain proportion will reside in Unalaska. This proportion, however, will grow at a constant rate of 1.3 percent per year such that, by the year 2000, almost two-thirds of all residents in the Aleutian Islands Census Division will be in Unalaska. Almost all of this growth can be attributed to migration from outside the region.

Second, despite the projections of the MMS SCIMP model, we anticipate a reduction in the non-resident workforce involved in the traditional processing sector. Most of the new employees in the bottomfish industry will fill positions which were lost with the decline in the crab fishery. This situation will continue until 1990 when the crab fishery can be expected to display signs of growth.

Third, by the early 1990s, a severe strain will be placed on available housing and certain community facilities and utilities. These strains could act as constraints to further growth unless prompt action is taken to alleviate these problems.

Fourth, fertility and mortality rates should remain constant throughout the period, with minor fluctuations. A possible increase in mortality in the 1980s will be offset by a possible increase in the birth rate in the 1990s. These fluctuations are tied to the increase in accidents and stress-related diseases associated with limited economic growth in the 1980s and the subsequent increase, in the 1990s, in young couples among the semi-permanent resident segment of the population, contributing to an increase in the number of births.

Finally, patterns of migration are expected to change somewhat as the rate of immigration declines and the rate of emigration increases over the next few years. Toward the end of the decade, however, this pattern will reverse itself and immigration will exceed emigration throughout the remainder of the forecast period.

Table 25 outlines the projected changes in the proportion of residents and non-residents in Unalaska. The resident category includes permanent and semi-permanent residents and long-term transients. As this table illustrates, the percentage of non-residents will decline throughout the forecast period to 23.6 percent by the year 2000.

Table 25

Unalaska: Resident and Non-Resident Population Projections
Primary Scenario
1981-2000

<u>Year</u>	<u>Residents</u>		<u>Non-Residents</u>		<u>Total</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
1981	1054	54.2	890	45.8	1944	100
1985	1272	56.4	985	43.6	2257	100
1990	1530	62.5	916	37.5	2446	100
1995	2129	67.9	1007	32.1	3136	100
2000	4521	76.4	1397	23.6	5918	100

Several different assumptions are implied in this forecast. For a while at least, processors will continue to hire employees on a six month basis. This will discourage any significant increase in processor employees wishing to reside in Unalaska on a permanent basis. Therefore, the rate of growth of the resident population attributable to former non-resident processing employees will be minimal throughout the 1980s. When 12 month contracts do become the rule, as is expected by 1990, the rate of growth of residents will increase significantly. The turnover rate of long-term transients not involved in the processing sector (e.g., government employees) will remain high and possibly increase slightly in the short-term. This turnover rate is expected to decline in the 1990s, however, as opportunities for long-term transients (who may be considered residents) increase. The differential rates of growth of residents and non-residents is also based on age, sex, and household size differences. The dependency multiplier for non-residents is smaller than for residents.

No major changes in the age and sex distribution among Unalaska residents is expected for the next seven years. In the early 1990s, there may be an increase in males aged 25-34, but by the latter part of that decade more balanced age and sex distributions will emerge as more residents with families replace non-residents in the seafood processing industry. These projections assume that, for the next few years, at least, newcomers to Unalaska will be primarily young, unmarried males or young couples. This is because of the frontier environment of Unalaska and the nature of the renewable resource economy. Even so, families will continue to grow throughout the forecast period, especially toward the end of the period as the processing workforce experiences a shift from non-resident transients to semi-permanent residents.

Among the non-resident population of processor employees, the existing trend toward older employees who are returnees and toward a larger proportion of males is expected to continue throughout the forecast period.

Finally, the proportional contribution of the various ethnic groups in **Unalaska** is expected to undergo some change throughout the forecast period, as indicated in Table 26. These estimates are based on several different assumptions. First, the estimates for the **Aleut** population are based on an average annual 5.4 percent rate of growth. This figure is derived from the average of the annual growth rates for 1970-1980 (7.6%) and 1977-1980 (4.1) (see Table 9). Second, the estimates for the Black population are derived from an extrapolation of the proportional representation of Blacks to the total population for 1977-1980. This would give Blacks a 2.0 percent share of the population in 1985, 2.5 in 1990, 3.0 in 1995, and 3.5 in the year 2000. Third, the estimates for the "Other" category, including Filipinos, Vietnamese and Mexicans, are derived by taking the current percentage of processor employees belonging to this category (60%) and assuming this proportion will remain constant throughout the forecast period. Because members of this category employed in the processing sector will retain their non-resident status until the enactment of 12 month contracts in the late 1980s, the dependency ratio is assumed to be lower than that of the population at large, but increasing during the forecast period to the same level as other ethnic groups in the community. The dependency ratio for members of the "Other" category will increase from 1.2:1 (1.2 dependents for every worker) in 1985 to 1.4 in 1990, and 1.6 from 1995 to the year 2,000.

From these figures, three major trends are evident. First, the absolute numbers of each ethnic group will increase in a linear fashion through the forecast period, with the exception of Caucasians who are expected to exhibit a slight decline between 1985 and 1990. This might possibly be accounted for by out-migration due to delays in groundfish industry development. Second, the proportion of Filipinos, Mexican and Vietnamese residents and non-residents will increase such that, by 1995, the "Other" category will comprise over one-third of the total population of Unalaska. Third, if the Aleut population continues to grow at a 5.4 percent annual rate through the forecast period, their share of the total population will remain relatively constant, perhaps even increasing slightly, until the last five years of the forecast period when it will begin to drop off.

Table 26

Projected Ethnic Composition of the Population of Unalaska
Primary Scenario
1985-2000

<u>Ethnic Group</u>	Year							
	<u>1985</u>		<u>1990</u>		<u>1995</u>		<u>2000</u>	
	N	%	N	%	N	%	N	%
Caucasian	1314	58.3	1297	53.0	1475	47.0	2949	49.8
Black	45	2.0	61	2.5	94	3.0	207	3.5
Aleut	254	11.2	322	13.2	409	13.1	519	8.8
Other	644	28.5	766	31.3	1158	36.9	2243	37.9
<u>Total</u>	2257	100.0	2446	100.0	3136	100.0	5918	100.0

One must keep in mind, however, that these figures reflect total population, including residents and non-residents. Among the resident population, Caucasians and Aleuts will comprise a slightly larger proportion of the population than reflected by the figures in Table 26, while Blacks, Mexicans, Vietnamese, and Filipinos will comprise a slightly smaller proportion.

3.2.5 Community Facilities

In the next five to seven years, with or without groundfish development, some improvement will be made on existing facilities, including electricity water distribution, and sewage. There will also be improvements in the docks and in the Unalaska Airport. It is not expected, however, that these improvements will be sufficient to accommodate the anticipated groundfish industry development for three reasons. First, the improvement of these facilities depends largely upon the availability of revenue. Such revenue can come from three potential sources, local taxation, state or federal funds, or municipal bonds. The amount of revenue available from local taxation is not expected to increase in the near future and may decline as processors reduce activity or leave because of the decline in the crab fishery. State and federal funds, as noted earlier in this report, will also not increase as local development is increasingly delegated to local authorities and state revenues diminish with the anticipated decline in oil revenue. Bonds may become a possibility in the next few years but run the risks of local resistance to community debt and to development in general.

A second factor limiting expansion of community facilities and utilities is existing environmental limitations to renovation. As noted in the baseline ethnographic description of the community, facilities and utilities in Unalaska are faced with problems of soil erosion, difficulty of access, and the age of existing structures. The airport in particular is confronted by limitations on runway expansion and improvements with respect to both length and width. While these limitations will not prevent improvements from being made, they do serve as obstacles which make the task of renovation a difficult one at best.

Third, a distinction should be made between increased groundfish development and increased population in Unalaska. It is expected that most of the improvements in community infrastructure planned for the next few years will help to promote growth in the groundfish industry but will not meet the demands associated with increased numbers of residents in the 1990s. Even with the planned improvements, community facilities and utilities will be under great strain with increased levels of demand. The improved systems of water distribution, sewage, and landfill, in particular, may not be able to serve the projected levels of industrial and population growth anticipated for the 1990s.

The first community utility slated for significant improvement is the electrical power system. With the improvements in the distribution system and the centralization of power generation in the hands of the City Department of Public Works, a uniform and updated electrical power system should be in operation by 1988. The proposed system of power exchange between the City and the processors will contribute to a

greater level of efficiency and a uniform distribution system will provide electrical power to all neighborhoods by this time. Declining crab processing activity projected during the next five to seven years will tend to free power for use in groundfish industry development. Standard Oil Hill, an area owned by the Unalashka Corporation, has only recently (1983) been integrated into the area served by the Unalaska Electric Utility, and the city planner notes that the extension of the distribution system to Little South America, another Unalashka Corporation holding, would present no particular difficulties and could easily be done at the same time any major development occurred which would justify the investment.

Improvements in the city's sewerage and water distribution systems may be delayed because of projected decreases in city revenues available for public facilities. Planned improvements will probably be completed in the next four or five years. By the 1990s, however, neither of these systems will be able to accommodate the increased demand caused by greater numbers of residents in the community. Likewise, while existing landfill is sufficient to meet current needs, there are already indications that this is about to become a pressing problem, particularly in the face of additional development.

Significant improvements in local systems of communication are not expected until the mid 1990s. The local telephone system will make some improvements in equipment and gradually expand in areas serviced through the 1980s, and the existing system should meet local needs for the next seven years. Other forms of communication, including television, radio and the local newspaper, may experience some growth in the 1990s, but this will be largely dependent upon external factors beyond the purview of this report.

The Unalaska Airport has been perceived by local officials as the key to economic growth during the forecast period. Without significant improvements, the airport could act to limit future development because of an inability to accommodate jet aircraft. The high fares (88% greater than comparable routes using the B-737 elsewhere in Alaska) and tariffs (estimated to be 56% higher) required by operating costs for existing aircraft serving the airport restrict the flow of people, goods and communications to and from the community.

Because of the recent bond measure approved by the community in the last election, funds will be available to make some improvements in the Unalaska Airport terminal building (indeed, as of August, 1983, the new terminal building was under construction), though no funds have been authorized for hangar improvements. There will probably be a delay in the planned runway improvements because of problems in obtaining funds from the state for this purpose, although the project has been included in the state's FY84 budget. Because of these delays, the Unalaska airport will continue to be a liability for the community and a potential impediment to the expected levels of groundfish industry and oil-related development in Unalaska in the 1990s.

Improvement in the harbor and docks in the area will continue throughout the forecast period. The recently constructed small boat harbor will probably undergo some renovation in the early 1990s to accommodate

increased usage and larger vessels. The City and the Department of Transportation are currently assessing the feasibility of relocating a portion of the boat harbor facility to Expedition Bay near the Unisea Inn and Universal/Pat Pearl plant sites. Construction of docks is seen as essential to the projected levels of growth both in oil-related activity and the local groundfish industry. In the case of the latter activity, construction of one or more cold storage facilities will also occur in the next few years.

3.2.6 Private Development

Private development in Unalaska has already been discussed, in part, in the section on proposed changes in the local economy. Essentially, such development not expected to be modest at best, even with anticipated levels of groundfish industry development or oil-related activity. Throughout the 1980s, local investors or developers, including the Ounalashka Corporation, will lack the either market or capital necessary to make any significant investments in housing or real estate. A vacancy rate is already emerging in corporation-leased housing on Standard Oil Hill. Land prices are expected to remain high, even as demand decreases with the stabilization of the local population. In the 1990s, the incentive and resources for private ventures will increase with anticipated increases in income, economic growth and population, but local investors and developers will also face stiff competition from outside business interests. The lack land suitable for development will continue to act as a constraint on private development in Unalaska throughout the forecast period.

3.2.7 Regional Relationships

Unalaska ties with other communities in the region occurs in several different areas, as noted in the ethnographic baseline description. During the forecast period, these ties will undergo substantial changes in some areas and remain unchanged in others. While specific aspects of these changes are included in discussions of the impact categories of sociocultural structure, three specific dimensions of intraregional ties will be addressed here. These include economic, social, and political ties. Other dimensions, specifically health care and education, which have served to link Unalaska with surrounding communities in the past are expected to decline in importance.

3.2.7.1 Economic Relations

The key to change in all of the links between Unalaska and other communities in the region is the effect of groundfish industry development in these communities. Of the other communities in the region which currently has some relationship to Unalaska, all but Nikolski are expected to benefit to one degree or another from groundfish industry development in the region. Such development is expected to occur in Akutan, the Pribilof Island communities of St. Paul and St. George, and Chernofski Harbor. If this development occurs along the lines of scenarios developed in other studies (cf., Dames & Moore 1982a, 1982b; U.S. Army Corps of Engineers 1982), there will be three major consequences in regional relationships involving Unalaska.

The first and most immediate consequence of groundfish industry development throughout the region will be increased economic competition between Unalaska and other communities in the region. Such competition is already becoming evident between Unalaska and Akutan. The development of harbor facilities in Akutan, as projected in the Army Corps of Engineers (1982) scenario, could attract groundfish processors who might otherwise locate in Unalaska. Such development would also mean that vessels which current must travel to Unalaska for supplies, making an average of 15 trips per year (U.S. Army Corps of Engineers 1982:38), would not have to do so. This would have an effect on wholesale suppliers, retail establishments, and marine engineering firms in Unalaska.

Despite this projection, however, it is uncertain as to how extensive groundfish industry development will be in Akutan. The location of several processors in Akutan in the late 1970s and the growth of the Trident Seafood groundfish processing complex in the community led to several estimates of rapid economic growth. However, in the past few years, the number of processors in Akutan has declined from 11 in 1981 to 5 in 1983. Moreover, Trident has been unable to sell their product and appears to be in some financial difficulty. Given these indications, the optimistic projections of economic growth in Akutan may have to be revised.

Economic competition could also result if the Tanadgusix Corporation of St. Paul proceeds with their plans to develop facilities at Chernofski Harbor for groundfish processors. The location of this site and the potential for development (Dames & Moore 1982) could potentially have greater consequences for Unalaska than the occurrence of groundfish industry development in Akutan. Such development could draw both existing and potential processors and support services from Unalaska. Initially, however, processors which do locate in Unalaska will have to rely on Unalaska existing commercial infrastructure for supplies and support services. In the short run, therefore, Unalaska could benefit from such development at Chernofski Harbor, although in the long-run such development could be detrimental to the Unalaska economy. However, while this competition may be to the disadvantage of the Unalaska economy, by the time groundfish processing at Chernofski Harbor becomes fully operational, the Unalaska economy should be sufficiently strong to effectively mitigate the potential negative consequences of economic competition.

Second, assuming that significant improvements are made on the airport by the early 1990s, Unalaska's role as a transportation hub will increase. Cold Bay, because of its existing facilities, will remain the major center for air transportation in the region. Unalaska will be linked to Cold Bay, Akutan, and Nikolski by air and, with the addition to jet service, may be linked with the Pribilof Islands as well. These links will be especially important to the community of Akutan which will require expanded air service and the local population and economy continues to grow.

Perhaps even more important than the airport, however, will be Unalaska's role as a containership port. As the groundfish industry to expected to develop throughout the region, a cost-effective means of transporting processed seafood products will become essential. One likely

possibility is the use of Unalaska, because of its existing or planned port facilities, as a center for cold storage and shipment of processed products. This port would be especially useful to processors located in Akutan or Chernofski Harbor and would allow for the shipment of seafood products by containerships, reducing transportation and overhead costs.

Third, with the revenue derived from taxes on fish landed and processed, the other Aleutian communities will be able to construct or improve facilities of their own rather than rely on those of Unalaska. The practice among Akutan residents, for example, of sending a few students to Unalaska for high school, will end if educational facilities in Akutan are expanded, using projected increases in municipal revenues. Similarly, the use of the Iliuliuk Health Clinic by residents of Akutan and the Pribilof Islands will decline as clinics in these communities are developed. The one exception to this trend will be the community of Chernofski Harbor. Because of the lack of existing facilities, the projected community of groundfish processor and sheep ranch employees may initially have to rely on Unalaska for educational and health care facilities and services. This dependence will probably remain until the end of the forecast period when Chernofski Harbor is large enough to develop facilities of its own.

3.2.7.2 Political Relations

Political relations involving Unalaska and other communities in the region are not expected to change significantly in the short-term. Currently, Unalaska is used by other communities in the region as a negative example of uncontrolled growth. Officials of other communities, in their efforts to plan for and manage the projected growth associated with groundfish industry development, are seeking to avoid the problems experienced in Unalaska.

Once economic competition between the communities in the region increases to the point that the economy of one or more communities is negatively affected, as when processors are drawn to other communities, then some effort at political cooperation between communities may be initiated. Growth throughout the region will eventually necessitate the establishment of management policies for regional development adhered to by all the communities in the region. Because of its location, Unalaska would be likely to benefit from the formation of any regional forms of government responsible for managing such growth.

The involvement of Unalaska in regional Native corporations is not expected to alter significantly through the forecast period. While the city may serve as a center for some Native corporation activities, such as the social services provided by the clinical psychologist in Unalaska, the independence of the Ounalashka Corporation in managing Aleut-owned property and the provision of services and facilities by the city which would be provided by the Aleutian/Pribilof Islands Association elsewhere, will mean a continuation of the status quo.

3.2.7.3 Social Relations

Social relations between Unalaska and other communities in the region, as noted in the baseline ethnography, are currently kin-based and de-

creasing in intensity. It would appear that kin-based social relations between residents of Unalaska and the communities of Nikolski, St. Paul and St. George will be minimal through the forecast period. It is possible that ties between Unalaska and the communities of Akutan and Chernofski Harbor may develop, because of the proximity of these communities to Unalaska, their dependence on Unalaska for transportation, and increasing economic ties.

3.2.8 Social Subsystem

3.2.8.1 Output

As with the economy, the component of the sociocultural system of Unalaska expected to undergo significant changes during the forecast period is the subsystem of social relations. The degree to which this subsystem does change will largely be determined by the level of population growth and economic activity. Changes in the structure of social relations, in turn, will have implications for the output and structure of other subsystems in the community, including political organization, religion, and values.

Projected increases in population, employment, and income, and existing trends towards fragmentation of traditional extended kinship networks are expected to combine to further weaken traditional patterns of social cohesion among the indigenous population based on kinship. This trend will extend to the level of the nuclear family as the influx of values and attitudes associated with outsiders who move into or work in the community on a seasonal basis generate further conflicts within Unalaska families. Marriage rates are expected to remain stable, but the number of single heads of households will increase as the rates of divorce and separation increase. These changes will occur in any event, but increased economic activity in the form of groundfish industry or OCS development will accelerate and exacerbate the process.

Inter-familial patterns and inter-community ties are expected to weaken, while inter-regional ties may be strengthened. With the projected economic activities, there will be less need, as well as less desire, for inter-familial ties. Inter-community ties will also weaken as social class differences become more pronounced. Inter-regional ties may increase as more residents search for marriage partners outside the region or spend increasing amounts of time in other parts of the state, particularly Anchorage. If there is any change in the intensity of intra-regional ties, it will occur primarily between residents of Unalaska and Akutan. No change in the pattern of social relations between residents of Unalaska and those of Nikolski or the Pribilof Island communities of St. Paul and St. George is expected during the forecast period.

Non-kin behavioral patterns will also change with increasing levels of groundfish industry development. The major change is likely to be the formation of social class distinctions based on income. Social class will cross-cut traditional social networks based on ethnicity or length of residence. Social relations will emerge increasingly among members of the same social class, although relations among ethnic group or residential category members are expected to remain strong throughout the forecast period. This trend is due to the growth of income dispari-

ties and the projected increase in seafood processing employees and residents from outside the region. While the income disparity will promote the formation of social classes and the emergence of a network of social relations based on **social** class status, the presence of a large number of processor workers and **non-Aleut** residents will **crystallize** existing networks based on ethnic group and residential status.

Inter-ethnic relations are expected to increase most noticeably in the **field** of economic activities, but levels of inter-ethnic social activities will vary along the lines of socioeconomic class. Members of different ethnic groups belonging to the upper levels of the socioeconomic status hierarchy will interact socially with each other more frequently than **will** members of different ethnic groups belonging to the lower levels of this status hierarchy. Among the latter, inter-ethnic social relations are expected to remain at current levels.

After 1991, ethnic identity itself will be challenged by the **potential** alienation of property rights for **Aleut** residents. Should local **Aleuts** divest themselves of their property interests once the current restrictions regarding property transfer are **removed**, the economic power which helped to renew a sense of pride in **Aleut** ethnic identity **will** be compromised.

As almost all of the projected newcomers to the community are expected to be **non-Aleut**, the ethnic ratio in **Unalaska** will continually change at the expense of the **Aleut** segment of the population. In the next seven years, however, this ratio will remain relatively constant due to an assumed growth rate of 5% a year and the relatively small number of **non-Aleut** immigrants residing in the community, as indicated by **Table 26** above. In the 1990s the ethnic ratio will be affected by the potential increase in new residents involved in the groundfish industry. A large percentage of these immigrants will represent Filipino, Vietnamese, and Mexican ethnic groups.

The ethnic ratio, in turn, **will** have noticeable effects on the quality of social relations between **Aleut** and **non-Aleut** segments of the community. Several factors which could increase friction between the two groups. These include: the desire among **Aleuts** to articulate, at the encouragement of local **Aleut** leaders, a traditional ethnic identity; the strong economic base **Aleuts** gained through land ownership and investment in commercial ventures (assuming that property is not alienated by 1991); increased economic competition between the two groups, particularly among lower-class **Aleuts** and lower class Filipinos and Vietnamese not involved in the processing sector for the same jobs; and increased political competition as the **Ounalashka** Corporation struggles to maintain some political control over the **Aleuts** in **Unalaska** while promoting their interests in the context of the larger community.

