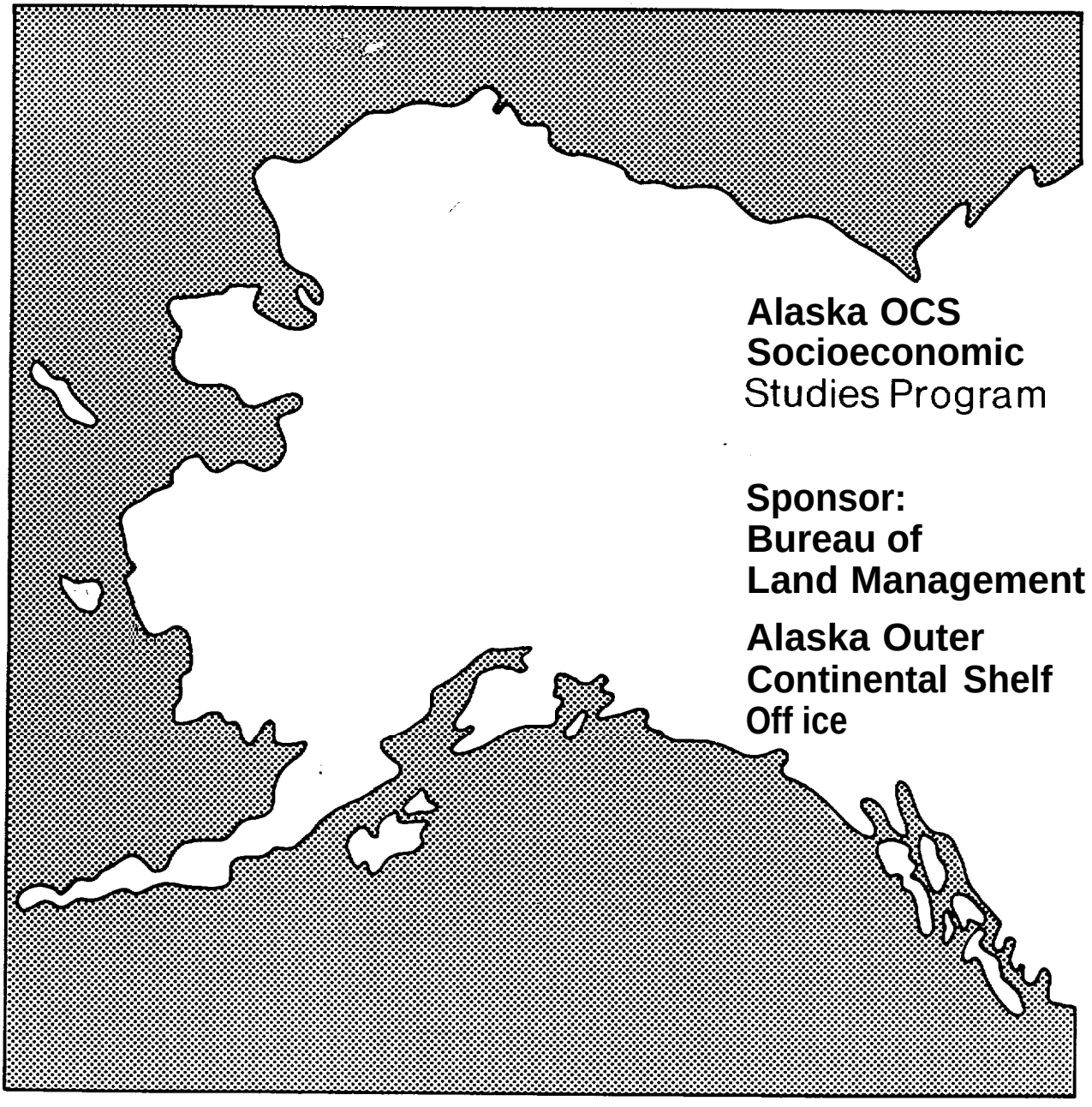
Technical Report Number 39



Alaska OCS Socioeconomic Studies Program

Sponsor: Bureau of Land Management

Alaska Outer Continental Shelf Office

Western Gulf of Alaska Petroleum Development Scenarios Kodiak Non-Native **Sociocultural** Impacts