With the projected decline in the proportion of **Aleuts** in **Unalaska**, however, social relations between **Aleuts** and **non-Aleuts** could conceivably improve in the long run. As the proportion of **Aleuts** in the community declines, their **economic** position will be less of an issue in the eyes of the **non-Aleut** population. Those **Aleuts** who do become financially successful could adopt the residential pattern found in other communities, namely seasonal migration between **Unalaska** and Anchorage or

Seattle. The economically successful members of the Aleut population would be more assimilated into non-Aleut social networks than unsuccessful Aleuts.

Ethnicity will continue to be an important factor for the Aleut community for several reasons. A group ethnic identity in Unalaska is coming to be tied to economic, if not political power. To retain control over land resources as well as consolidate existing and projected business investments, the Ounalashka Corporation will continue to utilize ethnicity as a means of mobilizing its constituents, particularly in the face of the 1991 changes in property transfer restrictions. When these changes do occur, ethnic identity will be challenged and perhaps even weakened, especially when social relations throughout the community based on socioeconomic status begin to supplant relations based on ethnic group membership. While differences in ethnic identity may appear between upper-class and lower-class Aleut residents in Unalaska in the 1990s, among both groups, this identity is not expected to revert to its pre-ANCSA character (Berreman, 1956 1964).

How is Unalaska as a complete community expected to change in the next twenty years under the assumptions of the projected increases in groundfish industry development? As more individuals move into the community, the population will become more diverse and heterogeneous with respect to social class, ethnic group membership, and values and world view. This will result in an alteration of social interaction levels. Social groups will become smaller.

There are also certain demographic considerations which should be kept in mind when considering the changes in social relations. The community is expected to be more homogeneous with respect to age and the sex ratio is expected to move closer to parity. Improvements in the sex ratio will help promote some measure of stability among residents who intend to remain in Unalaska for extended periods of time. Similarly, the large proportion of residents in the 20-35 age range will result in a greater uniformity of values shared by otherwise diverse elements of the community.

3.2.8.2 Feedback

The structure of social relations based on length of residence in Unalaska is expected to remain constant throughout the forecast period. The social divisions outlined earlier will remain pretty much the same. The major difference will lie in the proportion of individuals belonging to each group. It is expected that in the next five to seven years, the proportions will more or less constant with a slight decline in the number of semi-permanent residents, long-term transients, and non-resident transients. In the 1990s, however, these three groups will experience the greatest increases and come to represent significant social networks. In the last ten years of the forecast period, the proportion of the local population comprised of long-term, permanent residents (i.e., those residents who have resided in Unalaska since 1970) will diminish considerably, both as a result of natural population decline (through death or emigration) and in relation to the projected increases in other social groups. By the mid 1990s, the proportion of seasonal transients will decline as more processor workers come to

reside in Unalaska on a 12 month basis.

With the predicted decline in permanent residents and transients by the end of the century, it is possible that length of residence will play less a role in the demarcation of social boundaries among various segments of the population of Unalaska than is currently the case. Residents who currently belong to the semi-permanent category (both the "newcomers" and the "pioneers") will ultimately come to be regarded as permanent residents. Interactions between permanent and semi-permanent residents will increase, reducing the distinctions between the two groups. Similarly, there will be less distinction between long-term and seasonal transients than there is at present, especially as many of the long-term transients will also be involved in the processing sector and belong to the same ethnic groups as seasonal transients. Therefore, while today there are four residential categories, by the year 2000 they will have merged into two, resident and transient, and even then length of residence will be of little importance in distinguishing the two groups .

Although socioeconomic status is expected to cross-cut ethnic group boundaries, ethnicity will continue to remain important as a basis for social organization in Unalaska, but for different reasons than currently. For the Aleut segment of the population, ethnicity will remain important as long as family networks remain intact and as it is useful for economic or political purposes. With the sale of some Aleut-owned land in the 1990s and the projected rise in income of some Aleut residents, however, ethnic identity will begin to have different meaning for upper- and lower-class Aleuts. Among lower-class Aleuts, ethnic identity will remain linked to subsistence (Veltre and Veltre 1982) and "reference group alienation" vis-a-vis the non-Aleut community (Berreman 1964). For upper-class Aleuts, ethnic identity will remain a key to economic power and will also be important in a psychological sense of maintaining continuity with the past.

It is possible, however, that ethnicity will become relevant in another context. As the expanding groundfish industry attracts a greater number of long-term transients, many of these new residents will represent different ethnic groups, largely Vietnamese, Filipino and Mexican. As has been the case throughout United States history, immigration of any minority group in a relatively short period of time results in the formation of fairly rigid social boundaries between ethnic groups. Occasionally, these boundaries are marked by incidents of violence and other forms of hostility. No projections for ethnic conflict between white residents and non-white immigrants are being made for Unalaska. There is no doubt, however, that as these segments of the population increase, ethnicity will be a factor in the formation of social networks, choice of residence, job opportunities, and patronage of local businesses.

In place of social distinctions based on length of residence and ethnicity, socioeconomic status and neighborhood will emerge during the forecast period as criteria for membership and activity in social networks. As noted above, socioeconomic status will cross-cut ethnic group boundaries in the early to mid-1990s. As will be detailed below, social distinctions based on neighborhood of residence are already becoming

prominent in Unalaska. Given the nature of housing and current pattern of community development, neighborhoods will become distinguished by the socioeconomic status of their residents.

The trend in primary social networks in Unalaska is clearly in the direction of friendship and neighborhood ties. Social ties based on friendship will become important for all segments of the population and are expected to cross-cut many of the categories currently dividing the community into separate groups. Many of these friendships will originate in the workplace, church, or neighborhood, but can expand to other areas.

Neighborhood identification is already growing in importance as local residents identify themselves as living on Haystack, Nirvana Hill, Skibowl, or Strawberry Hill. This identification will increase as neighborhoods tend to comprise residents belonging to the same socioeconomic classes, ethnic groups, length of residence categories, and economic sectors. Neighborhoods will serve as boundaries, establishing certain social networks for neighborhood residents which excluding non-residents. As the number of Filipino, Vietnamese and Mexicans working in the groundfish industry increases, some of these neighborhoods may even take on the appearance of ethnic enclaves.

Kinship ties will remain important throughout the forecast period, largely because of the community's size, but they will not be dominant in social relations as in the past. This is due to three specific factors. First, there is a clear trend throughout Alaska, as well as in the community of Unalaska, toward small nuclear families in contrast to large extended kin networks. This appears to be the case even among the indigenous residents. Second, the largest proportion of new residents in the next seventeen years will be either young, single males or young couples without children. The large majority of the population, therefore, will not be in large extended kin networks. Third, as was noted in the baseline description, family stability in Unalaska is threatened by value conflicts which serve to polarize the generations. While this has been particularly evident among indigenous families, resulting in alcohol abuse and domestic violence, it is likely some newly formed families will be similarly affected as the conflict between "frontier" and "modern" values contributes toward a generation gap.

What kin networks do exist will more than likely be the result of extensions of existing families in Unalaska, particularly those families which are either financially prosperous or hold positions of prestige and authority.

With the projected changes in kin relations in Unalaska, the structure of social relations will be based more on secondary social networks. These networks include the church congregations currently in existence, particularly the Unalaska Christian Fellowship, workplace relations, and formal social organizations such as the Lions Club, Volunteer Fire Department, and Volunteer Emergency Medical Service.

Recreational activities will continue to be an important focus for social interaction. Interest in community softball and basketball leagues appears to be firmly rooted as a means of social interaction and

are expected to grow in size throughout the forecast period. Classes offered by the City Department of Arts, Culture and Recreation and the University of Alaska Extension Office will also remain focal points for social gatherings, although, in the short-run, participation in these activities may decline as funding for the programs decreases. In the 1990s, however, these programs will be important means of social interaction for two reasons. One is the recreational nature of these activities, which is particularly important in the relatively harsh environment of Unalaska. The second reason is that these activities are successful in integrating the diverse elements of the community, if only for brief periods of time. This in turn functions to reduce social tension and promote community cohesiveness.

Other secondary social networks also help integrate the diverse elements of the community. This is especially true of church congregations. Some organizations such as the Volunteer Fire Department and the Lions Club may involve specific segments of the community; their membership will probably not be broad-based. The Lions Club, for instance, while including Aleuts and non-Aleuts in its membership, does not include women. Workplace relations will remain an especially important focus for social interaction among new residents and long-term transients, particularly if the processors become unionized.

External networks are expected to remain the same throughout the forecast period. The major external social ties which involve residents of Unalaska will occur primarily with urban centers such as Anchorage and Seattle. Because of the projected increase in outside fishermen, Unalaska will remain "a suburb of Seattle," conducting much of its trade and commerce and deriving many of its residents and transient workers from there. With the exception of a possible increase in social ties with Chernofski Harbor and Akutan, no change in the structure of social networks with other nearby communities in the region. It is possible that greater social ties may emerge between Unalaska and communities of the Alaska Peninsula, particularly King Cove and Sand Point, but these will not occur, if they occur at all, in the near future.

3.2.9 Value System

3.2.9.1 Output and Feedback

Because of the nature of the value system of any social group, output and feedback are one and the same. Each response to external resources or demands necessitates either a validation of the existing set of values or changes in the hierarchy of values which range from subtle shifts in preference to radical changes which alter the fundamental character of the community itself.

In the baseline ethnography the value system of Unalaska was characterized as being in a state of flux due to the rapid economic growth of the 1970s, the large influx of outsiders attracted by this growth, and the increased exposure to the wider sociocultural system. Of these three factors, only the third is expected to be of any real significance through the 1980s. Advances in telecommunications and transportation will help to reduce the perceived isolation of Unalaska from the rest of the state, nation and world. The "traditional" value system, held

primarily by the older generations of the Aleut population; will continue to decline despite the renewed emphasis on traditional ethnic identity. A reflection of this decline may be the almost complete absence of Aleut speakers in the community by the year 2000.

The expected increase in the social heterogeneity of the population of Unalaska should maintain the opposition between the "frontier" and "modern" value systems. The intensity of this opposition, however, depends on the context. In the short run, for instance, as the increasing social heterogeneity of the community's population is expected to level off, a stable value system will begin to emerge. This value system will comprise a synthesis of "frontier" and "modern" values, giving great emphasis to individual initiative, acquisition, enterprise, and effort. At the same time, a greater concern for "community spirit" will develop as local residents acknowledge the need for combined efforts if the community is to weather the transition between the traditional crab fishery and the development of a local groundfish industry.

By the 1990s, however, it is possible that the opposition between "frontier" and "modern" values could again become more distinct as the number of new residents and long-term transients increase. Those intending to settle permanently in the community will expect a frontier environment; associated with these expectations will be a value system emphasizing individual initiative, a rural orientation, male domination, and competition. Long-term transients, and perhaps the remaining permanent residents, will be oriented to an urban environment, economic success, occupational skill, and relationships based on contract rather than status.

Nevertheless, the current trend toward the adoption of a "modern" value system should continue in the long-run, fueled by the economic growth associated with the groundfish industry and the expectations associated with oil-related development. The conflicts associated with this progression will continue in the form of generational conflicts, stress and alcohol abuse.

A reflection of this shift to a modern value system will be evident in the community's assessment of social status. Membership in particular kin groups will remain an important criterion for determining social status through the 1980s but will diminish significantly in the 1990s as the proportion of local residents not associated with large kin-related groups increases. In its place, wealth, and occupation will be the dominant criteria. How money is earned and how it is spent are already coming to play a large role in the stratification of Unalaskan society and these factors will continue to be of importance, replacing some of the more traditional indices of status. Consumption of goods exported from outside the community will continue to grow in importance as a means of assessing status, particularly among the long-term transients. Status differentiation based on occupation will increase in Unalaska as the number of new semi-permanent residents and long-term and seasonal transients increase. Those occupying the highest levels of this system will be the professionals, managers, fishing vessel owners, and skilled technical personnel.

Length of residence will decline as an index of status, except for the

few remaining permanent and semi-permanent residents. Emotional stability will continue to be a factor in assessing social status. Political acumen may also increase in importance as skill in negotiation and administration will assume greater importance, both with the projected stabilization or downturn of the economy in the 1980s and the dramatic rise of the groundfish industry and other local developments in the 1990s *

Despite the renewed and possibly continued emphasis on traditional cultural patterns and beliefs among the Aleut segment of the population, it is expected that the traditional Aleut belief system will decline in importance throughout the forecast period. This is largely due to the increased exposure of younger generations of Aleuts to the beliefs and world view of the modern sociocultural system. The system of ethics and morality associated with the Russian Orthodox faith will continue to be an important part of the belief system of Aleut residents, but for an ever-decreasing segment of that population. The other system of beliefs held by Aleut residents, including folk medicine and beliefs in "outside men," will perhaps decline at a more rapid rate, especially as the older Aleuts begin to die or move out of Unalaska.

For the non-Aleuts, religion will continue to inform a major portion of the belief systems of local residents. A conflict between sacred and secular beliefs will continue in the long run and perhaps be exacerbated in the 1990s with the migration of new semi-permanent and long-term transients from the outside, many of whom will hold secular belief systems. In addition, many new residents will maintain a wider variety of religious belief systems, especially the Vietnamese Filipinos and Mexicans. Beliefs associated with Roman Catholicism and Buddhism will exist alongside the fundamentalist Protestant belief system held by many current residents.

The world view of Unalaska residents will be influenced by the projected shift towards a "modern" value system and the anticipated shifts in the economy throughout the forecast period. The conflict between those who view the community as an environment to be exploited and those seeking to improve the quality of life in the community will remain as long as a large segment of the population continues to be seasonal transients. With the projected increase in the number of semi-permanent residents and long-term transients, however, this conflict could change as a larger proportion of the population shares a greater sense of commitment to the community. Some conflict will remain between those who wish to make Unalaska a modern city and those wishing to preserve its "frontier" flavor.

As was noted earlier, current perceptions of past, present and future differ among specific segments of the local population. The divergence in these perceptions may continue as the community becomes socially more heterogeneous in the long-run. In the next five to seven years, however, there will be a trend towards convergence of perception, largely because of the common experience of economic stabilization or decline. As long as initial groundfish industry remains limited in size and scope, expectations will be revised to accommodate reduced capabilities and a possible air of pessimism may be shared by greater numbers of local residents. In the 1990s, however, the anticipated levels of

growth in the local groundfish industry will generate new expectations and contribute to a renewed sense of optimism throughout the community.

The one component of world view which will continue to be important is ethnic identity. This will be particularly true for the **Aleuts** throughout the forecast period and the expected numbers of Vietnamese, Filipino and Mexican residents in the 1990s. Although **Aleut** ethnic identity is expected to become less of a political issue in the 1990s, it will remain a crucial aspect of self-identity for the **Aleut** residents. Economic success and political expertise will be an important source of **ethnic** pride and will contribute to existing efforts to affirm a traditional ethnic identity through education. For the growing numbers of ethnic groups in the 1990s, ethnic identity will remain important even as members of these groups seek to integrate themselves into the **larger** community. Ethnic identity provides a measure of security and certainty in a novel environment. While successive generations of these ethnic groups will gradually become part of the mainstream of American/Alaskan society, the adaptive use of **ethnicity** will be important throughout the forecast period.

Reciprocity and redistribution will slowly become more formalized and a function of both church and state in Unalaska. Government involvement in redistribution will occur in the form of welfare and Social Security payments, particularly in the next five to seven years. With the predicted downturn in the economy, churches will also become more active in providing assistance for needy local residents. While this assistance currently takes the form of job referral and food sharing, it may also take the form of fund-raising activities for direct contributions to local residents.

In the 1990s, non-government redistribution networks may develop and expand as a way of cementing social relations in a new environment. These networks will become important to different segments of the community for different reasons. Among long-term transients and **semi-permanent** residents, reciprocity and redistribution will acquire importance as a means of establishing social networks and adapting to the new "frontier" environment. Among older residents, these networks will be crucial to maintaining existing social networks, preserving "traditional" values, and identifying themselves as a separate segment of the community.

3.2.10 Political Subsystem

3.2.10.1 Output

The response of the political system of **Unalaska** to the projected increases in groundfish industry will be evident in four specific areas of activity: administration of community development, levels of conflict, measures of efficiency, and social control. Each of these activities will be discussed in turn.

3.2.10.1.1 Administration of Community Development

The administration of community development will become the major activity of the Unalaska city government throughout the forecast period.

This administration **will** be necessitated both by increasing expectations of the current population and by increasing pressure on existing community facilities and services exerted by the projected number of transient and permanent residents. This increased pressure **will** come in two forms. One will be the needs of groundfish industry processors which are expected to move into the community, particularly in the 1990s. These processors **will** require improvements in local utilities such as water distribution, electricity, and sewage, transportation facilities such as docks and the airport, cold storage facilities, housing for employees, and a favorable tax structure. The second form of pressure **will** be exerted by the increased number of residents and employees in the communities. As noted earlier, in the 1990s the local population is expected to increase significantly in response to expanded opportunities in the groundfish industry and the potential resurgence of the crab fishing industry. Those individuals wishing to become permanent residents or long-term transients **will** require adequate housing and community services. Pressure, therefore, **will** be placed on the local government structure to provide adequate housing, utilities, health and social services, police and fire protection, education, and recreational activities.

The success of city government in meeting these demands depends largely on the revenues it is able to obtain through local taxation. As most of the land is owned by the Ounalashka Corporation, property revenues will be minimal until 1991. Even after that point, property administered by the Ounalashka Corporation may continue to be exempt from taxes by transfer of title to the non-profit Unalaska Aleut Development Corporation which can avoid taxes if the property is used for certain privileged purposes. City officials estimate that property taxation **will** not be adequate to support major expansions of public utilities until the City achieves a permanent population of about 5,000 people. Federal and state sources of revenue-sharing funds are expected to decline throughout the forecast period so the city must depend on the municipal sales and use tax which includes the fish tax. Because of the decline in the King crab fishery, the amount of revenue generated by this tax has also declined in the past two years, although much of this loss has been compensated for by revenues acquired from taxes on petroleum products. This situation is expected to continue with a possible stabilization resulting from expansion of the local groundfish industry. If processors demand a more favorable tax structure as a prerequisite for relocation or expansion in Unalaska, however, this stabilization may not occur until 1989 or 1990. The decline in revenues may necessitate a few years of "austerity budgets." With the projected increases in tax revenues, both from property taxes and sales and use taxes, in the 1990s, however, the city **will** undoubtedly move further, and with greater speed, into improvement of existing, and the development of new, facilities and services.

3.2.10.1.2 Levels of Political Conflict

Levels of political conflict are expected to increase in the next ten years. This conflict will occur in three specific forms. One will be among the various segments of the community interested in securing control of the city council. The objective of this control will be to influence the direction of the city's role in economic development,

provision of services and management of growth in the private sector.

The second form of conflict may occur between the Ounalashka Corporation and the city council. This conflict is expected to occur as a result of the city's interest in managing local development and meeting the anticipated levels of demand noted above. It is the Ounalashka Corporation, however, which will have the greatest capacity, at least in the short-term, for implementing many of these development schemes because of its control of property and its expansion of private investment in the commercial sector of Unalaska's economy. Although some form of compromise must inevitably be reached if both agencies are to meet their stated objectives, such compromise may not be reached without a certain amount of competition and disagreement in the next few years. Nonetheless, this should not be overemphasized. The City and the Corporation have already demonstrated the ability to work cooperatively, as, for example, in the case of the current draft land use plan which was developed by the City in consultation with the (previous) management of the Ounalashka Corporation.

Third, political conflict, as has emerged in other communities in the region, is likely to occur between the profit-oriented Ounalashka Corporation and the non-profit Unalaska Aleut Development Corporation. As noted earlier in the report, the two corporations currently differ on how to best serve the interests of the Aleut population of Unalaska. While this disagreement is in part related to the individuals who dominate each organization, relations between the two corporations are expected to remain at a stalemate for several years at least. However, there has already been some discussion of possible transfer of some responsibilities from the Ounalashka Corporation to the Unalaska Aleut Development Corporation as a means of protecting certain investments and interests from divestiture in 1991. Such a transfer in itself could engender further conflict between the two organizations, because of differences in philosophy and objectives and because of the increase in political power of the UADC with its increasing economic power. However, in the long run, the two organizations will also have to achieve some measure of compromise if either is to operate effectively. As the utility of each corporation becomes apparent in competition with other social groups, a measure of cooperation and concerted action between the two could emerge.

3.2.10.1.3 Measures of Government Efficiency

The measures used by local residents to assess the efficiency of the city government will also change, particularly in the next ten years. This change will result from new expectations on the part of local residents, particularly the expectations of recent newcomers who will bring with them the measures used to evaluate the efficiency of local government in other parts of the United States. In the next ten years, community debt is expected to increase as the tax base declines, and revenue-sharing funds available from state and federal sources diminish. The city government will have to accommodate increasing numbers of residents who possess higher expectations of city government performance with decreasing revenues. This condition alone will fuel political conflicts among various segments of the community. In the short run, community satisfaction with local government will decline. However, if

the local **groundfish** industry begins to replace the revenues lost with the **decline** of the crab fishery, however, the city may be able to improve its level of efficiency, reducing the **level** of local dissatisfaction with services and facilities.

3.2.10.1.4 Social Control

If the population of **Unalaska** increases at levels projected with the development of the regional **groundfish** industry, one of the most dramatic consequences will be a rise in the crime rate. This will occur for two reasons. First, as **social** differentiation based on income becomes more prominent in the next ten years, those at the lower end of the socioeconomic scale will be increasingly subject to the temptation to burglarize and rob. Second, as population increases while levels of police protection remain constant, increases in violent crime and traffic violations will occur.

In the next five to seven years, the increase in crime will consist largely of a rise in the number of **misdemeanors**, especially traffic violations, alcohol-related offenses, and crimes against property. With the projected increase in population in the 1990s, felony offenses will also begin to rise.

3.2.10.2 Feedback

3.2.10.2.1 Municipal Government

While the levels of certain political activities are expected to increase throughout the forecast period, the political organization of **Unalaska** is expected to remain relatively constant, at least for the next ten years. A slight reduction in the number of city employees is expected in the next five to seven years, but in the 1990s the city government will expand in both size and scope. In the meantime, however, a gradual shift will occur in city administration from the current pattern of long-term transients who assume certain responsibilities such as planning and administration? to semi-permanent residents. There will be a greater reliance on advisory boards in the next few years to obtain feedback from local residents and to assist in the decisionmaking process, particularly as population grows and these boards essentially compensate for a lower level of informal contact among community members. However, any growth in local government will be dependent upon its financial resources, which are not expected to increase in the short-run.

In the long run, the structure of the city government is expected to expand to accommodate the increased demand for services. The greatest increases will come in the area of public works, with perhaps somewhat smaller increases in planning and development, and financial administration.

3.2.10.2.2 Native Corporations/Associations

In contrast to the short-term stagnation in the growth of the City government, the **Ounalashka Corporation** may experience some growth and alteration in structure as it becomes more involved in management of

commercial investments. The one factor militating against such growth, however, is the relative absence of a pool of qualified leaders in the Aleut community. Existing leaders will be confronted with increasing demands, while younger, qualified Aleuts may continue to be reluctant to assume leadership positions.

In the 1990s, the Ounalashka Corporation may begin to undergo further changes in its structure. These changes will be necessitated by two factors. First, in 1991, the Corporation will lose much of its control over the property of its shareholders. Although they will retain the right of first refusal, they will have to compete with other bidders for the property of individual corporation members. To retain control over the property, and to continue policies of economic development and financial investments, some changes in the organization will be required. In this endeavor, it is possible that many of the responsibilities currently undertaken by the Ounalashka Corporation will be transferred to the local non-profit corporation, the Unalaska Aleut Development Corporation, both for tax purposes and in the interest of preventing the wholesale transfer of land held by the Ounalashka Corporation to non-Aleut businesses or individuals. Another possibility is reorganization of the Ounalashka Corporation under the Indian Reorganization Act to institute trust status on Aleut-owned lands.

Second, as noted earlier, throughout the 1980s, there will be some conflict between the Ounalashka Corporation and the city government over control of land and differing strategies for local development. By the end of the decade, however, some compromise will have to be achieved if both organizations are to meet their goals. This compromise may eventuate in a closer working relationship between the city and the Ounalashka Corporation. Certain changes in the objectives or the structure of the Ounalashka Corporation, however, may result from the compromise made to achieve this relationship.

3.2.10.2.3 Social Control

The structure of social control will continue in the direction of greater emphasis on formal mechanisms of control, while informal mechanisms, such as gossip and traditional sanctions, become ineffective. The range of criminal activity associated with a frontier environment (e.g., public drunkenness, assaults) will remain constant or decline throughout the 1980s while overall crime rates increase. Law enforcement will also remain relatively constant, handled almost exclusively by the Unalaska Department of Public Safety. The demand for police protection will first decline then, about 1990, begin to increase again. However, the number of police officers is expected to remain at relatively constant levels, possibly declining by one or two officers, with a fairly high turnover rate. It is possible that as population increases in the 1990s and the community experiences a period of rapid economic growth, increased demand for services and increased revenues will result in more personnel.

3.2.10.2.3 External Affairs

Unalaska's ties with federal and state agencies are expected to remain constant in the short-term. The City government will make efforts to

increase its ties to state and federal governments but, given the projected declines in revenues and services at both of these levels, local-state and local-federal ties are not expected to change in structure. What structural changes do occur will probably come in the form of reorganization of state and federal agencies.

The structure of intra-regional political activities during the forecast period will be tied to groundfish industry development. If significant economic growth and development occurs in Akutan and Chernofski Harbor, it is likely that the initial economic competition and eventual development of economic ties among these communities may necessitate some form of regional political cooperation. As the economic ties develop, primarily through the use of Unalaska as a transportation center, contacts between municipal and Native corporation officials in Unalaska, Akutan, and the communities on the Pribilof Islands will increase in frequency.

The current structure of association between the Aleut Corporation and the Ounalashka Corporation will remain constant. However, while the structure of the ties between the local and regional Native corporations is expected to remain intact, the local corporation will gradually be called upon to assume many of the responsibilities currently assumed by the regional corporation, including management of joint financial ventures and provision of housing and social services for Aleut residents of the community.

The existing structure of relations between the Aleutian/Pribilof Islands Association and the community is not expected to change during the forecast period. Because the city provides many of the services normally provided by the APIA in other, smaller communities in the region, APIA activities will be limited to using Unalaska as a regional center for certain services such as the clinical psychologist currently in Unalaska.

3.2.11 Religion

3.2.11.1 output

Religious activities in Unalaska will remain essentially unchanged for the next seven to eight years. The belief system will continue to be characterized by the dichotomy between religious and secular beliefs, with religious beliefs having great influence among Unalaska residents for two reasons. First the influence of the Unalaska Christian Fellowship will remain strong. Second, the Russian Orthodox faith will continue to meet the spiritual and psychological needs of Aleut residents, especially since that belief system is tied to ethnic identity and concern for that identity will increase as the ratio of Aleut population to non-Native population continues to decline.

Similarly, levels of participation are expected to remain constant. Participation in Russian Orthodox services will be minimal on a weekly basis but will increase for special holidays such as Christmas and Easter. The Unalaska Christian Fellowship, because of its vigorous efforts at recruitment of transient processor employees for weekly services and its focus as a voluntary organization for social interac-

tion, will see a gradual rise in weekly attendance of religious services and perhaps an even greater rise in attendance of church-sponsored social events.

3.2.11.2 Feedback

The religious subsystem is not expected to change much over the next eight to ten years. It is possible that distinct congregations of Baha'i and Mormon faiths will eventually disappear due to their small size and lack of separate facilities or sources of support. Similarly, the Russian Orthodox church will remain relatively constant in terms of its role in the community, the size of its congregation, and its leadership.

The Unalaska Christian Fellowship will continue to play an expanded role in the community, especially as its leadership becomes a permanent part of the community. It will serve as a potential political force as well as a voluntary social organization. The schedule of activities will remain constant, but some fragmentation of social events is bound to occur as the congregation becomes more heterogeneous in membership. It is also possible that one or more splits may occur within the congregation, either on the basis of differences in religious belief or because of increasing socioeconomic differentiation. If such fission does occur, small groups may break away to form their own fellowship groups, meeting informally in each other's homes or renting community facilities for purposes of worship. One or two of these splinter groups may even become strong enough to establish their own churches, more than likely of a fundamentalist variety. Such fission, however, is not expected to generate any serious conflict within the religious community of Unalaska and, given the current strength of the Unalaska Christian Fellowship, would not seriously weaken the original church within the forecast period.

In the next ten years, the small Catholic mission in Unalaska may experience some growth, largely through its association with the Unalaska Christian Fellowship, and its potential for attracting Mexican and Filipino processor employees for religious services.

In the 1990s, the religious organization of Unalaska will begin to experience considerable change. With the projected increases in population due to both groundfish industry and oil-related development, some of the existing religious institutions will experience growth in membership while a few new institutions, perhaps missions of one or more Protestant denominations, will emerge in the community. Particularly likely is the emergence and growth of another fundamentalist congregation. These groups appear to be on the increase with respect to missionary activity and are flexible enough to adapt to a frontier environment. Also, as noted above, the most likely source for such a congregation would be the fundamentalist members of the Unalaska Christian Fellowship.

The Catholic Mission, because of the anticipated growth in transient processor employees, may develop into a full-fledged church with a facility of its own and a resident priest. This growth, however, will ultimately depend on the efforts of a small group of semi-permanent

residents to seek out a priest to reside in the community on a long-term basis and acquire the funds necessary to construct a church. The Unalaska Christian Fellowship, because of its current policies of recruitment, will also benefit from the growth in population.

The Russian Orthodox Church of the Holy Ascension may also experience some growth in the 1990s, largely as a result of the projected increase in the number of Aleut residents, It is not expected, however, that the Russian Orthodox congregation will grow to the same degree that the non-Native congregations do. There has already been some involvement of Aleut residents in the Unalaska Christian Fellowship and this may continue in the future as the UCF becomes a focus for the social activities of permanent residents, Aleut and non-Aleut alike.

As has been implied in the above discussion, one aspect characterizing each of the major religious institutions in Unalaska is their association with a specific ethnic group. The Russian Orthodox Church will remain an Aleut ethnic church while the Catholic church will serve the spiritual needs of Filipinos and Mexican-Americans. The Unalaska Christian Fellowship will include members from all ethnic groups but the bulk of its congregation will continue to be Caucasian. Other churches or missions associated with various fundamentalist Protestant groups may also assume the character of ethnic churches.

3.2.12 Education

3.2.12.1 Output

Projections of educational activities through the next twenty years are tied to: 1) the number of school age children likely to be in the community 2) the amount of revenue available for school programs and facilities, Particularly municipal revenues, 3) the importance of education for different segments of the community, and 4) the rate of teacher turnover.

The number of school-age children likely to be in the community through the forecast period is related to the population of permanent residents. In the 1981-82 school year, the total Unalaska School population (165 students) comprised 15.6 percent of the total population of residents in Unalaska. Assuming that this percentage remains constant through the forecast period, the estimated enrollment levels in Unalaska will increase by an average annual rate of 16.4 percent. Table 27 provides an estimate of this enrollment by five year periods.

Table 27

Unalaska School Enrollment Forecast
 Primary Scenario
 1985-2000

<u>Year</u>	<u>Enrollment</u>
1985	198
1990	238
1995	332
2000	705

Despite this projection, however, it should be noted that school enrollments have been declining for the past few years and may continue to do so for the next few years. The basis for this projection is as follows: First, the groundfish industry will not develop rapidly enough to completely replace the losses suffered with the decline in the crab fishery. Because of this, families of processor managers will not be as numerous, reducing the school-age population. Second, the proportion of professional families residing in Unalaska experience a relatively high rate of turnover, averaging five years residency in the community. We expect this pattern to continue, at least in the short-term. The expected immigration of professionals with families, therefore, will not necessarily mean an increase in the number of school-age children. Third, most of the new residents in the community will be single males or young couples without children and will not contribute to an immediate increase in school-age residents.

The dropout rate at the primary and secondary school level is expected to decline slightly or remain constant throughout the forecast period. Participation in the educational system is tied to both employment opportunities and the value placed upon education in the wider sociocultural system. With the limited number of employment opportunities available in the short-term, education will be perceived as essential to obtaining a well-paying job. This perception will be reinforced by the value placed on education in the wider sociocultural system. Consequently, there will be increased pressure within families to keep children in school. This will occur, even among Aleut families which have been more ambivalent about sending children to school in the past.

Participation rates in adult education and vocational education are expected to experience slight to moderate growth in the next seven to ten years. Adult education is a mechanism for social interaction as well as recreational activity, particularly among the permanent residents of the community. Adult basic education will largely serve Aleut residents who have not been able to benefit from the regular educational program of the Unalaska schools and transient processor employees wishing to learn English or acquire a basic education. The need for vocational programs offered through the Unalaska High School will increase

as the demand for skilled local labor increases with projected construction associated with the anticipated levels of groundfish industry and oil-related development. Such programs, however, will depend upon the availability of funding and are likely to decline dramatically if a source of city revenue is not available.

In the 1990s, adult and vocational educational programs will experience a period of rapid growth as funds become available for the expansion of existing programs. Participation levels will increase as the projected new residents seek adult education as a form of social and recreational activity and as existing residents seek vocational training in order to utilize new employment opportunities.

Higher education throughout the forecast period is expected to increase gradually. Several factors contribute to this assessment. The decision of an Unalaska student to attend college or university outside the Community is tied to: 1) the degree of willingness of the student's family to allow him or her to leave the community 2) the attractiveness of local economic opportunities, and 3) the ability of local schools to prepare students for higher education. In all three respects, circumstances exist which could encourage greater numbers of students to leave the community to attend college or university elsewhere. With the expected continuation of the pattern of short-term residence of professionals and processor managers, the lack of a long-term commitment to the community would encourage students to seek educational opportunities elsewhere. As economic opportunities remain at constant levels or decline slightly over the next seven to ten years, there will be little financial incentive to remain in Unalaska, unlike other fishing communities where high school students have been known to earn over \$50,000 a year in the salmon fishery. Lacking such an incentive to remain, higher education will become a more attractive option.

The local school system also appears to be improving in quality, as indicated by a comparison of recent achievement test scores with the statewide average. If this trend toward provision of quality education continues and we expect it to, the students who do graduate from the Unalaska High School, will be better prepared to handle the experience of attending college or university outside the community.

The rate of teacher return is expected to decline slightly over the next seven to ten years because of the projected state of the local economy. However, in the 1990s, the rate of return will be at levels which are comparable to the existing high rate. As the overall quality of life in the community improves, teachers will remain in Unalaska for longer periods of time.

No construction of educational facilities is expected in Unalaska in the next seven to ten years. When the number of school age children begins to increase in the 1990s, and the revenue available for construction increases, some construction will occur. Most of this construction will take place in the form of renovation of existing facilities. It is possible, however, given the projected increase in school enrollment as outlined in Table 27, that additional schools may be constructed. One likely scenario would be the exclusive use of the existing Unalaska school as a secondary school while two primary schools, one on Unalaska

Island and one on Amaknak Island are constructed. A school on Amaknak Island is particularly likely because this is where most of the new residents will be located, although the cost-effectiveness of a multiple campus system will have to be carefully evaluated.

Extracurricular activities are expected to remain at current levels throughout the forecast period. Participation levels in extracurricular activities will remain high because of their social and recreational importance. As the school-age population increases, more students will be involved in these activities but the overall level of participation will remain the same as other opportunities for social and recreational activity will emerge. The same can be said of overall community participation in these extracurricular activities.

Achievement levels will remain at constant levels or experience a slight increase. This assessment is made on the following assumptions. First, with the expansion of programs and facilities in the past ten years, the infrastructure for a quality education exists. The fact that achievement levels as indicated by statewide exam scores have already begun to increase suggests that this may be a trend. Second, with the anticipated period of stagnation or short-term decline projected for the local economy, education will become more important. The incentive for families to encourage their children to do well, along with student motivation, will increase in the next ten years. The only real impediment to an increase in achievement levels is the anticipated stabilization or decline of revenues available for school programs. Increased levels of stress associated with economic decline could also weaken levels of academic achievement.

In the 1990s, other factors will emerge to influence the achievement levels of local students. One factor will be the projected growth of the commercial fishing industry which will discourage students from leaving the community for higher education because of the greater financial incentives to remain at home. With the lack of motivation to attend college, overall levels of achievement, at least among high school students, could suffer. Second, with the anticipated increase of families of seafood processor employees will come a greater social heterogeneity. This may adversely affect overall achievement levels because of the lack of adequate educational opportunities of these families, particularly those belonging to non-Aleut ethnic minorities, before coming to Unalaska. While the level of motivation among students from these families will be high, as it is now, it may not be equalled by the level of achievement. Third, educational performance is tied to stress which can result from any change in the economy, favorable or unfavorable. Even with the anticipated resurgence in economic activity, the stress level may remain high, causing academic performance to suffer.

3.2.12.2 Feedback

For the next ten years, the organization of the educational system of Unalaska will remain essentially unchanged. Educational opportunities will continue to be available for all segments of the population. A pre-school will remain in one form or another with the possible development of a second pre-school in the late 1980s. This assessment is based

on two factors: one, the anticipated increase in residents and transient processor workers with children during this period; and two, an increasing dependence upon such a facility as a form of day-care while parents are working.

Primary and secondary education will be handled by the Unalaska School District. The Unalaska School will remain the sole source of primary and secondary education in Unalaska well into the 1990s when a second facility, a primary school, will likely be constructed on Amaknak Island. As noted above, it is also possible, given projected increases in enrollment, that a second primary school will be constructed while the existing facility is used exclusively as a high school. The catchment area of the Unalaska School District is expected to remain the same throughout the forecast period.

The number of teaching personnel may diminish by one or two in the next few years but will then increase by as much as 100 percent from current levels by the year 2000. This projected growth is based on potential increases in numbers of students as well as available revenues resulting from projected groundfish development and property taxes.

Educational objectives will begin to change in the next few years. There will be a greater emphasis on vocational education; programs which offer on-the-job experience for local students. Efforts will also be made in the direction of improving the achievement levels of Aleut students who currently lag behind other students in Unalaska. Such efforts will be directed at involving Aleut parents in the formulation of educational objectives and the direction of extracurricular activities.

No significant changes are anticipated in the organization of school-related extracurricular activities. Basketball and softball will remain the most popular sports activities. These activities will continue to be an important focus for the entire community as well as for individual students.

The structure of the Adult Education and Extension programs will remain intact for the next five to seven years, though there will be changes in the funding available, the number of instructors, and the administration of such programs. These programs are expected to suffer from a lack of adequate funding in the short-term, resulting in fewer courses offered and a reduction in salaried positions. In the long-run, however, the programs are expected to expand, especially since they provide a basis for social and recreational activities for those segments of the community expected to experience the greatest growth in the 1990s. For long-term transients and semi-permanent residents, these programs will provide opportunities for recreational activities and social interaction. For other long-term transients, particularly those working on the processing lines who are not native English-speakers, such programs will be used as a means of acquiring a basic education.

3.2.13 Health Care

3.2.13.1 Output

Health care needs are expected to increase through the forecast period, for entirely different reasons. A major portion of the increase will be due to stress-related disorders, primarily alcohol abuse, alcohol-related accidents, and hypertension. In the short-term, these disorders will be related to the levelling off of economic growth and the disparity between a stable or declining economy and increasing expectations resulting from the past increase in the crab fishery and the anticipation of growth in the groundfish or oil industries. As this disparity between capabilities and expectations increase, so will the perception of deprivation which is related to the occurrence of stress-related disorders. Thus, in the short-term, a greater number of illnesses will occur among a slightly smaller number of residents.

In the 1990s, the number of disorders will continue to increase, but be exacerbated by both the increased number of residents and the stress associated with boom-town conditions. While the projected increases in employment opportunities and per capita income will help to relieve certain economic tensions, the strain on existing community facilities and services will result in forms of stress similar to those experienced in the 1970s and early 1980s.

The morbidity rate is expected to increase accordingly. Mortality will increase slightly as a by-product of the projected increase in alcohol-related illnesses and accidents. Mortality due to other causes, however, will remain constant, as elderly residents move out of the community to live in retirement elsewhere.

While the demand for health care will continue to increase, the level of service provided in the community is expected to remain constant for the next few years. The quality of medical care provided by the Iliuliuk Health Clinic, measured in terms of number of personnel and facilities, will remain constant until the late 1980s. Funding for the clinic provided by the city is not expected to increase until more revenue becomes available through taxation or external sources.

Those increases which do occur in the provision of services will take the form of emergency medical technicians and emergency transport to facilities outside the community. Emergency medical technicians now comprise the major part of the medical care offered in Unalaska and, given both the types of health problems expected to occur in the near future and community interest in EMT training, the number of residents trained as emergency medical technicians and the kinds of service provided by these individuals is expected to increase.

3.2.13.2 Feedback

According to the study conducted by D.E. Raven Associates (1982), the structure of health care in Unalaska will remain unchanged through the 1980s. This assessment was based on the perceived lack of community interest in expanded facilities, conflicts between the city administration and the Ounalashka Corporation (although these are unspecified and,

according to others in the community, may be less than implied) and preference for health care outside the community. In the 1990s, it is possible health care will undergo major changes in Unalaska. As the number of cases increases and as the cost of emergency medical transport becomes prohibitive, there will be considerable pressure to expand the facilities and range of services provided by the Iliuliuk Health and Family Services Clinic. Such expansion could take the form of additional personnel, perhaps one or two additional physicians, a dentist, and two or more nurses or physician's assistants. The clinic itself will probably undergo some renovation and expansion, with the possible addition of rooms for treatment and short-term stay, an additional operating room, and a dental clinic.

Toward the end of the forecast period, the population of Unalaska will have become sufficiently large to support a small hospital in the community itself. The construction of such a facility, however, will depend on the availability of funds, the relative cost of health care outside the community, and a change in local preferences for outside medical care.

The cost of health care for Unalaska residents is expected to increase during the 1980s. Much of this cost is attributable to high transportation costs for medical emergencies and hospitalization outside the community. If Unalaska is serviced by jet aircraft once necessary airport improvements are made, this cost could decline. Relative costs for care received at the Iliuliuk clinic will also increase during the next few years because of the projected downturn in the economy, even though absolute costs remain constant.

3.2.14 Social Services

3.2.14.1 output

As is the case with health problems, the frequency of social problems requiring professional assistance is expected to increase throughout the forecast period. Alcoholism, generational conflicts and family violence are expected to remain issues within the community. While much of this problem will be handled by the existing infrastructure including the new clinical psychologist residing in Unalaska, it is likely that the demand for services will exceed supply. This situation will persist throughout the forecast period, particularly since social services are largely funded by external agencies such as the Aleutian/Pribilof Islands Association or the Alaska Department of Health and Welfare. As the state is expected to have less revenues derived from oil in the 1990s, social services could be adversely affected. Social services will increasingly become the responsibility of the city. Because Unalaska is the major population and economic center of the region, it could benefit from an expansion of APIA social service programs, although such programs will be primarily intended for smaller communities.