The United States Department of the Interior was designated by the Outer Continental Shelf (OCS) Lands Act of 1953 to carry out the majority of the Act's provisions for administering the mineral leasing and development of offshore areas of the United States under federal jurisdiction. Within the Department, the Bureau of Land Management (BLM) has the responsibility to meet requirements of the National Environmental Policy Act of 1969 (NEPA) as well as other legislation and regulations dealing with the effects of offshore development. In Alaska, unique cultural differences and climatic conditions create a need for developing additional socioeconomic and environmental information to improve OCS decision making at all governmental levels. In fulfillment of its federal responsibilities and with an awareness of these additional information needs, the BLM has initiated several investigative programs, one of which is the Alaska OCS Socioeconomic Studies Program (SESP).

The Alaska OCS Socioeconomic Studies Program is a multi-year research effort which attempts to predict and evaluate the effects of Alaska OCS Petroleum Development upon the physical, social, and economic environments within the state. The overall methodology is divided into three broad research components. The first component identifies an alternative set of assumptions regarding the location, the nature, and the timing of future petroleum events and related activities. In this component, the program takes into account the particular needs of the petroleum industry and projects the human, technological, economic, and environmental offshore and onshore development requirements of the regional petroleum industry.

The second component focuses on data gathering that identifies those quantifiable and qualifiable facts by which OCS-induced changes can be assessed. The critical community and regional components are identified and evaluated. Current endogenous and exogenous sources of change and functional organization among different sectors of community and regional life are analyzed. Susceptible community relationships, values, activities, and processes also are included.

The third research component focuses on an evaluation of the changes that could occur due to the potential oil and gas development. Impact evaluation concentrates on an analysis of the impacts at the statewide, regional, and local level.

In general, program products are sequentially arranged in accordance with BLM's proposed OCS lease sale schedule, so that information is timely to decisionmaking. Reports are available through the National Technical Information Service, and the BLM has a limited number of copies available through the Alaska OCS Office. Inquiries for information should be directed to: Program Coordinator (COAR), Socioeconomic Studies Program, Alaska OCS Office, P. O. Box 1159, Anchorage, Alaska 99510.

Technical Report No. 39 Contract No. AA550-CT6-61

ALASKA OCS SOCIOECONOMIC STUDIES PROGRAM

WESTERN GULF OF ALASKA

PETROLEUM DEVELOPMENT SCENARIOS

KODIAK NON-NATIVE SOCIOCULTURAL IMPACTS

Prepared by

Jim Payne

Prepared for

BUREAU OF LAND MANAGEMENT

ALASKA OUTER CONTINENTAL SHELF OFFICE

January 1980

NOTICE

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Alaska OCS Socioeconomic Studies Program
Western Gulf of Alaska
Petroleum Development Scenarios
Kodiak Non-Native Sociocultural Impacts

Prepared by
Jim Payne, for Peat, Marwick, Mitchell & Co.

January 1980

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This report is dedicated to the people of Kodiak City. It is hoped this report will assist them in preparing for future events that will affect their island community and maritime way of life. I was warmly accepted by the community and appreciated the opportunity to share in their life.

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I. INTRODUCTION

CONTEXT OF THE STUDY

This report presents projections of potential petroleum development related impacts to the sociocultural system of Kodiak City, Alaska (To avoid confusion over the term "Kodiak", the island, borough, and city entities will be referred to as Kodiak Island, Kodiak Borough, and Kodiak City, throughout this report). It is one of several similar studies being conducted for the Outer Continental Shelf (OCS) Socio-economic Studies Program under the auspices of the Bureau of Land Management.