3.2.14.2 Feedback

With the recent addition of a clinical psychologist to the community, the range of services provided will expand. However, because of the increased demand, it is possible that the quality of service may suf-

fer. By the 1990s, the demand will have increased enough to produce several changes in the structure of social services. The psychologist may be supplemented by one or more trained social workers with specialization in individual and family therapy. An alcohol rehabilitation program will become crucial as alcoholism comes to be seen by local residents as more of a serious problem.

3.2.15 Recreation

3.2.15.1 Output

The extent to which Unalaska residents participate in recreational activities is expected to remain relatively constant, though some variation in the choice of activities will occur as a result of changes in the local economy. In the next five to seven years there will be a greater increase in subsistence-related forms of recreation and a decline in outside vacations as the economy experiences a downturn and then stabilizes. With less income available for recreational activities, more time and energy will be spent on forms of recreation which are local and relatively inexpensive. In the 1990s, however, the community will return to levels of recreational activity which roughly correspond to existing patterns. Outside vacations, dining out, and activities requiring motor vehicles will increase.

Because these patterns are tied to income levels, the projected changes will not affect all segments of the population uniformly. Subsistence-related forms of recreation among the Aleut population, regardless of income level, are expected to remain at constant levels, at least until 1995 when the overall population of the community is expected to increase markedly. This assessment is based on the fact that these activities serve important social and psychological functions for local Aleuts. It is expected that one of the most enduring aspects of Aleut identity in Unalaska will be both the skill exercised in and enjoyment derived from participation in these activities. Among the non-Native segment, participation in these activities will be based on income level and value system. Those who reside in or are expected to move to Unalaska and wish to enjoy the "frontier" character of the community will undoubtedly spend more time on these activities than long-term transients or semi-permanent residents wishing to enjoy activities associated with a modern, urban environment. This latter group, particularly those with the incomes to do so, will spend greater amounts of time on vacations, home entertainment systems, and dining and drinking in public places.

By the end of the forecast period, if the population does increase to levels assumed in the scenario, per capita subsistence activities may decrease because of the pressure exerted on local resources by the overall increase in demand. While the level of subsistence activity of non-Aleut residents in the community is expected to be less than that of Aleut residents, the overall numbers of non-Aleuts participating in subsistence activities may pose a threat to available supply of local resources, resulting in increased regulation and the imposition of further limits on the amount of resources harvested. This could lead to conflict within the community, especially given the importance of these activities to the Aleut segment of the population, and perhaps result in

an increase in illegal subsistence activities.

3.2.15.2 Feedback

While the degree to which local residents engage in different types of recreational activities **Unalaska** may undergo some change throughout the forecast period, the range of these activities **will** remain the same. In the 1990s, it is conceivable **that** a few more bars and restaurants may open in the community, providing more opportunities for dining and drinking outside the home. Already, the restaurant at the airport has applied for a liquor license, providing an additional location for entertainment of this nature in the community. The number of **community-sponsored** recreational activities may also expand as municipal revenues begin to increase during this period. For the most part, however, even with expanded levels of groundfish development and current levels of **OCS-related** activity in the region, the dimensions which distinguish recreational activities in **Unalaska** (traditional vs modern activities, urban and rural-oriented activities, requirements of a cash income, and location of activity) **will** remain. In the 1990s, the structure of this subsystem will experience a shift **in** the direction of modern, **urban-oriented**, cash-based activities and vacations outside the community but there **will** always be a significant part of the population participating in more traditional forms of activity as well. As the population becomes less transient, the use of modern forms of transportation, particularly skiffs and motorcycles, for recreational activities **will** increase. Towards the end of the forecast period, there may **also** be an increase **in** the number of trucks and airplanes owned **by** local residents and used for recreational purposes.

The size of social groups participating in recreational activities **will** undergo some change throughout the forecast period. During the next five to seven years, there **will** be an increasing emphasis on activities involving small groups such as the nuclear **family** or a few friends. Community activities **will remain** popular but may be undertaken primarily by specific segments of the community rather than broad-based groups. With the projected increase of **non-Aleut** ethnic minorities in **Unalaska** in the mid 1990s, however, there will probably be an increase in social events and recreational activities which emphasize ethnic group membership. These activities may occur within the context of local churches or voluntary associations and will include pot-luck dinners, dances, films and lectures.

3.3 Alternative Scenarios

3.3.1 Assumptions

In the foregoing analysis we have presented the likely consequences of groundfish development in Unalaska in the absence of further OCS-related activity. We have noted throughout this document the weaknesses of these assumptions and have suggested alternatives. Among these we note difficulties in accepting the assumed rate of replacement of the foreign fleet by domestic fishermen, the rate of displacement of foreign processors by domestic processors (a critical element in assumed population growth in Unalaska), the ratio of offshore processing vessels to onshore plants, the ratio of resident to non-resident employees in the processing sector, the role of the joint fishery in assuaging U.S. demands on the resource and in protecting the foreign market for groundfish, the economic wisdom of fishermen converting to groundfish harvesting, and, foremost, the issue of the development of a market which will, in the foreseeable future, be able to support a domestic groundfish harvesting fleet and processing sector. These are a few of the issues that have led us to develop alternative scenarios which may be of benefit in assessing the likely consequences of OCS development on Unalaska. The following discussion of alternative scenarios will examine only those features of the social organization of Unalaska that will show major variation from the primary scenario presented in the previous section. It is not intended to be comprehensive but rather provide outlines of alternative sequences and levels of development supported by information currently available. A major point to bear in mind is the significance of the pace at which the changes occur under the different scenarios. The first scenario describes the most severe of the three alternative scenarios in regard to the rate at which development is expected to occur.

While the primary groundfish analysis presented above" is based, as much as possible, on assumptions of continuity, the reality supports more pessimistic assessments regarding economic growth and community development in Unalaska. Barring a remarkable resurgence of the Bering Sea king crab resource, we project a gradually declining economic base for the community of Unalaska, a gradual population decline (or at least stabilization), and other social and economic expressions of a post-boom economy. The first of the three scenarios below provides the most extreme case of major oil- and/or gas-related activity and major groundfish development occurring simultaneously in Unalaska. The other two scenarios are based on a more realistic assessment of the likely course of OCS and groundfish development in Unalaska. By introducing OCS and groundfish activities at different points in the historical continuum we hope to provide two analytic vignettes that can be applied to conditions as they occur.

In view of the need for timely and useful forecast analyses, we have provided the following alternative scenarios which will enable future analysts to evaluate the relative effects of: (1) the co-occurrence of both OCS and major groundfish development, (2) the early occurrence of groundfish development and later oil-related development, and (3) early OCS-related development and later groundfish development. In the latter two scenarios we have held projected OCS and groundfish development at

what we consider the "most likely" level and simply varied the point in time at which each occurs in Unalaska. As will be made clear in the analysis, we have accepted the "most likely" levels of development regarding the OCS while suggesting in each of the latter two scenarios that the "most likely" level of onshore groundfish development in Unalaska will be substantially below that projected in other published reports.

3.3.2 Alternative Scenario 1

3.3.2.1 Assumptions

This first scenario comprises our assessment of the effects of groundfish development (at levels provided by the MMS office) occurring in conjunction with projected levels of development related to outer continental shelf oil activity. The level of oil-related population growth is founded on MMS analyses and are, for the purposes of this analysis, accepted at face value. Table 28 provides the basic population figures employed in the following three scenarios.

3.3.2.2 Summary of Effects

This first scenario is one extreme in the continuum from no change to major externally-induced change. The most severe forms of negative consequence occur under this scenario. Population grows at a rate much higher than the physical, social and political infrastructure of Unalaska can support. Virtually all physical and support services now in place are inadequate to accommodate the projected population--even assuming that OCS-related construction activities are relatively isolated and internally maintained. We provide below a brief overview of the more significant consequences of the co-occurrence of both OCS and groundfish development in Unalaska.

Community facilities, depending on how abrupt or gradual the development process, will be taxed beyond capacity within the first two to three years of growth. The inherent lag time in meeting water and sewage requirements cannot be met without extraordinary funding sources and major construction effort. The City Council has recently (as of August, 1983) decided to proceed with the sewage system already designed by calling for a \$3 million bond election, although no funding sources have yet been seriously considered for expansion of the water system. City planners note, however, that if such sources become available construction of the system could be completed within two years. The economy of Unalaska, discussed briefly below, would be subject to the profound influence of competing economic bases--in employment, in services, in product demand, and so on. Health care provision, ironically, should improve as increased demand will push the community beyond the current marginal demand for medical services to the point where a resident physician and improved facilities, will have to be acquired. Recreation activities, for the community at large, will diversify as the character of the resident population changes. Resource utilization patterns in conjunction with recreation activities will place greater pressure on the limited subsistence resource base. The existing social service delivery system will require additional personnel but the subject population will remain relatively narrow; the

character of the issues that will have to be handled by this service will increase in intensity and consequence. Induced changes in the educational system will include rapid physical expansion of existing facilities and major changes in curricula.

Our forecast will focus on the three areas in which change will have the greatest and most enduring effects on the community. These include population changes, economic diversification, social relations, and political organization and priorities.

3.3.2.3 Population

The following table depicts the rate and distribution of population growth throughout the forecast period. It is based on MMS assumed levels of OCS-related development beginning in 1985 in conjunction with a gradual but significant growth in groundfish-related population beginning in the current year (this table is a version of MMS Table IV, B.2.a.-2 modified to reflect actual levels of groundfish activity in Unalaska today).

Table 28

*Population Growth
Including Both OCS and Groundfish Figures*

*Alternative Scenario 1
1981-2000*

Year	Permanent Residents	Transient Processing	Fishermen/Workers	New Perm/Res	Onsite OCS Commuters	Total
1981	1054	890		0	0	1944
1982	1076	890		0	0	1966
1983	1144	940		0	0	2084
1984	1214	969		0	0	2183
1985	1272	985		220	120	2597
1986	1329	973		32	38	2372
1987	1372	946		95	80	2493
1988	1416	902		112	89	2519
1989	1477	908		223	139	2747
1990	1530	916		169	106	2721
1991	1597	924		220	98	2839
1992	1684	937		347	118	3086
1993	1792	955		562	164	3473
1994	1939	978		745	209	3871
1995	2129	1007		812	222	4170
1996	2381	1049		821	222	4473
1997	2724	1102		841	222	4889
1998	3182	1174		848	222	5426
1999	3811	1270		860	222	6163
2000	4521	1397		877	222	7017

As discerned from the above table, in-community population at the peak of OCS activities, if major **groundfish** activity occurs at roughly the same time, will exceed 7,017 individuals. At peak activity **groundfish-related population will** add 4,521 permanent residents to Unalaska, to which must be added an additional 877 residents in association with petroleum activities. We must remind the reader that these figures are year-round population additions and must not be seen as **analogous to the types of seasonal increases historically tolerated in response to herring, salmon or crab harvesting activities.** To the above increased permanent population **levels** must be added the certain population ebbs and flows in response to major yearly fluctuations in resource **levels** of crab, **salmon, shrimp, halibut, herring or** other unpredictable changes in seasonal harvesting activities.

These changes can begin, peak and decline within 5-10 years (King crab and herring are excellent examples). If such a change were to coincide or overlap with **groundfish** and oil development the population of Unalaska **could** reach periodic peaks of 8-10,000. The growth of population **directly** in association with these two developments, **in addition to** the enduring nature of these developments **will** strongly encourage secondary economic development and further population growth which **will** provide an additional population increase. The **lag time** associated with the types of development which must necessarily occur in order to support such rapid population increases would make a smooth transition very **difficult** .

The population would be distributed into three distinct employment categories with residence strongly conditioned by such employment. Amaknak Island would be the locus of **groundfish** activity with **groundfish** providing a source of year-round activity and crab processing acting to generate seasonal peak periods of activity and population. Captains Bay and portions of Amaknak's inner harbor **will** be locus of oil-related activity. Unalaska proper, and its periphery, **will** retain its existing residential orientation and **will** absorb the bulk of the permanent population growth associated with both **groundfish and petroleum** development.

Table 29

Unalaska: Resident and Non-Resident Population Projections
Alternative Scenario 1
1981-2000

Year	Residents		Non-Residents		Total	
	N	%	N	%	N	%
1981	1054	54.2	890	45.8	1944	100.0
1985	1492	57.5	1105	42.5	2597	100.0
1990	1699	62.4	1022	37.6	2721	100.0
1995	2941	70.5	1229	29.5	4170	100.0
2000	5398	76.9	1619	23.1	7017	100.0

This table, when compared with Table 25 in the primary scenario, indicates that the proportion of residents and non-residents in Unalaska through the forecast period is relatively consistent with the projections found under the primary scenario. The composition of this population, however, by ethnicity, by employment, by education, and by other social variables will differ considerably from that suggested under the primary scenario in the absence of petroleum-related development in Unalaska.

Table 30

Projected Ethnic Composition of the Population of Unalaska
Alternative Scenario 1
1985-2000

Ethnic group	1985		Year 1990		1995		2000	
	N	%	N	%	N	%	N	%
Caucasian	1647	63.4	1565	57.5	2478	59.4	3729	53.1
Black	52	2.0	68	2.5	125	3.0	245	3.5
Aleut	254	9.8	322	11.8	409	9.8	519	7.4
Other	644	24.8	766	28.2	1158	27.0	2524	36.0
Total	2597	100.0	2721	100.0	4170	100.0	7017	100.0

The assumptions underlying these projections are similar to those in the primary scenario. With or without OCS development, the rates of growth of Blacks, Aleuts, and Others (primarily Vietnamese, Mexicans and Filipinos) will remain constant through the forecast period. The growth rate for Caucasians, however, will increase due to the fact that most of the oil-related workers are expected to belong to this group.

Under this scenario, Caucasians will continue to represent over one-half of the total population through the forecast period, a proportion greater than projected in the primary scenario. Vietnamese, Mexicans and

Filipinos will comprise a slightly smaller proportion of the total population than exists in the primary scenario, but they will still represent over one-third the total population by the year 2000. The proportion of Aleuts will continue to decline until 1985, rise briefly for the next five years, and then decline at a rate of 3.7 percent per year, even though the absolute number of Aleut residents during this period will grow by the assumed annual rate of 5.4%.

3.3.2.4 Community Facilities

Public facilities, including water, sewage, electric, docking and airport facilities, within the first year or two of oil-development will reach critical demand levels. The established water supply and delivery system has (during the first quarter of 1983) proved inadequate to supply even current processor demand. At least one groundfish processor in Unalaska had to halt operations as a result of inadequate water supply (and ultimately terminated operations entirely, though other economic issues were probably paramount in this decision). The sewage system will also require major renovation before significant additional demand can be tolerated. Available electrical power sources are currently adequate and can tolerate a significant increase in demand. However, access to service cannot be expanded at a rate sufficient to accommodate the projected increase in demand. Thus, the initial year or two of growth in demand will have to be satisfied by privately-owned electrical generation and only slowly reintegrated into the city system.

Airport renovation and expansion, currently proceeding with construction of a new terminal building but awaiting additional state funding for extension of the runway, will be seen as a critically limiting factor very early in the development sequence and urgent measures will need to be taken to assure that this facility is made adequate to the expected levels of development. Unlike the case in the primary scenario, the projected growth of OCS activity in Unalaska should generate revenue which could be used for airport renovation and expansion. However, given the assumed pace and cooccurrence of the two development scenarios, it is not expected that this facility can be completed in time to facilitate the early development activities of either groundfish or OCS activities. Thus, the peak demand created by these two developments, if sufficient lead time is not available, could potentially result in severe air transportation inadequacies.

As reflected above, major projects will have to be initiated on an urgent basis and will have to rely on state and federal funding actions and, to an increasing extent on municipal bonds. The pace of growth will be unusually accelerated and will not allow adequate planning. The effort to meet urgent demands will have to be extraordinary and will result in altered priorities and unintended long-term consequences.

Permanent housing, regardless of which development scenario (excepting a non-OCS, non-groundfish scenario, not considered in our analysis) is implicated, will be incapable of absorbing expected precipitous growth without major dislocation. A lengthy period of residence in temporary bunk-house, trailer or pre-fab variety facilities will be unavoidable. Provision of services to those residences that are constructed will be subject to major delays.

3.3.2.5 Economic Subsystem

Employment opportunities will increase markedly, and conversely, the absolute number (and rate compared to today) of unemployed individuals (at least temporarily unemployed) will also increase significantly. This is because in the current economy unemployment is structurally limited to only a certain category of resident. Transient and short-term residents will simply leave town once it becomes clear that suitable employment no longer exists, or if known employment opportunities exist elsewhere. The following table depicts the expected distribution of employment through the year 2000.

Table 31

*Estimated Total Employment
Alternative Scenario 1
City of Unalaska
1980-2000*

Employment Sector	<u>Year</u>				
	1980a (Actual)	1985	1990	1995	2000
Commercial Fishing	150	141	165	232	456
Mining-Oil	2	120	106	222	222
Contract Construction	12	67	84	151	194
Manufacturing	1166	1026	1011	1726	2910
Transportation, Public Utilities & Communications	57	56	58	106	192
Trade	60	89	100	192	334
Finance, Insurance and Real Estate	27	26	24	42	69
Services	44	64	70	135	236
Government	82	80	96	192	332
Total Employment	1600	1669	1714	2998	4945

a. 1980 figures from Alaska Consultants, Inc. 1981:217.

As characterized in the above table, the major employment shift will occur between 1990 and 1995. The total employment increases during this period by approximately 57%. Between 1995 and the year 2000 total employment increases by approximately 60%.

This employment level will generate major changes in the secondary economy as retail, construction, and other consumer activities increase accordingly. The fact that both OCS and groundfish activities are

expected to be relatively long-term (when compared with the traditional fluxuations of particular fish species) and constant activities will provide a powerful incentive to establish additional commercial firms in the community. The rapid pace of these changes, however, will also result in shortages, underplanning and exaggerated expectations regarding profits and growth. The growth of population and of commercial opportunities, in turn, will generate a further population increase in relation to externally perceived options available in the community. We are careful to note, however, that the income levels of most current residents and the bulk of those employed in the processing sector will not increase appreciably in response to groundfish development.

Subsistence activities, to the degree they are tied to recreational objectives, will increase in intensity and in absolute number of participants. Where the actions of the newer residents, particularly the white oil-related employees, tend to reduce access to the traditional locations or resources of the long-term residents we expect to find increased conflict. The subsistence-related activities of Unalaska residents are particularly susceptible to disruption by newer residents and, because these activities are so closely tied to perceptions of identity, the likelihood of conflict is high.

Table 32. below, we have broken the manufacturing and contract construction classifications into their component OCS and groundfish employment categories.

Table 32

Estimated Basic Employment in Selected Sectors
Alternative Scenario 1
City of Unalaska
1980-2000

Employment Sector	1980a	1985	Year 1990	1995	2000
Commercial Fishing	150	141	165	231	456
Traditional	(150)	(80)	(50)	(46)	(78)
Groundfish	(0)	(61)	(115)	(186)	(378)
Contract Construction	5	30	38	57	48
Traditional	(5)	(3)	(2)	(2)	(3)
Groundfish	(0)	(21)	(30)	(36)	(37)
Ocs	(0)	(6)	(6)	(19)	(8)
Manufacturing	1166	1026	1011	1726	2910
Traditional	(1166)	(620)	(388)	(361)	(612)
Groundfish	(0)	(275)	(524)	(845)	(1725)
Ocs	(0)	(131)	(99)	(520)	(573)

a. 1980 figures are from Alaska Consultants, Inc 1981:219.

The anticipated decline in the relative strength of traditional fishery activity in Unalaska during the next decade is reflected in this table. By traditional fishery we refer primarily to the crab fishery and

current trends in this fishery. We have not considered the potential growth of other traditional fisheries such as herring, halibut, or salmon in generating temporary or long-term growth in Unalaska. These are potential sources of fluctuations in the number of residents committed to particular fisheries adaptations. Given the current organization of the salmon, herring and, potentially, halibut commercial fisheries (e.g., ownership patterns, harvesting patterns, regulatory constraints, and SO on) a major resurgence of any one of these in Unalaska during the next decade appears remote.

3. 3. 2. 6 Social Subsystem

Periods of population stability tend to encourage closer social ties and larger social networks. Major periods of seasonal activity and high population broken by periods of inactivity and low population tend to work toward very narrow and exclusive social circles which endure the fluctuations. The prospective rapid growth in population ultimately stabilizing at several times the current population will lead to development of new forms of social interaction which will compete with, disintegrate, and finally, replace earlier forms of social organization. While few individuals will be able to specify the elements of this process most will be conscious of the change and some may, in fact, react strongly to them. After two or three years of rapid development this process of social change will be accepted as the normal course of events and will not stir reaction.

Social class distinctions will also emerge and gradually become tolerated as a normal consequence of growth. The increasing presence of residents of external origin, whose established patterns of social interaction are based on such a model, will accelerate this process. The indigenous and current long-term resident population of Unalaska will bear the brunt of these social changes. Residents of external origin traditionally form social groups on the basis of shared characteristics and they will likely share more in common with other such residents than with the local inhabitants. Many of those who take up permanent residence will be of the managerial and upper-level staff category and whose earnings, experience and orientation will tend to put them into a particular social classification though they will likely live in the community of Unalaska and interact socially and politically with other community members. Processor personnel, traditionally young and male, will form yet another social category but one which will not interact extensively with other residents of Unalaska, preferring instead to remain for the most part on Amaknak Island (Dutch Harbor). The bulk of the petroleum-related employees, on the other hand, will be mature, highly skilled, family men who will live in company-provided housing or in existing homes purchased or leased in Unalaska. As the experience in Valdez suggests, petroleum-related workers will not be strongly inclined, at least during the first few years of activity, to participate in formal community functions and will be even less inclined to participate in the political affairs of the city. Their involvement in other informal social activities will be largely determined by the number and age, and length of enrollment, of their offspring in the Unalaska school system. It is on the basis of the educational system (i.e., school-related activities) that many of the longer-term residents of the community have interacted and will continue to interact socially.

3. 3. 2. 7 Political Subsystem

The political organization of the current population of Unalaska has endured major changes in just the last few years. In fact, during the last few months virtually every city council position has changed hands (only one individual continues to hold a previously held position). As noted in the ethnographic description and analysis, the current managerial staff of the community is expected to change radically during the next year or so. The current City Manager will leave the employ of the City in September of 1983 and a new Planning Director began duties on August 1, 1983. In addition, capital program management was removed from the office of the Planning Director in February of 1983 and as yet (as of August, 1983) no decision has been reached concerning that position. These changes occur at a point just prior to the beginning of the growth assumed in this scenario. It is difficult to avoid the conclusion that the incoming staff and newly composed city council, assuming development were to begin soon, would be able to gain the experience and knowledge necessary to effect the kinds of political action required under this accelerated growth scenario. Plans will have to be made, and actions taken based on little information. The position of city manager is of special importance in this regard. The outgoing manager was particularly skilled in handling the oftentimes conflicting objectives of the various community factions. He knew well the history and orientation of each of the major actors in the political arena. The importance of this knowledge and skill must not be underestimated and will be precisely what is unavailable to the incoming manager (who will most likely be selected from outside the community). The effects of this qualitative difference in experience and understanding will be difficult estimate. It will emerge only in relation to the length of time available to the incoming staff to acclimate to the new political environment and to the extent that development is accelerated during the early course of this administration.

3. 3. 2. 8 Religion

Both output and feedback impacts on the religious subsystem under this scenario will assume the forms described under the primary scenario. The only significant difference will be a greater rate of growth in membership of the Unalaska Christian Fellowship, the possible establishment of new churches in the community by the end of this decade, and a greater rate of fission among church congregations of Protestant denominations.

3. 3. 2. 9 Education

The effect on education in Unalaska if both groundfish development and the peak of OCS activity occur simultaneously will be a major consideration for the community. The nature of the assumptions regarding permanent versus transient residency in association with groundfish development lead, independently of petroleum development assumptions, to the conclusion that rapid expansion of present facilities will be required.

If the projected curve of additional school population associated with oil development activities is considered, the current facility and staff will prove inadequate by the end of the first year of oil activity.

The organization of education, particularly the priorities established in setting curricula, will shift according to the relative percentage of OCS-related employees resident in Unalaska. The petroleum-related employees are expected to push for higher standards and create more pressure for post secondary education in the local high school. Increased achievement levels and a greatly intensified level of extra-curricular activities are also projected.

Table 3 3

Unalaska School Enrollment Forecast
Alternative Scenario 1
1985-2000

<u>Year</u>	<u>Enrollment</u>
1985	232
1990	265
1995	459
2000	842

It is clear that during the early 1990s school population in Unalaska will surge dramatically. This period, if not adequately anticipated by the community, will result in shortened construction lead-time, inadequate time for planning and informed decisionmaking, and major shifts in the content and focus of the high school's curricula. We foresee the need for the construction of at least two primary schools and the conversion of the current facilities into a high school only. One of these two primary schools will have to be sited on the Dutch Harbor side. This division will tend to accentuate existing social differences between the two segments (i.e., Amaknak residents and Unalaska proper residents) of the community. An alternative plan is outlined by Haeg and Bettis (1982) which envisions the construction of a new junior high/high school facility adjacent to the existing facility which would itself be converted into strictly an elementary school. However, this plan does not seem to recognize the extent of residential growth which will in all probability occur on Amaknak Island.

3.3.2.10 Health Care

Both the cost and the quality of health care will increase dramatically under the assumptions of this scenario. It is likely that the additional tax revenues generated by petroleum activities will offset additional costs to the community. The quality of care expected by the petroleum firms will also serve to simulate demand for additional health practitioners. One of two changes can be expected in the structure of delivery services; first, that a second clinic is constructed which is at least partially directly funded by oil firms or that the Iliuliuk Clinic is upgraded in a manner discussed in the primary scenario. The second possibility is that a small hospital (20-40 bed) is constructed

in Unalaska by the early 1990s which entirely replaces the clinic.

3.3.2.11 Social Services

Because of the rapid increase of both economic growth and population under this forecast, the need for social services will increase--though probably not in direct ratio to rate of growth. While economic prosperity might serve to reduce social and psychological tension in other contexts, the strain on the quality of life resulting from increased population on limited utilities, housing, increased socioeconomic status differentiation, increased income opportunities (which are unattainable), and so on, will mean a major increase in the severity and number of problems which will be encountered. Alcoholism will certainly increase, accidental injury and death will increase, domestic violence, particularly among the lower socioeconomic groups, will also increase. This increased demand will give rise to additional personnel and facilities in the area of social services. As is often the case, these services may be provided by professional staff located in or affiliated with the clinic or projected hospital.

3.3.2.12 Recreation

The trend in recreational activities discussed under the primary scenario will generally hold for this alternative scenario with the following exceptions. First, there will be a general trend in recreational activities in the direction of the dominant national value system (i.e. g an urban cash-based economic perspective). Activities involving money (e.g., motor vehicles, planes, dining out, vacations, home entertainment systems) will increase most rapidly under this development scenario. There will be a second trend toward small-group activities as the population become more heterogeneous, with the exception of such community-wide events such as Fourth of July, community athletic leagues, festivals and school-related competitions.

3.3.3.1 Assumptions

This second scenario takes as its initial assumption the early occurrence of groundfish development and later development of the OCS. This scenario differs from alternative scenario 1 in several ways; First, the pattern of growth in the groundfish industry, rather than growing gradually during the latter part of the 1980s and reaching elevated levels at the same time OCS activity peaks in Unalaska, is assumed to grow rapidly during the late 1980's and be at elevated activity levels prior to OCS-related population and economic growth. Second, the key difference between the effects of this sequence of events and those of alternative scenario 1 is that the community will have come to recognize the profound and long-term importance of groundfish development to Unalaska before the incremental, additional effects of OCS activity become visible. Third, to the degree that the importance of groundfish activity to the economy of Unalaska is recognized, the level of community resistance to OCS events which appear to threaten this activity will be increased. Thus, the "perception of petroleum development within the context of an existing boom-like, or steady growth, economy will tend to be negative. This, then, is also a major difference between Alternative Scenario 2

and Alternative Scenario 3 in which we assume (.)OCS activities actually precede rather than follow significant groundfish activities.

3.3.3.2 Summary of Effects

In several respects the effects of this particular sequences of events will resemble those portrayed in the primary scenario in that through 1990, at least, our primary scenario assumes major groundfish development and virtually denies significant OCS development effects. This alternative scenario begins to differ significantly from the primary scenario around 1990 when OCS activities begin to affect the community of Unalaska. We concentrate below only on how demographic, social, economic and political organization and values will be affected by the introduction, within the context of an already active fisheries-related economy, of significant OCS oil-related development beginning in the late 1980's and early 1990's.

3.3.3.3 Population

Table 34 below provides a rough estimate of population levels from 1983 through 1995 based on the assumption that groundfish development activity increases rapidly from 1983 to 1990 and that major OCS activity does not achieve significant levels prior to 1990.

Table 34

Projected Population of **Unalaska**
 Alternative Scenario 2
 1981-2000

Year	Permanent Residents	Transient Fishermen and Processing Workers	New Perm. Residents	On-site OCS Commut.	Total
1981	1054	890	0	0	1944
1982	1076	890	0	0	1966
1983	1500	1233	0	0	2733
1984	1592	1271	0	0	2863
1985	1667	1291	0	0	2958
1986	1743	1276	0	0	3019
1987	1800	1241	0	0	3041
1988	1859	1184	0	0	3043
1989	1937	1191	0	0	3128
1990	2006	1201	220	120	3547
1991	2095	1212	32	38	3377
1992	2209	1229	95	80	3613
1993	2349	1252	112	89	3802
1994	2542	1282	223	139	4186
1995	2793	1321	169	106	4389
1996	3121	1375	220	98	4814
1997	3572	1445	347	118	5482
1998	4174	1540	562	164	6440
1999	4999	1666	745	209	7619
2000	5932	1833	812	222	8799

As discerned from the above table, population growth is assumed to occur at a rapid and steady pace beginning in the current year (1983), reaching approximately 3547 by the year 1990. Oil-related population growth is assumed to begin in 1990 and to increase dramatically within the first year of activity, decline precipitously in the second year and then increase at a constant rate of 9.4% per year throughout the final years of the decade. By the conclusion of the initial Construction's phase of oil development the total resident population of Unalaska will have reached 8799, of which only 17% of the growth of 6,066 residents since 1983 will have been in response to oil activities,

While the assumptions of rapid growth for the groundfish industry through 1990 are likely to prove extreme, they demonstrate how population would have to be accommodated in Unalaska during the latter part of the 1980s. The rate and consequences of growth in both the OCS and groundfish industries, particularly during the last few years of the century when the permanent population is supposed to grow by 1,000 new residents each year, are dramatic and are not likely to be successfully tolerated under the assumptions of this scenario. During the early phase of this population growth, given assumptions provided in the primary scenario, the bulk of these new residents will be absorbed by current processor facilities with a rapid, but gradual increase in community population as upper level managerial and staff employees establish permanent residence in the community itself. Thus, we see

facilities and commercial operations which currently operate on a seasonal basis coming to be utilized on a year-round basis. Instead of resident population remaining relatively constant and in-community population varying by as many as 3,000 from season to season, we will expect to see these long-term processor employees coming to be viewed as residents.

Table 35

**Unalaska: Resident and Non-resident Population Projections
Alternative Scenario 2
1981-2000**

Year	Residents		Non-Residents		Total	
	N	%	N	%	N	%
1981	1050	54.2	890	45.8	1944	100.0
1985	1667	56.4	1291	43.6	2958	100.0
1990	2226	62.8	1321	37.2	3547	100.0
1995	2962	67.5	1427	32.5	4389	100*0
2000	6744	76.7	2055	23.3	8799	100.0

The period 1995 through 2000 will see unprecedented growth in the permanent and overall total population of Unalaska. The assumptions underlying the assignment of a specified percentage of projected growth to the permanent residency category begins to appear intolerable about 1995. There is little chance Unalaska could sustain such a rate of population growth in this category of residency. Various limiting factors are certain to constrain this rate of growth. These include physical limits on housing, sewage, water and power and all other facilities.

The actions of the incoming population will be driven by different political, social and economic motivations than the traditional seasonal employees. For the most part, however, they will not be as great a burden on community facilities as might be expected since existing systems of residence and service, in processor supplied accommodations, will have to satisfy early demand. The gradual and incremental process implied above will also allow the development of needed community facilities (particularly water and sewage) which require longer lead times. The current city plan, for example, to eventually include the processors under the city power network should allow the timely development of such facilities.

If land ultimately becomes available, and this will be a major consideration under each of the scenarios considered in this report, then it is possible that the gradual population growth suggested here can be met during the early phase of groundfish development and will only become critical as OCS activities begin to surge in the late 1980s and early 1990s. The unavailability of land is certain to constrain growth in the late 1990s even assuming the Native Corporation determines that it is in its interest to sell or lease some of its holdings.

The bulk of the additional population cannot be assumed to be housed in owner-occupied units. The majority, in fact, must be housed in temporary facilities. These may include improved cannery housing which

provides for families or temporary pre-fabricated units on site. These additional processor employees, for several reasons, cannot actually be classified as "permanent" residents. On the one hand, the forecasted growth suggested in the primary scenario which assumed that they were, indeed, permanent residents would not allow such growth. On the other hand, the assumed existence of year-round contracts, and thus "permanent" residency, does not take into account the fact that 6-month contracts may continue to constitute the bulk the labor agreements. In addition, the application of a broad classification of "resident" to such workers, even if they have successfully worked through three or four such contracts, fails to recognize the major distinctions in local perceptions' of the meaning of this category of resident to the community, the likelihood of their departure, their reliance on harvest levels, and their long-term commitment to employment in the processing sector. It also fails to weight the individual's own sense of participation in and identity with the activities conducted in Unalaska. It will take several years of such residence in Unalaska before these individuals begin to see Unalaska as a "home." However, given the large number of individuals that must be classified in this category, the aggregate economic, social and political effects, as discussed in the primary scenario, will be major.

3.3.3.4 Economic Subsystem

The economic organization and system of values discussed in the primary scenario hold as well for this alternative scenario through the year 1990. We must make it clear that OCS activity, regardless of the different scenario assumptions, will continue to increase throughout the region. Thus, the existing oil-related activities in Unalaska will continue to play some role in the local economic, social and political context of Unalaska. We must assume, for our purposes here, that these activities continue to increase at a minimum rate through to the year 1990. Thus, by this year there will already exist a relatively well entrenched physical infrastructure to support the initial stages of rapidly increased levels of activity in the community. What we have assumed in our discussion of social and political effects is that it will be the dramatic surge in such activities that will bear most directly on community organization and infrastructure.

The effects of a dramatic increase in employed population present during the first years of major oil activity in Unalaska will have marked effects on the local economy. The wage system that has evolved over seven or eight years of processing activities in the community will be directly affected by the competing economy of local petroleum activities. Employment patterns, as was the case in Valdez, will shift dramatically as demand for an entirely new range of skills and categories of employees increases. These new temporary residents, in turn, create demands for new products and services, which, in turn, create secondary employment opportunities, hence raising the employment multiplier. The pace of inflation will be a subject of concern to all existing residents of the community and the role of petroleum development will be clearly recognized. Property values, the cost of loans, construction costs, and consumer prices will soar in very notable ways during the first three years. Local construction will be very active

and a period of rapid physical growth will ensue. If Valdez proves to be a valid indicator, tax revenues will allow major improvements of all existing facilities and the construction of facilities that do not as yet exist. Again, this will all occur within the context of an existing rapid growth economy oriented toward the fisheries and long-term growth.

The reader is referred to our discussion of oil-related impacts in the Cold Bay scenarios where many of these issues are discussed in detail.

The distribution and pattern of employment within the Unalaska economy under this scenario differs significantly from both the primary scenario and alternative scenario 1.

Table 36

*Estimated Total Employment
Alternate Scenario 2
City of Unalaska
1980-2000*

Employment Sector	1980	<u>Year</u>			
		1985	1990	1995	2000
Commercial Fishing	150	185	217	305	599
Mining-OCS	2	2	120	106	222
<i>Contract Construction</i>	12	71	109	138	225
<i>Manufacturing</i>	1166	1174	1327	1582	3067
<i>Transportation, Public Utilities & Communic.</i>	57	59	75	97	208
<i>Trade</i>	60	94	129	176	361
<i>Finance, Insurance & Real Estate</i>	27	27	31	39	75
<i>Services</i>	44	68	91	123	256
<i>Government</i>	82	85	113	176	360
<i>Total Employment</i>	1600	1765	2122	2742	5373

Table 36, above, is a modified version of MMS Table IV, B.2.a.-2. The modification involves a sizeable reduction in the number and classification of residents assumed to be involved in the groundfish fishery.

Table 37

Estimated Basic Employment in Selected Sectors
Alternative Scenario 2
City of Unalaska
1980-2000

Employment Sector	1980a	1985	1990	1995	2000
Commercial Fishing	150	185	217	305	599
Traditional	(150)	(80)	(50)	(46)	(78)
Groundfish	(0)	(105)	(167)	(259)	(521)
Contract Construction	5	31	49	52	55
Traditional	(5)	(3)	(2)	(2)	(3)
Groundfish	(0)	(28)	(41)	(44)	(33)
OCS	(0)	(0)	(6)	(6)	(19)
Manufacturing	1166	1174	1327	1681	3587
Traditional	(1166)	(620)	(388)	(361)	(612)
Groundfish	(0)	(554)	(808)	(1221)	(2455)
OCS	(0)	(0)	(131)	(99)	(520)

From the above two tables it is apparent that processing activities associated with traditional fisheries pursuits will begin a rapid decline between 1980 and 1990, falling 50% in the first five years and another 50% during the period 1985-1990. Groundfish activity, on the other hand, will increase from zero participants in 1980 to over 500 workers by 1985. For the most part, this first decade of groundfish activity will accord with our projections in the primary scenario. The decade of the 1990s, however, will see a significant difference in the employment picture. Petroleum-related activities are assumed to commence around 1990 and to add an additional 131 positions to the local employment picture during that first year. This figure declines by the mid-1990s and then rises to a total of 520 positions by the end of the century.

It is clear that a category entitled "fixed-term resident" would be of use in classifying those individuals whose stay in Unalaska is structurally limited by the external agencies which have determined their presence in Unalaska in the first place. These include many upper-level managerial processing staff committed to the residual crab fishery, as well as a portion of the staff which comes to Unalaska to work in groundfish processing. This group also includes the bulk of the oil-related management assigned to Unalaska. These individuals will come to Unalaska under the express belief that their stay in the community will be limited to a fixed "tour of duty" and that upon completion of this tour they will return "home." Their view of their own role in the community will be strongly conditioned by the rigid limitations placed on their time of residence in the community. Thus, while the number of individuals officially resident in Unalaska and holding particular high-level positions remains relatively constant, the individuals filling these structural positions will shift from one year to the next. Thus, the effects of these different population groups on the social, economic

and political organization of Unalaska will differ considerably and these differences are discussed in the analysis below.

3.3.3.5 Social Subsystem

Among the more significant effects of the projected rapid growth in population assumed under this scenario, are the social consequences of a large number of year-round, fixed-term processor employees in Unalaska. The community of Unalaska has come to tolerate, and indeed, expect and rely on, the seasonal population growth and decline in response to fisheries activities. The community generally positively awaits the different fishing seasons, particularly King crab and, to a lesser extent, and for different reasons, the salmon season. For other reasons they positively await the close of these seasons and the return to "normal" activities, school, and routine business.

The anticipated population growth associated with groundfish activities will affect Unalaska throughout the year. It will be unremitting and constantly growing. Unalaskans will eventually have to adjust to a community identity more closely associated with "processing" per se, than with their role as a transportation crossroads, or even as a "fishing" community. Groundfish production is primarily a high volume, predictable, low profit margin, processing venture. The supply is abundant and the harvesting technology sufficient to keep the processing sector active year round. While supply is abundant, the market is extremely limited and fixed. Fishermen will be at sea a greater portion of the year, will harvest vast quantities of groundfish for which they will reap a very narrow margin of profit. With a significant decline in the role of "bonanza" fishing seasons to fishermen, the spurts of local expenditures, and their replacement by predictable, constant, business-oriented processing activities much of the traditional positive value of identification with the fishing industry will have been lost. Cannery wages, for example, given the predictability of the harvesting sector and the very narrow margins on which the processors will have to offer, will begin to decline and will eventually level off at a relatively low rate compared with salmon or crab processing where earnings, especially given the number of overtime hours required to process in a timely fashion the salmon and crab resource.

Table 38

Projected Ethnic Composition of the Population of Unalaska
Alternative Scenario 2
1985-2000

Ethnic Group	1985		Year 1990		1995		2000	
	N	%	N	%	N	%	N	%
Caucasian	1800	60.8	2021	57.0	2329	53.1	5028	57.1
Black	59	2.0	89	2.5	132	3.0	308	3.5
Aleut	254	8.6	322	9.1	409	9.3	519	5.9
Other	845	28.6	1115	31.4	1519	34.6	2944	33.5
Total	2958	100*0	3547	100.0	4389	100.0	8799	100.0

Several assumptions have been made in constructing this table of ethnicity: First, the category "Aleut" has been assumed to suffer no out-migration as a result of either OCS or groundfish activity. Natural population increase for this population, therefore, is assumed to be held entirely within the community. Thus, the proportion of the community that can claim Aleut ethnicity grows through the mid-1990s and then, population growth rates that exceed natural birth rates, the percentage of Aleuts resident in the community declines precipitously--even though their absolute numbers are assumed to continue to grow at a relatively rapid pace. The social role of the category "Other" suggests a potent source of change for the community. Under the assumptions of this scenario the category of Other, which includes Vietnamese, Filipinos, Mexicans, is expected to grow from approximately 1500 in 1995 to nearly 3000 by the year 2000. If it is true that the ethnic composition of the prospective processing sector of the groundfish industry bears a significant resemblance to the traditional ethnic composition of the salmon or crab fisheries, and that the bulk of these individuals will ultimately elected to establish residence in Unalaska, then it is certain that residential areas will develop which reflect the ethnic composition of the community. Filipino, Mexican and Vietnamese areas of the community will become recognized, social status and political representation will be shifted to accord with these new social distinctions.

Educational facilities and personnel, under the assumptions of this scenario, will be inadequate to meet demand by about 1987. Table 39 has been constructed primarily on the basis of the permanent population estimates derived for Tables 34 and 35 above.

Table 39
Unalaska School Enrollment Forecast
Alternative Scenario 2
1985-2000

<u>Year</u>	<u>Enrollment</u>
1985	260
1990	347
1995	462
2000	1052

As this table indicates, demand for educational services are expected to increase dramatically between now (1983) and 1985, creating by 1987 the need for construction of a primary school and the conversion of the current facility to a high school only. By 1990, under this scenario, a second primary school, probably located on Amaknak, and the expansion of the current facility to accommodate additional demand for secondary education will be indicated. Further expansion of the high school and additional construction on the two primary schools will be required between 1997 and 1999. It may be determined that, rather than construct facilities on Amaknak, upgrading of the interisland transportation system is more appropriate. In this case, a single major primary school

may be constructed near the current high school site.