The OCS Socioeconomic Studies Program is a multiyear project, whose major goal is to examine potential impacts and changes that may occur at the statewide, regional, and local community levels as the result of petroleum development in the continental shelf areas of Alaska. Besides analysis of sociocultural systems, other investigators are examining potential impact areas such as transportation systems, socioeconomic systems, the fishing industry and comparing the results of OCS development in other countries. These studies are temporarily sequenced to provide an integration of products. Thus, the findings of the fishing industry and transportation studies serve as assumptions for the socioeconomic study. The socioeconomic findings in turn serve as assumptions for the sociocultural studies.

This specific study is mandated to fulfill the following objectives:

- To analyze potential impacts and changes in the social systems of Kodiak resulting from projected OCS petroleum development events.

- To develop the necessary understanding of the social systems in Kodiak including their social organization, content, and current concerns.

- To develop an understanding of the social system linkages between Kodiak and higher levels of government.

The information from this report will be used by the Bureau of Land Management in preparing environmental impact statements (EIS) and in the decision-making process as it relates to lease sale #46 scheduled for October 1980. The information is presented in three distinct subsections. The first section serves as a baseline, attempting to describe the current state of Kodiak's sociocultural system. The second section projects where this system will be in the year 2000 without OCS development. The final section builds upon the non-OCS projection by adding effects from petroleum development at three differing levels. These differing levels are called scenarios. Each succeeding scenario assumes an increased amount of petroleum is discovered and projects an increased concomitant level of developmental activity.

STUDY LIMITATIONS

This report describes the non-Native sociocultural system of Kodiak City. Analysis of the Kodiak Native sociocultural system is being conducted by another investigator and presented in a separate report

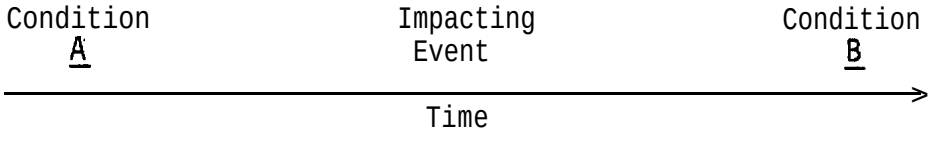
(Davis 1979). The two reports are distinct products but should be read together for a more comprehensive understanding of petroleum impacts to the entire islandof Kodiak.

Because of readjustments within the overall project, the time frame for research on Kodiak City was constricted. This time limit restricted the use of certain data gathering techniques such as survey questionnaires and formal structured interviews.

II. METHODOLOGY

THEORETICAL ORIENTATION

Examination of change is the major factor in social impact assessment. The assumption is that when an external factor impacts a social system, that social system will change. The term "external factor" is stressed to differentiate from normal change inherent within the system. The emphasis is on the effects of an induced factor (or factors). In this respect, the paradigm is similar to an experimental research model. In this model, a sociocultural system is in condition A, an event impacts the system and changes are measured in condition B. The change between condition A and condition B reveals the effect of the impacting event.



Because of Anthropology's historic emphasis on studying traditional societies, there have been many opportunities to examine the effects on these societies of their contact with more modern societies. Referring back to the research paradigm, the "impact event" is the contact situation and the effects are the changes on the traditional society. The nature of this impact varies depending on numerous factors. Even a single element may have a profound effect. The introduction of a steel ax into a culture in which stone axes were technologically, socially, and symbolically embedded, demonstratively

affected the social relations of the culture (Sharp 1968).

The main theoretical construct of Anthropology is the concept of culture. Some assumptions about culture are that it is a distinctive and universal attribute of humans and it is their major adaptive mechanism. Culture is integrative in nature, where different aspects (analytical constructs) of culture are seen as interdependent. Examples of these are: religion, beliefs, kinship, subsistence techniques, technology, artistic expression, etc. Culture has the capacity to change, with certain areas more susceptible to change than others. Because parts of culture tend to be integrated, change in one part may produce an alteration within the system, producing varying degrees of change in other areas.

According to one school of thought in Anthropology, these areas are weighted. Alterations in one area will have a more profound effect on the system than an alteration would have in another area. The technological and economic areas are posited as being most significant in producing culture change. As in the stone/steel ax example above, changes in this core level produced changes, particularly in the social sector (White 1949; Steward 1955; Harris 1968).