Other major social changes will be involved in the overall shift in the distribution of population into processor-related employees oriented to "Dutch Harbor-side" activities and those focussed on Unalaska and traditional pursuits. The established pattern of seasonal interaction, as noted above, is acknowledged as the natural course of events and is well tolerated. The community of Unalaska has adjusted to major seasonal increases in population on the Dutch Harbor side and its ebb and flow effects on activities on the community of Unalaska. The flow of fishermen and processor employees in and out of Unalaska are seen as routine. Local restaurants and bars, and to a certain extent, other local commerce depend upon this seasonal population. However, the population growth anticipated to result from groundfish activity will be long-term, will create major increases in product and service demands and will have a constant and, ultimately, profound social effects on Unalaska. They will eventually become involved in virtually aspect of community organization and, ultimately, will become the dominant social and political force in the community.

The community's perception of oil-related development in Unalaska will be very strongly affected by the fact that long-term fisheries development is invariably considered superior to the relatively circumscribed growth associated with OCS development and its attendant fixed-duration residency and outmigration. In this alternative scenario oil development will clearly be viewed as more detrimental to the established population of Unalaska than either the primary scenario or alternative scenario 1 or 3. As the groundfish industry comes to play an increasingly important role in the local economy, local perception of the additional incremental oil-related development will be negatively affected. There will be little positive value associated with development of temporary oil support facilities, less positive value attached to the personnel assigned to these facilities, and less inclination to react favorably, as a community, to the beneficial aspects of their presence in the community.

3.3.3.6 Political Subsystem

Political decisionmaking under this second alternative will be affected in several different ways. Unlike the first alternative, by the time oil-related activities begin to have major effects on the Unalaska economy and social organization, a political infrastructure organized around, and already dominated by, the groundfish processing industry will have been firmly in place. From the local perspective, all the activities of the petroleum will be juxtaposed, particularly political issues, against the perceived values of the fishery and its activities. The question of "what's in it for the local population," will be very difficult to answer. The city, as a political entity, will have to balance the value of additional tax revenues against the fact that the tax structure of the community was already meeting its objectives. Under such circumstances, increases in assessed value, in tax rates, etc., which are invariably utilized to derive the maximum community benefit from oil-related activity, will be seen by many community members as an unfavorable result of such development. It will be much more difficult, under these conditions, for oil firms to obtain variances or

other political decisions necessary for their operations than it would be if no successful alternate economic support were in place.

From the perspective of the petroleum firms, the presence of major fishing industry activity in Unalaska will severely restrict the breath of development options available. All decisions will have to be weighed against increased traffic in the harbor, the increased use of trawl equipment the generally increased demand for services, the increased competition for labor supply, and so on, all within the context of a political and social environment that views petroleum activity as superfluous.

3.3.4 Alternate Scenario 3

3.3.4.1 Assumptions

This third alternate scenario takes as its first premise the delayed development of the domestic groundfish processing sector in Unalaska. The second premise of this scenario is that oil development currently taking place in Unalaska will continue until oil is discovered in the St. George, Navarin or North Aleutian Basin. We assume here (following MMS projections) that beginning around 1984-1985, with the discovery of commercial quantities of oil, the pace of oil-related development in Unalaska will accelerate dramatically through the early 1990's. Our assumption is that Unalaska will be used primarily as a transportation and/or support base for operations elsewhere in the Bering Sea. At an extreme, it is possible that Unalaska could be identified as a logical site for a transshipment port but this seems unlikely. Only by the early 1990s do we begin to assume a significant increase in groundfish activity.

3.3.4.2 Summary of Effects

This scenario varies in significant ways from the primary scenario, alternative scenario 1 and alternative scenario 2, in that oil activity, and not groundfish activity, will be the first to affect the Unalaska economy. It is our opinion, given the current course of development of both these sectors of the U.S. economy, this latter scenario is the most likely to prevail during the next decade.

Under this scenario we suggest that the crab fishery will not be able to retain its current position of preeminence in the local economy. We assume here that the crab production and economic returns of the late 1970's and early 1980s will not recur during this decade and that the recent decline of this resource will continue, at least for the next few years, and then grow at a much smaller rate than in the past ten years. Thus, we are projecting the gradual decay of the economic base on which Unalaska currently depends. We must forecast here the collapse of several of the major crab processing operations in Unalaska. We must also suggest a declining city income base and increased pressure on the city rely on municipal bonds for projects that might otherwise be funded on the basis of the existing system of revenue or on state funding based on perceived need (i.e., economic base, population growth, and so on).

Thus, the central thrust of this last scenario is that oil-related development, if it comes within the context of economic decline, will in fact be courted as beneficial to the community and positively valued by the bulk of the population--particularly that segment of the community which depends on city operations or funding for their existence. This segment will include most commercial enterprises and the employees thereof, the school staff, the city government, construction and service workers, and all others who depend on the wider economy for their employment or income. Only those whose income is derived independency of this wider economy will be immune to the consequences of the absence of economic development in Unalaska and will thus perceive of oil development as detrimental to their values. The point at which such development occurs will be significant. The greater the decline of the current economic base of the city the more positively petroleum-related activities will be perceived.

In our assessment, this picture of change in Unalaska will most closely approximate the actual sequence of events that will occur. We feel that the development of a groundfish industry in Unalaska, as projected in existing published reports, grossly exaggerate both the pace and nature of groundfish development likely to occur in Unalaska. We believe that US actions to promote increased utilization of this resource will be met primarily by an increase in joint-venture type arrangements with foreign processors, that the bulk of the returns from this type of arrangement will be absorbed by a very limited number and type of fishermen, that the total domestic crew requirement will be far less than projected in these other reports, and that significant development of onshore processing facilities--the basis of economic and population growth in the region--will be delayed well into the 1990s. This is a markedly different set of assumptions from those currently in vogue and may therefore be considered highly speculative. On the other hand, it has been our experience that existing ebullient projections regarding the pace of such development have not been grounded in reality and are therefore more speculative.

We discuss below how the demographic, social, economic and political consequences of this sequence of events will differ from those projected under the primary scenario and under alternative scenarios 1 and 2.

3.3.4.3 Population

As reflected in Table 40, we foresee rapid population growth during the next seven to eight years directly associated with petroleum development, and relatively little population growth during this period in association with groundfish activity.

Table 40

Projected Population of Unalaska
Alternative Scenario 3
1981-2000

Year	Permanent	Transient	New Perm.	On-site OCS	Total
1981	1054	890	0	0	1944
1982	1076	890	0	0	1966
1983	1098	800	0	0	1898
1984	1121	725	220	120	2186
1985	1174	747	32	38	1991
1986	1166	777	95	80	2118
1987	1189	808	112	89	2198
1988	1213	848	223	139	2423
1989	1237	890	169	106	2402
1990	1315	940	220	98	2573
1991	1396	969	347	118	2830
1992	1463	985	562	164	3174
1993	1528	973	745	209	3455
1994	1577	946	812	222	3557
1995	1627	902	821	222	3572
1996	1697	908	841	222	3668
1997	1758	916	848	222	3744
1998	1834	924	860	222	3840
1999	1934	937	877	222	3970
2000	2059	955	877	222	4113

Thus, by the time rapid growth begins to occur in conjunction with groundfish development in the community, the bulk of the population effects of OCS-related development will have already taken place. The period, 1981-2000, on which this table is constructed does not The population associated with oil activities will have already stabilized by the time groundfish development begins in Unalaska, i.e., before a clear contrast between the two sources of employment, revenue and population, would be made by the community. Thus, under the assumptions of this scenario, groundfish development will occur within the context of declining or stabilizing population growth in association with OCS oil-related activity.

Table 41

Unalaska: Resident and Non-Resident Population Projections
Alternative Scenario 3
 1981-2000

<u>Year</u>	<u>Residents</u>		<u>Residential Category</u>		<u>Total</u>	
	N	%	Non-Residents N	%	N	%
1981	1054	54.2	890	45.8	1944	100.0
1985	1206	60.6	785	39.4	1991	100.0
1990	1535	59.7	1038	40.3	2573	100.0
1995	2448	68.5	1124	31.5	3572	100.0
2000	2936	71.4	1832	28.6	4113	100.0

As reflected in the above table, with the delayed development of a groundfish industry in Unalaska, the proportion of non-residents in the community by the year 2000 will be higher than projected in the other scenarios. This is despite the expected 877 residents associated with OCS activity. We feel this is a realistic assessment for two reasons. First, the social pattern of moving from one residence category, that is transient to permanent resident, occurs at a much slow pace than has been assumed in previous studies. The current proportion of Unalaskan residents that have arrived in Unalaska as processor workers and decided to remain in the community is very small. We do not feel the social and structural variables involved in groundfish processing activities will lead to dramatic changes in this pattern even though the period of employment may increase to six- and even twelve-month periods.

3.3.4.4 *Economic Subsystem*

Groundfish development will occur in gradual increments and will continue to provide significant local employment opportunities throughout the century. The first stage of oil development, if it involves any major construction, will begin with a bang and will conclude with bang. Employment opportunities, during either the initial stage of construction or during later operations, will not directly benefit a significant portion of the employable resident population of the community. Virtually all the direct benefits of these activities will accrue to non-residents. The bulk of the indirect benefits of both construction and operation of any oil facility will also be drawn by non-residents. Even where the employees of these firms remain in the community two or three consecutive years the economic multiplier for their earnings in relation to Unalaska will be far less than the multiplier for the current population. This is because the new residents will rely to a greater extent on imported consumer items and on externally defined consumer patterns than other residents of the community. Their ties to the non-local commercial value system will be greater and their commitment and involvement in the local economy will be minimal during the early period of their residence in the community.

Under the assumptions of this scenario groundfish development will occur

very gradually during the last few years of the 1980's and will, by the time OCS activities begin to stabilize, become a major component of local economic activities. Thus, oil activities will have become a constant source of income to the community, through earnings of related employees and through direct taxes to the city, by the time significant groundfish development takes place. Conflicts between the two sources of revenue, the two sources of employments the two sources of population, and so on, will be minimal given the already well advanced nature of oil development in Unalaska. This is the only scenario, ironically, in which oil development will have the most profound initial impacts on the community and yet will ultimately result in the smoothest integration of the two major anticipated economic and social forces of the next twenty years--oil activities and groundfish development.

Table 42

Estimated Total Employment
Alternative Scenario 3
City of Unalaska
1980-2000

<u>Employment Sector</u>	<u>1980</u>	<u>1985</u>	<u>Year</u> <u>1990</u>	<u>1995</u>	<u>2000</u>
Commercial Fishing	150	86	120	130	164
Mining-Oil	2	38	98	222	222
Contract Construction	12	42	78	121	112
Manufacturing	1166	687	978	1398	1682
Transportation, Public Utilities & Comm.	57	35	54	85	110
Trade	60	56	93	154	192
Finance, Real Estate & Insurance	27	16	22	34	40
Services	44	40	65	108	136
Government	82	50	89	154	191
Total	1600	1050	1597	2406	2849

In Table 42, the estimates of total employment, based on assumed rates of growth in groundfish and OCS development, reflect the earlier startup of oil-related development and the delay in groundfish activity until 1990. Because of this delay, it is assumed that the 99% figure of proportion of non-residents in the harvesting and processing sectors of the traditional fishing industry will remain relatively constant. By 1990, this figure will have decreased to 97%, to 90% by 1995 and to 75% by the year 2000. The rates of growth in the sectors of commercial fishing, mining (OCS-activity) and manufacturing provide the basis for growth rates in the other employment sectors.

Table 43

*Estimated Basic Employment in Selected Sectors
Alternative Scenario 3
City of Unalaska
1980-2000*

<u>Employment Sector</u>	<u>1980a</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
Commercial Fishing	150	86	120	130	164
Traditional	(150)	(86)	(94)	(57)	(41)
Groundfish	(o)	(o)	(26)	(73)	(123)
Contract Construction	5	19	35	46	28
Traditional	(5)	(5)	(5)	(5)	(5)
Groundfish	(o)	(o)	(5)	(20)	(13)
Ocs	(o)	(14)	(25)	(21)	(1o)
Manufacturing	1166	687	978	1398	1682
Traditional	(1166)	(668)	(719)	(488)	(402)
Groundfish	(o)	(o)	(130)	(384)	(707)
Ocs	(o)	(19)	(129)	(526)	(573)

a. 1980 figures are from Alaska Consultants, Inc. 1981:219.

The employment and population projections for Unalaska in this scenario are based on the following assumptions. First, OCS development is assumed to occur at the rate estimated by the MMS Office, but begins in 1984 instead of 1985, as was projected in alternative scenario 1. This is in response to the already fixed levels of development planned by existing oil-related enterprise in Unalaska. The projection of 220 new permanent residents in the community by the end of 1984, however, is unlikely to be achieved. We have used this year in our analysis because it allows us to assess the extreme case of immediate introduction of oil activities in Unalaska. A more realistic assumption would place rapid population growth beginning around 1986-1987. Second, groundfish development in Unalaska is assumed to be delayed until 1990. After that point it will grow at the rate assumed by the MMS to begin in 1983. Until then, Unalaska's seafood processing and harvesting sector will continue to rely on various species of crab, salmon and herring (halibut holds some promise as well). These sectors will decline in the next few years and then grow at a modest rate of 3 to 5 percent per year until 1990. The 1983 figures are taken from an informal census count of employment positions based on the number of processors expected to be in Unalaska through the year. Third, as there is no growth anticipated for the groundfish industry, the growth rate of the resident population of Unalaska has been revised downward to reflect this fact. We are assuming a continuation of the present 2.0% annual growth rate in resident population until 1990. The expected economic downturn and resulting outmigration will account for the relatively low growth rate throughout the remainder of this decade.

3.3.4.5 Social Subsystem

The social composition of the community of Unalaska will change radically from one period of activity to the next. With the increase in activity in Unalaska in relation to petroleum development during the latter part of the 1980's will come a certain type of resident. During the early 1970's oil-related construction and development activity was conducted by young, single, relatively unskilled and inexperienced (particularly with Alaskan conditions) workers. In the decade since the peak activities of the Alaska pipeline many of these workers have continued to work in the same types of employment as they began in the early 1970s. Many have remained in Alaska and are now very familiar with Alaskan conditions, have travelled widely in Alaska, and are used to fixed-period employment. While less so than during pipeline construction, they are still relatively mobile. Most, however, have since married.

The bulk of the workers that come to work in Unalaska or its environs to construct necessary facilities will be married, will be experienced, will be committed to their employment objectives, and will not be as unmanageable as they were perceived in previous major construction projects in Alaska. Their numbers, however, and the ways they will interact with the indigenous population will have marked effects.

Table 44

Projected Ethnic Composition of the Population of Unalaska
Alternative Scenario 3
1985-2000

Ethnic Group	1985		1990		1995		2000	
	N	%	N	%	N	%	N	%
Caucasian	1306	65.6	1614	62.7	2368	66.3	2473	60.1
Black	30	1.5	51	2.0	89	2.5	123	3.0
Aleut	254	12.8	322	12.5	409	11.4	519	12.6
Other	401	20.1	586	22.8	706	19.8	998	24.3
Total	1991	100.0	2573	100.0	3572	100*0	4.113	100.0

Unlike the other scenarios, this scenario suggests that the proportion of Aleuts to the total population in Unalaska, with the exception of a slight decline in 1995, will remain relatively constant through the forecast period. Also, Caucasians will remain a majority of the population, averaging over 60%, through the forecast period. This contrasts with the projections of major growth in the permanent population of Filipinos, Mexicans and Vietnamese (Other) under the primary and first two alternative scenarios. This is more in accord with the delays in growth assumed under this scenario and a lower expectation regarding the likelihood of conversion from transient to permanent resident. The dependency ratio, in turn, has been changed to reflect this delayed growth sequence. We have employed a dependency ratio of 1.15 to 1990, 1.35 by 1995 and, finally, by the year 2000, a ratio of 1.5 for each processor employee. The proportion of Black residents of Unalaska is expected to remain relatively constant through

1990, and then increase very gradually (.1% per year) throughout the 1990s. This accords with the observation that a certain population level must be achieved within any particular minority population before that ethnic group can be assumed to show self-sustaining growth. The growth rate for the Aleut population is assumed to remain constant at 5.4% throughout the forecast period. This is, admittedly, an optimistic expectation in that it assumes a negligible emigration. External incentives such as educational or occupational options, or internal impetus such as the perceived negative changes in the community may tend to reduce this rate of growth.

As reflected in the following table, demand on educational facilities and personnel in Unalaska, after a brief period of decline between 1980 and 1984, will grow at a relatively constant rate throughout the forecast period.

Table 45

Unalaska School Enrollment Forecast
Alternative Scenario 3
1980-2000

Year	Enrollment
1980	199
1981	165
1982	160
1983	160
1985	188
1990	239
1995	382
2000	458

The decline in school population between 1980 and the present (1983) is a direct consequence of the decline in the crab fishery, the current primary economic base of the community. We have computed the growth in school-age population in Unalaska under the assumption that this current population will continue at present levels. Any further decline in the crab fishery that would result in on-shore personnel reductions or that would otherwise result in a decline in this population would tend to reduce the apparent pace of student population growth. Under this scenario sufficient time is allowed to plan for future facility and personnel requirements. The addition of one elementary school will be indicated by 1992 and a second one will be required by 1997 if the growth projected here is achieved.

Unlike Valdez, where the community had just reestablished itself on a new area of the bay (as a consequence of the Tsunami which devastated the community a few years earlier), the organization and distribution of land, housing, community facilities, and so on, in Unalaska has evolved

in disjointed epochs and poses major limitations to the growth assumed to occur in relation to oil activities in the Bering Sea. The problems related to community facilities are briefly discussed in relation to the primary scenario and will not be examined further here except to note that the abrupt nature of the changes associated with oil development will be far more difficult to plan for, or react to, than would be the case with groundfish development. The negotiations which precede the lease or sale of land on which oil-related facilities will be constructed will be conducted in relative secrecy. The legal formalities, and paperwork required to initiate major projects in Unalaska will be obtained within weeks or months of a major discovery. The Unalaska city planner was contacted by an engineering firm retained by a major oil firm the day after the Navarin lease sale regarding business information on Unalaska.

When changes in one's community occur so rapidly there is invariably a sense of frustration, regardless of the type of development, at not having one's own opinion heard. This will surely be the case if oil development, of the scale anticipated here, occurs in Unalaska. It is precisely under this type of circumstance that particular segments of small local communities elect to seek remedies in the courts. Residents feel violated and concerned that adequate precautions to protect their interests have not been taken.

There is also a general fear in Unalaska that the presence of significant oil-related development may actually reduce the attractiveness of the community to prospective groundfish developers. While many of the variables involved selecting a processing site are relatively objective, e.g., sufficient fresh water, adequate sewage facilities, adequate communications and transportation, and so on, other variables are more subtle and less amenable to analysis. What are the anticipated delays resulting from harbor congestion? How secure or insecure are water supplies, electrical supply, or worker commitment within the context of oil-related activities? Would locating in Akutan or elsewhere enhance the enterprise's competitive position, bring them closer to the fishermen or result in lower taxes? Several informants noted that plant siting in other locations, especially if oil development precedes significant groundfish activity, might prove more profitable than siting in Unalaska.

3. 3. 4. 6 Political Subsystem

The political consequences of the rapid growth of oil-related population during the latter 1980's will likely be less profound than the numbers might indicate. The two principal factors in this assessment are first, the clear opposition of the existing population and political organization of Unalaska to domination by even local commercial forces (such as the processing industry). The political organization of Unalaska has, at times in the past, been subject to such domination and a majority of the current political leaders of the community are staunchly opposed to reliving these earlier experiences. Processing representatives are viewed as significant "peripheral" and temporary elements of the local economy. The attitude is more "What can the processors due for the city?" than "What can the city do for the processors?" An even

stronger version of *this* attitude can be expected to greet significant oil-related enterprise. Second, the perceived political position of representatives of the incoming petroleum-related enterprise can be expected to range from indifference to rigid avoidance of involvement in community affairs. This indifference will last for the first few years of development at least and technical underrepresentation of employees of petroleum-related firms, relative to actual population figures, may continue for as many as five to ten years.

Given the current economic situation, the longer **Unalaska** is without alternative means of economic support, the more favorably oil-related development will be received by the community. Moreover, most residents understand that groundfish development, even if major strides are made, is **still well** on the horizon. Activities surrounding oil exploration, oil leases and development of Captains **Bay**, on the other hand, are familiar to everyone and appear on the immediate horizon. Moreover, as discussed in an earlier section on existing oil activities in **Unalaska**, active development has already occurred and further development is planned and relatively fixed--regardless of the presence or absence of oil in the planned lease sale areas. The very gradual process of acknowledgement and acceptance has already begun and only abrupt unanticipated developments will be cause for major social or political reaction.

METHODS, STANDARDS AND ASSUMPTIONS

Introduction

The objective of this **study** is to develop ethnographic information on **historical**, contemporary and forecasted economic growth, **cultural** and **social** change, and community development in **Unalaska** related to **potential OCS** development in the area. Based on this ethnographic **information**, projections of social, economic, **cultural**, and institutional **ramifications** of specified **levels and forms** of fishing and potential OCS development will be made. We **are** therefore interested in two separate activities in **this preliminary volume**: description and projection. **The methods, standards and assumptions described herein** pertain to **these** two activities and the proposed manner of their integration.

From an ethnographic standpoint, description **can** take **one of two** perspectives. **The first, and most often employed, is to describe the events in a specific community and the relationships among these events from the perspective of the investigator.** This perspective, referred to as an **etic point of view, entails interpretation of customs and behavior in a specific culture as seen by observers or "outsiders".** **The alternative perspective is that of the community members themselves. This is known as an emit perspective and involves the interpretation of customs and behavior as seen by the participants or insiders of a specific culture.**

Sociocultural projections which aim for validity and quantification often rely almost exclusively on the etic Perspective. **Given the aim of reliability (that is verification of observations and conclusions by other observers), this is quite understandable. However, observer reliability often masks a lack of validity of projections for the members of the communities under study, with the result that local residents can neither understand nor conform to such projections.** An emit perspective compensates for the deficiencies of an **etic perspective**, but in doing so creates new problems. Projections often become characterized by other investigators or **policymakers** as intuitive in nature and idiographic in content.

Realizing the necessity for both perspectives in the **twin** objectives of description and projection, we therefore propose to **apply** two distinct models in the ethnographic study of **Unalaska, Alaska.** For the **etic** perspective we **will rely on** systems analysis which **is well** suited for both tasks of description and projection. For the emit perspective, we **will** employ a variant of **the decisionmaking models** commonly used in anthropological fieldwork which outlines perceived **options, values, and patterns of decisionmaking** among community residents.

In addition to presenting the methods to **be employed** in the ethnographic studies of both communities, this appendix also summarizes the major

standards and assumptions guiding our investigation. We define standards "as those ethnographic findings established prior to the current investigation. **These** include matters of undisputed ethnographic fact which have been verified by other *sources*. Assumptions refer to conditions and relations postulated to **exist** by reason of extension, logic, and theory, including aspects of ethnographic description unverified by other sources and postulated trends derived from social and cultural theory and related studies in similar contexts.

Systems Analysis

General Concepts

Systems Analysis is an analytical tool **which** originated in engineering and the natural sciences.

Systems theory is an intellectual tool for studying the relation between the structure of a system and its functioning. More precisely, this theory provides a set of roles by which the function of a system can be associated with a known structure and by which the states of a system as **well** as its outputs can be associated with the inputs (**Cortes, Przeworski and Sprague 1974:5**).

It provides a language and a perspective which enables the investigator to understand the **interrelations** among a unified set of components, whether that set be a biological organism, an information processor, a mechanical device, or a **social** group. Systems analysis has become a major tool for **management** in both business and government.

Systems analysis is not to be applied **in** its entirety **in** ethnographic studies **and** projections. **Much** of the terminology **is** inappropriate for the desired **level** of analysis and **much** of **it is** derived from the study of "closed systems" (i.e., models where **all variables** are controlled for and in which interaction occurs within a limited set of parameters). Social groups, on the other hand, are viewed as "open systems" which implies interaction between the unified set of components or individuals and other, independent, variables. Our **explication** of the model will therefore concern only those aspects of direct relevance to the study of **Unalaska**.

"Social system" is a phrase frequently employed in **sociocultural** studies and projections, but often with unclear meaning or intent. Frequently such definitions leave a good **deal** of latitude **in** what **is** being described or analyzed. **A case** in point is **the** definition provided by Parsons:

Reduced to its simplest possible terms, a social system consists in a plurality of individual actors interacting with each other in a situation **which** has at least a physical or environmental aspect, actors who are motivated in terms of a tendency to the 'optimization of gratification' and whose relation to their situations, including each other, is defined and mediated in terms of a system of culturally structured and

shared symbols (1951:5-6).

Definitions such as these leave too much room for interpretation and variation on the part of different observers. What is needed are precise categories and concepts which are easily understood. Given the possibility for substantial variation in both description and analysis, therefore, some effort should be devoted at the outset to explaining exactly what is meant by a social system.

Although the definition of any of the terms employed by social and behavioral scientists may particularly emphasize the theoretical bias of the investigator, the numerous definitions of social system all share some underlying features. First is the notion of the interrelationships of parts to form the whole. This notion, made explicit for social contexts by Durkheim (1899), underlies all definitions of social system. Second, social systems are usually conceived as interacting with phenomena located outside the social group, whether it be other social groups, ideas, or simply the local ecology, and these "relevant" aspects of the "outside world" are also part of the system. Third, individuals in particular social systems are usually motivated to interact with one another. Usually, this motivation is characterized as the desire to pursue pleasure and avoid pain in ways that enhance their capacity for survival. Fourth, individuals in social systems are provided with certain guidelines which enable them to behave in particular ways with expected consequences. These guidelines, usually characterized as a system of values or norms and embodied in a set of symbols, comprise the culture of the social group.

Real and Abstract Levels of Social Systems

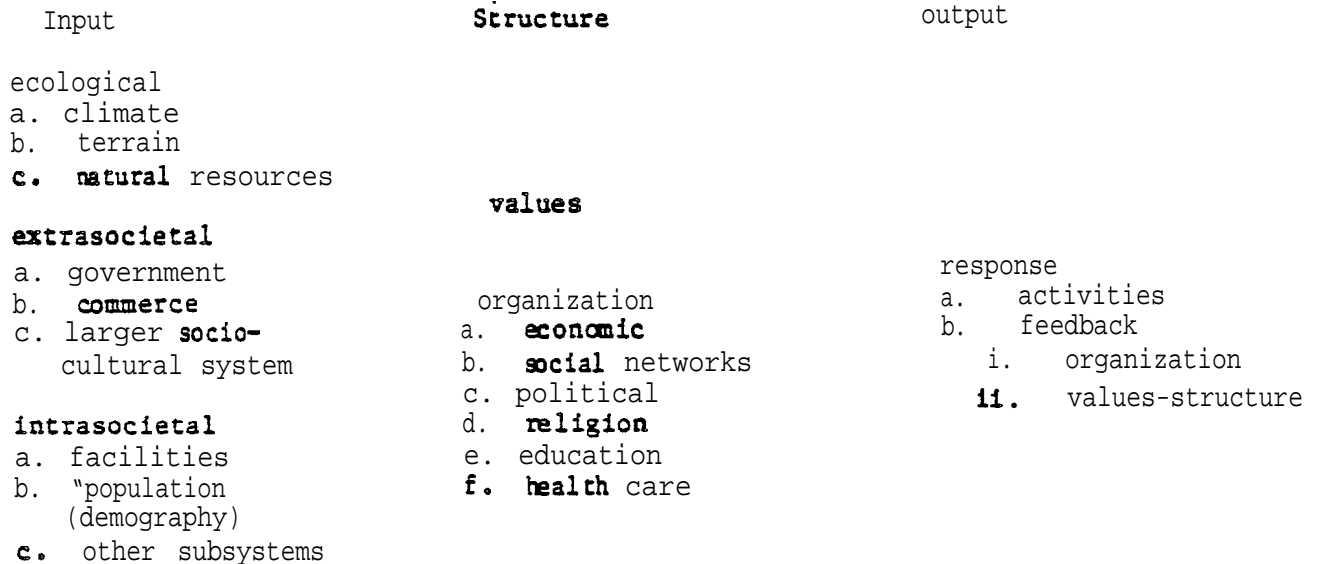
Social systems, in whatever form they assume, must be understood to exist at two different levels. The first is that of the real community; the living, breathing, human beings who constitute that community. Some of these individuals may be more successful at pursuing pleasure and avoiding pain; some more committed to adhering to cultural norms and values than others, but all are members of the same social system. For the purpose of description, an understanding of the social system begins at this level. For purposes of analysis, however, distinctions and generalizations become important and the individuals in the community become abstract categories, often referred to as "actors." The second level, therefore, is an abstract one constructed by the systems model to aid in understanding what transpires at the first level. An understanding of both levels is important, for although a major portion of forecast analysis will examine data at the abstract level, it must always be remembered that we are dealing with real entities populated by living humans.

Components of Social Systems

In a systems framework, a social system consists of more than the sum of a group of individuals residing in a particular community. It also includes the environment with which they interact and their behavior

which constitutes a response to that environment. **The social system** therefore consists of three interrelated components: **input**, structure, and output. **The** relationship among the three components is illustrated in the **following** model

Figure 1.
Model of a Social System



Input consists of a series of independent variables which **originate** outside the system and constitute what is known as **the environment**. **As** not everything **outside the community has relevance for social behavior**, only those variables which have an effect on community life **comprise** the environment. **There are** three major types of **environmental input** in **social systems**: ecological, **extrasocietal**, and **intrasocietal**. Ecological input consists of such variables as climatic conditions, **availability** of **natural** resources, **local flora and fauna**, and **geographical boundaries** and limitations. **Extrasocietal** variables include the presence and influence of external government agencies such as federal and state agencies and regional corporations, outside business interests involved in local economic activities, and transportation and communication **networks with** other communities. The larger **sociocultural** system, of which the community **is** a part, is also a source of **extrasocietal input**. Usually this takes the form of values, innovations, commodities, and technology imported from other areas of the region, state, or **country**. Thus, a **community such as Unalaska is** affected by federal, state and regional agencies and policies, outside commercial interests such as Japanese processors and buyers, and urban values, customs, and commodities originating in Anchorage, other parts of Alaska, and the United States as a whole.

In addition to the types of input from the environment, it is important to remember that any of these variables, can operate within the system in one of two ways. First, they may serve as a set of demands or pressures to which the community must respond. A natural disaster, crop failures, depletion of subsistence resources, increased tax rates, or the removal

of local factories to other communities by a multinational corporation are **examples** of **external** variables acting as demands or pressures on a **community**. In all these cases, the input creates a strain on **existing** structures to which the community must adapt. Second, independent variables from the environment may serve as a set of resources or supports. Federal grants or state **loans**, ANCSA (Alaska Native **Claims** Settlement Act) land allotments, modern labor-saving conveniences, and outside employment opportunities are examples of **external** variables which provide resources or supports for the community. Certain variables, such as government policies like Limited Entry, can serve as **both** demands as well as resources.

The **second** major component of the social system is the structure. In using the term, structure, **within** the context of the **social system**, we follow the lead of **Firth**:

In studying a field of social relations, whether we are using the **notions** of society, of culture, or of community, we can distinguish their structure, their function, and their organization. These are separable but related processes. All are necessary for the **full** consideration of social process. Briefly, by the structural aspect of social relations we mean the principles on which their form depends; by the functional aspect we mean the way in which they serve given ends; by the organizational aspect we mean the directional activity which maintains their form and serves their ends (1963:28).

Of particular concern to us is the distinction between social structure and social organization. According to **Firth**, "the more one thinks of the structure of a society in abstract terms, as of group relations or of **ideal** patterns, the more necessary it is to think separately of **social** organization in terms of concrete activity. Generally, the idea of organization is that of people getting things done by planned action" (1963:35-36).

In our application of the systems model, structure has two **subcomponents**: values, or norms, and organization, or behavior. Values or norms provide guidelines to behavior; they define not **only** the goals of social interaction but the means to obtaining those goals. In essence, they constitute a set of rules (Bailey 1969:10) about **how** one behaves. These rules include **normative** injunctions (how one **should** behave in a particular circumstance) as well as pragmatic advice (how one must actually behave **if** he or she **is** to obtain a culturally defined goal). **These** values or norms are **arranged** in a hierarchical fashion with some **values** more important than others. **Thus**, in a particular **community**, family responsibility may **be** more important than independence, or cooperation may be more highly valued than competition, depending upon the arrangement of these values in a hierarchy.

This value hierarchy, in **turn**, **serves** as a set of constraints on the second **subcomponent** of structure, **social** behavior, allowing for its regularity and expectability in the form of social organization. Organization refers to the **observed** patterns of behavior. **These** patterns are

based on both the structure of the rules which act as constraints to behavior, and the function or purpose the behavior is designed to accomplish. Thus, the act of reciprocity seems to maintain social solidarity, promote family obligations," and maintain egalitarianism while redistribution can promote the accumulation of wealth, social stratification, and competition. More will be said about structure in our consideration of subsystems.

The third major component of a social system is the output. This represents the response of the community to the perceived environmental input. This response can be deliberate and planned or it may be accidental. It may be direct or indirect. Oftentimes the response is an adaptation to changes in the environment, to make the best of existing circumstances. Not all output is productive however. Increases in the rates of morbidity and mortality, crime, and levels of conflict can all be potentially disruptive to the community. There are two major types of system output or response. The first type consists of activities represented by social indices such as population growth rates, income levels, crime statistics, morbidity and mortality rates, and marriage and divorce rates and the levels of conflict within a community. The second form of response is labelled "feedback." Whether the response is to change for the better or to suffer, it is bound to have an impact on the rest of the system. If enough members of a community, for instance, spend greater amounts of time and energy participating in a commercial activity, and less time and effort on subsistence activities, the structure of the local economy will accordingly be altered making a cash economy a permanent feature of the structure of the local system. Feedback measures the extent to which the systemic response influences the structure of the system as well as the input from the environment.

Relationships Among Components

It is possible to use the analogy of types of variables to characterize the relationships among environment or input, structure, and response or output. The variables originating from the environment are usually characterized as being independent in nature. In an open system, these variables are difficult to control for and are subject to unpredicted changes. The response or output of the system can be likened to a set of dependent variables. The variation in this response constitutes the focus of our study. The structure of a community's social system is comparable to a set of intervening variables. How a particular input generates a specific response from a community depends upon its structure, the combination of value hierarchy and organized behavior. Thus the same set of environmental pressures or resources may produce twodifferent responses from communities, or ethnic groups within a single community, with different structures.

One of the major limits of this analogy, however, lies with the concept of feedback. If a community's response to a certain set of environmental inputs has an impact on the structure of the community's social system, and perhaps even on the environment itself, then the distinction between dependent and independent variables becomes complex. What is a dependent variable in one context may be an independent variable in

another. Relationships of causality are not linear and the systems model takes this into account when examining all three components of the system.

One of the advantages of the *systems* model, moreover, is its ability to tie together concepts of structure, function, and process in the same set of relationships. The **model** does not give undue emphasis to any one of these aspects of **social** systems to the detriment of the others and regards all three as equally important in understanding both **existing social** relations as **well** as projecting the course of these relations in the future.

Subsystems

While it is **easy** to conceptualize a specific community (or social groups within a community) as a social system, for the purposes of analysis, it is perhaps convenient to approach the community from a more discrete level. As noted above, systems consist of a set of interrelated parts. Each of these parts serves a specific purpose or function **which** collectively maintain the system. In a **social** system, these parts may be viewed as subsystems. Any collectivity of individuals organizes its behavior for the performance of specific **tasks**. That behavior labeled economic usually involves the tasks of production, distribution, and consumption of material goods and subsistence items. Political behavior is concerned with the allocation of scarce **values** and the distribution of power. **Religious** behavior is concerned **with** the belief in the supernatural as a means of **explanation** and **expression** of social solidarity. Kinship is concerned with the organization of individuals into groups, defined **consanguineally** or **affinally**, for the purpose of controlling resources through descent, inheritance, or succession and making alliances through marriage.

Each of these **units** of behavior, therefore, can be viewed **within** the context of subsystems and analyzed from the perspective of the **components** of input, structure, and output. For the ethnographic study of **Unalaska**, eight specific subsystems have been selected for examination. The economic subsystem includes that part of the community's social system which is concerned with the production and distribution of commodities or subsistence goods. **This** subsystem can be further divided into commercial and subsistence sectors. **The** commercial sector is further divided into harvesting and processing sectors, entrepreneurial activity, alternative forms of employment, remarket relations and patterns of distribution.

The second subsystem is that of social networks. In **any social group** distinctions among members and the identification of networks of social interaction are based on identifiable criteria. Kinship, for instance, comprises a set of rules organizing individuals in **social** networks. The quantity and quality of kin relations **may serve** to differentiate members of a social group, creating boundaries between segments of the group itself. **Ethnicity**, friendship, neighborhood, place of work and length of residence can also be used as a basis for the formation of distinct networks of social relations. **These** networks often assume the forms of

voluntary associations. Kin and non-kin relations can also serve to link two or more communities or ethnic groups.

The political subsystem is the third major unit of analysis. It includes those aspects and elements of community life concerned with the authoritative allocation of scarce values, distribution of power, and regulation of competition. Local government activities, including local leaders, organizations and decisionmaking processes, mechanisms of social control and external relations are included in this subsystem.

Religion constitutes the fourth major subsystem. It involves those aspects of the community related to belief in the supernatural, providing a sense of order and meaning to otherwise inexplicable events. The integration and cohesiveness of society is another of the major functional consequences of religious activity and belief. Included in this subsystem are such variables as number of participants, facilities, and personnel.

The fifth major subsystem to be examined is education. The major functions of this subsystem are socialization and enculturation. Educational Curricula, grade levels and test scores, teaching personnel, school facilities and their location, funding, and prospects for advancement are all part of this subsystem.

Health Care is the sixth major subsystem to be examined. It comprises all of those aspects of the community's social system designed to prevent illness and disease and promote health and well-being. It includes medical facilities and personnel, health care practices, costs of health care, and the array of expected forms of mortality and morbidity.

Social Services is the seventh subsystem examined. While not possessing the same degree of significance in all social systems as the first six subsystems, social services nevertheless plays an important role in the structure and organization of communities such as Unalaska. Included in this subsystem are facilities for and personnel for the provision of counseling, referral and assistance in helping members of the social system, whether city residents or members of a specific ethnic group, deal with certain social and psychological problems such as alcohol abuse, domestic violence and mental illness.

Recreation is the final subsystem examined. Recreational activities and their organization within a community depend on several factors, including values, resources and social networks. Within rural Alaskan communities, the recreation subsystem includes subsistence activities, home entertainment, visiting and vacations, and community events.

Each of these subsystems will be examined using a systems format. An analysis of the economic subsystem will include those variables from the environment which act as input for economic activities. The values regulating the organized behavior in the commercial and subsistence sectors and the behavior itself constitute the structure, and the levels of income and productivity will serve as the output or response of the community. Such an analysis will enable us to determine which specific

aspects of the environment affect particular aspects of **the** subsystem under investigation as well as see how each of the subsystems are inter-related, serving in turn as inputs to each other.

Social Change

At its most abstract level, one can say that societies are motivated in their behavior **by** the desire to **survive**. Social **systems** are more or **less** constructed with that goal **in** mind. If that goal is either facilitated or threatened by changes **in** the environment, **then** individuals change their behavior and the social **structure undergoes** revision. Whether the environment is in **a** state of **flux** or **is** relatively constant, individuals **within** social systems are motivated to change their behavior for certain positive or negative reasons. A positive motivation for change is the desire to improve the quality of life (to pursue pleasure). A negative motivation for change is the desire to minimize certain forms of psychosocial and physiological stress and **strain** (to avoid pain). Actually, both positive inducements as well as negative avoidances generate certain types of stress to which a community must respond. **Not all** members **will** want to respond, **nor** are **all** members capable of responding. **Innovators**, for instance, are usually characterized as members of a community who are able to recombine existing ideas into new ideas, usually **under** circumstances of ecological stress (Bee 1974:180). **They** possess both the capability and the motivation to **change** their behavior **which** ultimately leads to changes in the **social** system.

A **social** system can be characterized **as** existing in a state of equilibrium or a state of change. Under a state of equilibrium, one of two possibilities may **exist**. Either the **input**, structure, and output **all** remain constant or **the** environment may change but the structure **is** insulated from it. An example of this **second** possibility is the isolation of Japan from changes **in** the larger **world** during **the Tokugawa** period. Under a state of change, one of two possibilities may also **occur**. A change in the input occurs which creates stress on the community's **social** system. If the community's response does not adequately meet its needs **under** these new circumstances, the organized behavior may undergo some revision. A new pattern of organization may **emerge**, even though **the** value hierarchy providing the guidelines or **rules** for **behavior** remains relatively intact. This is known as adaptive change. If the stress is **so severe** that a **major** modification of patterns of behavior **is** demanded, then the values **which regulate** those patterns may also undergo revision and a new value hierarchy emerges. This scenario is viewed as **one** of radical change.

Whether the change **is** adaptive or radical, it is **usually** seen as **originating** in the **environmental** component of the system (Bailey 1969:190). The impetus to change, however, stems not only from the environment, but **also** from the **structure** itself. **Easton** explains that "regardless of the degree of **structural** differentiation and specialization, no system" **is** endowed with so many channels that it has an infinite capacity to **carry** demands" (1965:121). Likewise, Bailey hypothesizes the possibility that **new** resources may become available and the value hierarchy or norms may

not give sufficient guidance for their use (1969:190). In either case, a community cannot foresee all of the potential changes in the environment and develop guidelines and forms of organized behavior to meet and adapt to all contingencies. The more the environment changes, the harder it is for the system to be adaptive.

The extent to which environmental input provides an incentive for change can be observed in the systems output, the community's response to environmental demands or supports. This response, as noted above, can take the form of various social indices such as population size, crime rates, morbidity and mortality rates, or income levels. It can also take the form of conflict between values and between social groups adhering to different sets of values. According to Bailey, the greater the conflict between normative and pragmatic rules, the greater the potential for change in the value hierarchy, the condition for radical change (1969}. Changes in the structure--the value system--, therefore, are the third form of response in which systems change may be observed. Our analysis includes all three forms of response when projecting changes for the community of Unalaska.

Limits of Systems Analysis in Projecting Social Change

Systems analysis, while essentially an etic model, is perceived to be of significant value in accomplishing the tasks of ethnographic description and projection of social change. However, there are also limitations to applying this particular model which should be noted at the outset. First, systems analysis, although perfectly suited for conceptualizing social relations and the patterns of interaction among components of a social system, was initially designed for quantitative applications. According to Cortes, Przeworski, and Sprague (1974), ideally, the social system can be reduced to a series of mathematical operations, and the structure explicated in a series of algebraic equations. This process, however, requires considerable quantitative data. For our study, quantitative data are accessible only through secondary sources and their limited scope prohibits their use in a systems format. We are therefore faced with the problem of employing qualitative data in a model designed originally for quantitative use. While this does not impair the display and analysis of interrelationships among the major components and subsystems of the social system, it does not possess the degree of sophistication and accuracy it would with statistical data. It will also mean that the assigning of weights to the variables to control for the different forces of change and their consequences is only a rough approximation, albeit a better approximation than can be obtained by employing other models of change.

A second major limitation of the model is one which plagues all forms of sociocultural projections. In a controlled experiment or closed system, it is possible to control the independent variables to achieve verifiability, that is to repeat the analysis and achieve the same results. However, this is rarely the case in human societies. It is virtually impossible to predict which changes will occur in the environment, even for a relatively short period of time. Given the complexity of modern society and the rapid rate of social and cultural change, it is

extremely difficult to control for all possible changes which may affect **the** social *systems* of the two communities. We are therefore forced to rely on **existing** trends or changes we know will occur within the projection period and attempt to **leave** as many alternatives open as possible. Although we will not be able to predict the course of change, the model is well suited to making projections based on **existing** information.

Third, as has **been noted** above, the systems model is essentially an etic model and reflects **the** perspective, **biases** and interests of the investigator. While this perspective may approximate the study objectives of the Minerals Management Service, **it** may diverge radically from the perspective, biases and interests of the communities under investigation. In other words, unless the investigator can take into **account his** own culturally constituted set of theoretical and methodological limitations, he can never hope to understand the present patterns of social relations or make projections concerning future changes in the social, cultural, economic, and institutional **life** of the communities. **In** order to secure this understanding and make these projections with any confidence, an insider's perspective is necessary. **This** perspective is sought through the use of an emit model which outlines options and consequences of change as perceived by local community residents.

Options Model

Decisionmaking Theories

The basis for an options model is the assumption that one of the fundamental activities of individuals in any society in the making of decisions or the **exercise** of choice. **Decisionmaking** has been **examined** from several different perspectives and the study has begun to approach an exact science with links to information sciences, psychology, sociology, and anthropology. As has been the case with systems analysis, **decisionmaking** theories have developed a language and perspective of their own for the analysis and description of how options **are** perceived and choices made.

There are at **least** three discrete stages to the exercise of choice. The first stage involves the acquisition of information. Such a task involves use of the human senses, language, and the world view provided **by** a culture. The second stage is the evaluation of alternatives. This evaluation is based on past **experience** as well as the **expectations** and preferences provided by the value hierarchy or set of **norms** of a social system. The third stage is the **exercise** of choice as one of the alternatives is selected and the others are presumably **excluded**, if **only** for the moment.

Each of these tasks can be analyzed in terms of its structure or **guide-**lines. The acquisition of information is usually constrained by both language and world view. **Both** act as constraints as to how the individual perceives and interprets the world (**Sapir** 1921, **Whorf** 1956). The evaluation of alternatives is structured by the value hierarchy of the **decisionmaker** and **presumably** approximates the set of norms adhered to **by**

the social group of which he is a member. Such a decision may be made on the basis of a good or poor understanding of the options available. As Fjellman notes:

On the basis of their own experience, people in the real world define, from cues in the environment, the situations in which they must make a choice between alternative courses of action. They may define the boundaries of the situation well or badly, and with varying degrees of explicitness. In any social setting, there may be a readily available typology for some decision situations. On the other hand, a good deal of human action flows through series of choices made without such articulable awareness. In such cases personal understanding of the decision process often takes the form of rationalization. The boundaries of the situation, and the relevant possible choices, are constructed after the fact (1976:4).

These boundaries, and the "relevant possible choices", are themselves culturally constituted, as Fjellman goes on to note:

An individual's discovery of possible future states, given present conditions, is based on knowledge from and experience in her or his cultural environment. These ultimate end states are ordered according to certain criteria. It is here that we need to speak of culturally based motives (1976:5).

The exercise of choice usually proceeds along the lines of maximization or "satisficing," a term coined by Herbert Simon to refer to a course of action chosen which is "good enough," i.e., that meets a minimal set of requirements.

People normally satisfice rather than maximize. That is, rather than trying to get the best conceivable result, even if he or she could possibly know what that might be, a decision-maker divides the payoffs into two groups: those that would be generally satisfactory and those that are not good enough. An individual will then act so as to get one of the results in the satisfactory group rather than the best possible one (Simon 1976:301).

An options model may also be employed to examine social and cultural change. Geohagan's (1969) model of decisionmaking in the context of post-marital residence provides a precise manner of examining sociocultural change from a quantitative perspective "specifying when a change has taken place in the ideational order as well as in terms of on-the-ground frequency" (Black 1973: 561).

It is apparent that these decisionmaking models examine many of the same components of social life as the etic models. The difference, however, is one of perspective. Using these models we are able to view the social system through the eyes of the participants, or "actors." At the

same time, in conjunction with a systems **model**, we are able to examine the same sets of data from two different perspectives, integrating them within the framework of the subsystem as the **unit** of investigation.

Construction of an Options Model

The construction of this model involves the acquisition of data and the organization of these data relying **on** Native (or **local**) models of organization **as** well as on a few assumptions based **on decisionmaking** theories. It is assumed, for instance, that **options will** be perceived, evaluated, and acted on in a manner **which** displays substantial **regularity** among **all** members of the social group. **These** tasks **will occur in** accordance with a set of rules established by the constraints of **world** view, value hierarchy, and fundamental processes such as "**satisficing**".

To **employ** the options model, the first objective is to observe the making of decisions. **This can** be done in a **natural** setting, or under artificially constructed circumstances. In the **first** instance, decisions **which** are expressed publicly, such as those articulated in city council or Native corporation meetings, **social** gatherings or other public forums, are those constructed by the **sociocultural** context itself. In the second instance, the investigator may create hypothetical **situations** and ask the informant to make decisions based on **existing information**. **This** second procedure is of limited use, **however**, and is employed primarily for the construction of **taxonomies**. The first instance provides a more realistic set of data. In this context, the investigator must determine what is perceived by community members to be the most important aspects of their life and what aspects of their environment are most salient. From this initial information, community members are asked which alternatives are viewed as **viable** in particular situations and which are viewed as most desirable. The investigator is then **able** to observe social behavior to determine which alternative **is** selected and how the choice corresponds with the evaluation of options or **alternatives**.

The use of an options model, supplementing the **systems analysis format**, provides us with two types of data. First, by viewing individual perceptions of available options under specified parameters, baseline information on behavior and values of various groups within a social system can be **derived**. 'Ibis aids in categorizing members of a community along different dimensions of behavior and beliefs. Second, **by** obtaining individual perceptions on the available options under certain scenarios such as **groundfish** industry or **OCS** development, the refining of forecast **projections** can be made to **allow** for an emit perspective, one ultimately responsible for responding to environmental change.

Finally, a word should **be** said about the limitations of such options or **decisionmaking** theories. **Most** of the problem here arises from confusion over normative as opposed to descriptive **decisionmaking** theory. **Normative decisionmaking** theory concerns the way people in a social system **should** make choices **in** particular situations (Fjellman 1976:6). **Descriptive decisionmaking** theory concerns the **ways** in which people **actually do** choose one thing **or**act over another, regardless of how they

choose. We will concentrate on the descriptive Perspective. As Fjellman notes:

Descriptive approaches are the result of the curious anomaly that people in experimental situations, not to mention real life, often make choices that normative theory, given its particular assumptions, doesn't predict (1976:5).

UNALASKA

Standards

In the Unalaska study, the existing ethnographic data on the community, much of which was collected by the primary investigator of this project, provide many of the standards on which the field research and initial data analysis will be based. These standards pertain to certain matters of fact relating to environmental influences, community structure, and behavior. Our discussion of these standards may be divided into categories of population, economy, sociopolitical organization, education, and social indices.

Population

Two important facts concerning the population of Unalaska provide the basis for a discussion of the present state of the community. The first fact is that the community has witnessed a dramatic rise in population over the last five years. The second fact is that the community is not a homogeneous one but one whose members are distinguished from one another by different criteria.

Prior to World War II, the community was small, increasing to an estimated 300 residents by 1939. With the forced evacuation of native residents from the community in 1943, the population of permanent residents declined while the number of military personnel increased to an estimated 60,000. After the war, the population once again began to grow but at a very slow rate. It was not until 1977 that the population saw any significant increase. In 1976, the estimated number of permanent residents was 500. By 1977, the number of permanent residents had climbed to 615 while the seasonal residents numbered an estimated 1,256 individuals (including outside fishermen and processor employees).

With the increase in population the community has become much more heterogeneous in its composition. Two major criteria for distinguishing community members are ethnicity and residence.

In addition to the changes in the social and cultural life, the proportion of Aleut and non-Aleut residents also was disrupted by

World War II. **After** the war, 60 percent of the community was non-Native. The pattern of a decreasing percentage of **Aleuts** continued at a constant pace until 1976 when the large-scale influx of **non-Aleuts** created a serious imbalance in the **ethnic** composition of the community. Native Alaskans today constitute only 15 percent of the population of **Unalaska**, numbering only about 220 individuals.

With this large population increase, a second major distinction has emerged, that of permanent and seasonal residents. If we define permanent residents as those having **lived** in the community for 7 years or more, then **only** 400 residents would **fall** into this **category**. **The remaining** residents **fall** into a seasonal or transient category. This includes fishermen **who come** to the area only **during** the fishing season, part-time fishermen *working* or seeking work as **crewman** on these vessels, and processor employees who reside in the community during the primary fishing season. **The vast majority** of these seasonal employees live in housing owned by the **processors** and maintain lifestyles independent of the permanent and semi-permanent residents.

The two **groups** of permanent and seasonal residents are **distinguished** by criteria in addition to that of residence. These two populations are vastly different not only in numbers but in ethnic, cultural, and racial characteristics, and economic objectives. Adaptive strategies already **well-** developed by either group are expected to play a significant role in determining how changes incident to groundfish and oil-related development will be met **by** the different segments of this population.

Economy

Since the mid-1960's **Unalaska** has been the focus of interest of an expanding crab fishery, **largely** due to the increasing national and **international** market for crab. **The** productivity of this fishery, however, **has** been subject to wide fluctuations. The highly productive years, nevertheless, have provided great incentive for **expansion** of **the** economic sector as well as immigration of seasonal residents.

With the increasing productivity of the crab industry, several floating and shore-based processors have been drawn to the area and operate in **Unalaska** during the primary fishing season. By 1973, three shore-based processors had been established in **Unalaska**. In 1982 there were 7 processors located **in Unalaska**. These processors constitute the dominant element of the commercial fishing industry in **Unalaska**.

The crab fishery, much more so than the salmon fishery, **is** heavily capital intensive. The standard **100+** foot fishing vessel and gear range between \$4,000,000 and \$6,000,000 each. Many of these vessels were **purchased** after the **highly successful 1979** season.

While the productivity of the crab fishery seemed as the major incentive for the economic growth of the 1970's, there **are** several

indications that this productivity may **not** continue into the future. First, average per pot harvests have declined from 35 crabs per pot in 1977 to 25 in 1978 to 15 in 1979, to 10, in 1980, and to **less than 2** in 1981. The 1981 harvest was the **first unmitigated** failure in **this fishery for the last decade**. **Second**, state fish and game **officials** in Kodiak, **Sand Point** and Anchorage **all** have suggested **that the excessive harvests** from 1978 to 1980 had significantly affected the reproductive ability of the resource. **They** also note, however, that species on **which** excessive effort was **not** exerted also have shown a marked decline in **abundance**. Third, even if current **levels** of productivity increase, the **financial** incentive does not appear to be **large enough** to motivate **many of** the processors **to invest** more of their time and effort **in the area**.

The economic sector is also influenced by other factors as **well**. One such factor is the **current** state of the local airport. The **Unalaska** Airport is currently **unable** to handle large jet-engine **aircraft** and suffers from poor visibility and location and is **subject** to frequent and unexpected wind sheers. A planned 1700 foot extension and concrete **pavement of the** present airstrip have been approved but depends on the availability of **state** revenue to finance the project. With these improvements, the airstrip **should** be able to accommodate modern jet-engine transport and passenger aircraft.

Energy costs are also a **major factor in the economic** sector. **Fuel costs** have risen over 100% in the last four years. The community is heavily dependent on **oil** for **its fuel**, although geothermal energy is viewed as having great promise for alleviating the high **fuel costs** for the community.

Much of the current development in the **economic** sector of **Unalaska**, apart from the crab fishery and proposed expansion of **groundfish** activities, is **related to the prospect of OCS** development in the area. **Oil** exploration and development vessels have frequented the area for the past few years and have used **Unalaska** as a **port of** call. The **local** perception of oil-related interest and operations out of **Unalaska** has already **affected** zoning, and economic and social planning **in** the community. How many outsiders will be expected to use **local** facilities, and whether new facilities should be constructed to house new residents are considerations which currently **motivate** economic development and planning.

Sociopolitical organization

Government

The responsibility for local government is assumed by two different organizations. **Unalaska** was incorporated as a city in 1942 and is administrated by a **city council**. The **city government** includes a **city manager** and city clerk, a Zoning Commission, and city **employees** such as policemen, firemen, and health aides.

In addition to the city government, the local **Native** corporation, the **Ounalashka Corporation**, constitutes the second major political organization of the community. **Organized** under a charter established under the Alaska **Native** Claims Settlement Act in 1971, the **Ounalashka Corporation** is responsible for distributing land entitled to all **native** residents and to promoting their interests through certain economic and political activities. Examples of these activities include projects such as the renovation and leasing of duplex housing, managing a Chevron station in town, and opening a **car rental** service. **Plans** are underway to construct 35 modular homes and to build a hotel in the area.

Interest Groups

In essence, each of the major social groups in the community, Native and **non-Native**, seasonal and permanent residents, constitute an existing or a potential interest group in the political arena of **Unalaska**. Each of these groups have particular needs, some of which overlap with those of the other groups, but others which are **unique** to each group. It is this **latter** category of needs which lead to social and political conflict in the community.

Although small in number, one of the more visible interest groups in the **political** organization of **Unalaska** consists of the **Aleut** residents. **This** group has **several** different needs addressed by the two major political organizations. One of these needs is for **suitable** housing. **Most** of the Native population of **Unalaska** resides in the HUD housing area to the southeast of the village. There are a few wealthy individuals among the Native population and several families who can be classified a poor, but most are employed and are not viewed as underprivileged.

The transient segment of the community's population represents an interest group whose needs **must** be reckoned with but who possess very **little** political power themselves. Seasonal residents do not form a political constituency **within** the community. In fact, **most** have never made the effort to establish "official" residence and thus are unable to vote in local elections. This is very important politically because there are **large** numbers of seasonal residents and their needs are more immediate than those of other segments of the community's **population**. **They live in** substandard housing without access to electricity, sewer systems, **running** water or other facilities.

The issue of development has done much to politicize the local population. Some of the shareholders of the **Ounalashka Corporation**, for instance, see its role as **excessively prodevelopment**, other see its role as retarding such development. Some see change as **occurring** at too rapid a pace while others advocate even more intensive development.

ANCSA has resulted in an exaggeration of preexisting **social schisms** between **Aleuts** and **non-Aleuts**. **While** the hostility of whites toward **Aleuts** as individuals appears minimal, there is a **clear**

sense of general hostility among non-Aleuts toward ANCSA. Aleuts are viewed by non-Aleuts as recipients of discriminatory legislation and the Aleuts have responded by taking a very defensive posture on the issue. The general impression is that the non-Natives see the Ounalashka Corporation as obstructing their access to land. Land is difficult and expensive to obtain. Reconditioned quarters built during World War II rent for as much as \$600 a month and remote, unimproved cabanas are leased for anywhere between \$50 and \$175 a month. Families wishing to move out of these residences are unable to do so because of the difficulty in obtaining land or buying homes. The use of mobile homes is widespread and sewer, water, and electricity are standard amenities only within the immediate city limits.

Representatives of both the city government and the Ounalashka Corporation agree that the current social and political environment is one of increasing confrontation between the two government structures and Objectives. The city leaders see the role of Unalaska/Dutch Harbor in future crab and ground-fisheries and oil-related development to be critical to the community's future. To successfully meet a perceived imminent demand for transportation and service facilities several objectives must be met. First, an extension of the existing runway is essential to accommodate larger aircraft. Second, Native Corporation-controlled land is in short supply and the native leadership of the corporation, as well as its non-Native executives, do not see their corporate interests as coinciding with the interests of the city. While the city sees available land at low cost to be critical to any local development, the corporation has a vested interest in keeping land in short supply, thereby increasing its value. As property management is viewed by the Ounalashka Corporation as the key to its future, this policy has its obvious advantages.

The role of Oonalasha Corporation in the development of Unalaska has recently become very significant. This corporation holds title to more than 115,000 acres in and around Unalaska and Dutch Harbor. Prior to 1977, this corporation had been occupied more with legal squabbles and minor organizational difficulties than with community development. Since that time, however, they have been very active in attempting to meet the constitutional mandate under ANCSA to serve the interests of their shareholders. One of the most difficult assessments required before this could be accomplished, however, was to determine how best to meet their obligation to show a profit. It is here that the interests of the city management and that of the corporate leadership differ most radically.

Social Indites

The final category of the standards of the community of Unalaska is comprised with a variety of indicators which measure the health and well-being of the community. Two of the primary indicators often applied for this purpose are crime and health. Both crime rates and various indices of morbidity have increased dramatically in the last five years.

One of the most remarkable aspects of the increase in crime rates has been the character and incidence of violence crimes which differs significantly from the national average. More rapes occurred per capita in Unalaska during 1981 than any other community in the United States. There were two felonies committed in 1977 but by 1980 this figure had risen to 52, also one of the highest rates in the nation.

With the rapid growth in transient and semi-transient personnel associated with the crab processing sector there has been a significant increase in demand for medical services. The mere increase in the number of fishermen operating in the area has led to a dramatic surge in the number of physical injuries treated in the Unalaska clinic. Treatment for loss of fingers, broken arms and legs, major wounds, and associated secondary infection have increased several-fold since 1977. The influx of highly transient personnel has also resulted in a high incidence of communicable diseases. This was found to be particularly common among recent Southeast Asian refugees. In a recent study of 1,000 processor employees residing in the community, over one-third were found to have evidence of tuberculosis.

Drug and substance abuse are intimately connected with the recent period of rapid growth. Alcohol abuse is perceived of and treated as a problem distinct and separate from drug abuse. Alcohol-related problems have existed here for many years, while drug abuse is a relatively recent issue, dating from the beginning of the influx of transient processor employees. The number of alcohol-related arrests has risen nearly 400% while the perception of the problem as a "community" problem has become generally accepted.

Assumptions

The assumptions governing the study of the social and cultural patterns of community life in Unalaska are primarily in the nature of forces which comprise the current or proposed environment of the community's social system. Included in these assumptions are certain trends which pertain to the policies and activities of external government agencies and organizations, the investment strategies and activities of outside commercial interests, and the prospect of changes in the ecological component of the community's environment.

First we are to accept that many of the projections of economic growth associated with groundfish industry development included in Technical Report #59 do in fact occur. However, we are also assuming that such development will not occur in the manner proscribed in this report for several reasons. We do not believe the suggested scenario of domestic replacement of foreign fleets now harvesting the resource. We question, for instance, the ability of domestic processors to make the incremental inroads to the international market within the specified time period necessary to develop an economically successful domestic fishery. Moreover, we do not expect the assumption that over 50% of the future bottom-fish

processing capacity will be shore-based.

Second, it is assumed that the community will not benefit from OCS development unless certain conditions are met. One is the improvement of the Unalaska Airport to accommodate modern transport aircraft. Another is the availability of land for potential commercial and air-related enterprises to purchase and develop. Much of this land is currently controlled by the Unalashka Corporation and is unavailable for such investment. Another condition is the improvement of existing housing and community services to handle an increase in population.

Fourth, we are assuming that the state funds on which the community is dependent for a large percentage of its operating budget will begin to level off within the next ten years and eventually decline before the end of the century. As the community is dependent upon state revenues, such a decline is bound to have an effect on the Community's social system. Exactly what this effect will be, however, is the subject of the study.

With respect to an analysis of the community's social structure and value hierarchy, the following assumptions may be made.

First, it was noted in the Standards section that several different interests have resulted in conflict within the political arena over the issue of development. These lines of cleavage may be expected to cross-cut other categories but will help elucidate how the community is structured in relation to recent change and on the basis of what criteria these groups determine negative or positive consequences of OCS development.

Second, it is assumed that changes in economic activities are bound to have ramifications in other spheres of social and cultural life. One of these spheres is that of ethnic identity. Native identity has already been altered by recent events and there is fear among many of the Natives living in Unalaska that Aleut culture has disappeared entirely.

Third, the impression that there exists a dual class of citizens, of non-Aleuts and Aleuts, in this community or that social schisms based on these differences are of major consideration among either group must be reappraised. Economic activity is assumed to affect socioeconomic status and avenues for social mobility, either creating new avenues or eliminating existing options.

Fourth, it is assumed that some aspects of the social structure are more important than others in projecting the overall pattern of change in the community's social system. In Unalaska, it is assumed that the social and political subsystems will be particularly important in characterizing the course of change in the community as a whole.

Finally, with respect to the community's response to social and cultural change, the following assumption is made. Social indices

such as **crime rates**, morbidity **and** mortality rates, **and family and marital** breakdown are indicators of system malfunction **and inducements** to **systemic** change. **The** higher the level of crime or disease, for instance, the greater awareness on **the** part of the **community** that something **is** wrong and that things **should** be changed.

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