Given this general theoretical orientation, certain specifics must be stated in relation to the sociocultural impacts on Kodiak of energy resource development.

Anthropological impact assessment and culture change research has tended to examine the effects of a modern society on a traditional one (Bodley 1975). The contrast between the two cultures tends to highlight differences between them and reveal where and how impact will occur. But, if the theory and method of anthropological impact assessment is based on clearly defined differences between two cultures, then how can this ' method work when analyzing two groups that share a common, complex, modern culture? It cannot be doubted that the culture of Barrow, Alaska, is substantially different from industrialized, modern, state-based (as opposed to kinship-based), "Euro-Ameri an" culture, which is introducing energy development to the North Slope. But what of Kodiak? The assumptions of this researcher in answering this question are: 1) it can be assumed that the theory and methods of Anthropological impact assessment can be applied to complex modernized societies, and 2) it can be assumed that the culture of Kodiak possesses a distinctiveness of its own to stand as a sub-culture of normative, industrialized "Euro-American" culture.

Support for these assumptions comes from a changing orientation within anthropology that has developed within recent years. The study of complex societies has been the focus of increasing attention (Dixon 1978). This is best demonstrated by the burgeoning research in the relatively new field of Urban Anthropology which concentrates on the study of the complex urban areas of societies.

A second theoretical consideration specific to the Kodiak work is the difference between post-impact studies of social change and this exercise which projects changes in a sociocultural system based on hypothetical impacts. Post-impact studies examine what happened to a system because of a specific impact that has already occurred. They look at a sociocultural system after the fact. Theoretically, these studies can be used to avoid mistakes with similar developments in the future. A major research task in post-impact studies is acquiring data that adequately and accurately describes the sociocultural system prior to changes resulting from the impact. The researcher must project backwards, including the use of historical and archaeological materials.

Projective-impact studies on the other hand must ask not only what happened, but also, what will happen? This change in tense elongates the time frame. The researcher must ask what happened of historical data to determine if there is a pattern in the system's way of responding to impacts in the past. The present is examined to gain a senese of contemporary concerns, organization, problems and developments that will extend in the future. From an understanding of a system's past and present, a projected future condition can be made. An assumption and analysis of three time frames must be made by a researcher doing this projective-impact type of work. This view will shape and determine data selection and method of analysis.

The final theoretical consideration specific to the Kodiak research is the requirementof parsimony. As Davis (1979:17) points out, "To

address the complete spectrum of human events on all of Kodiak Island for the whole of time is a desirable--but impossible--ideal. " The project guidelines and recommendations of the project staff reinforce a selective analytical orientation. This selection is further reinforced by the time constraints of the project. This proviso demands a narrow and specific analytical focus and structures the theoretical and methodological orientation.

RESEARCH METHODOLOGY

The research mandate, limited time frame and theoretical orientation provided constraints and set parameters for research. As such, the following research approaches served as the major methods for obtaining data.

Document Research

Reviewing relevant literature formed an extensive part of the initial research and was continued throughout the project. The Socioeconomic Studies Program produced a number of important documents providing both background information and assumptions for this paper. A second area of literature resources were the numerous documents and books available from the many libraries and research institutes in the Anchorage area. These were extremely useful for theoretical and historical analysis. In Kodiak itself two sources were used. The first of these were the three local newspapers: The Kodiak Daily Mirror, the Kadiak Times, and the Kodiak

Fish Wrapper and Litter Box Liner. The second source in Kodiak were the numerous local governmental agencies which provided pertinent data.

Field Work

Two on-site field visits were conducted i n Kodiak. The first was to gain baseline data. The second was to check research findings and to gather more data. Besides gathering documentary information, numerous informal discussions with local residents were held. This latter approach is a hallmark of anthropo logical field research a d proved extremely useful. An effort was made to gain the views of a w de range of community members besides key inst tutiona representatives and acknowledged spokesmen and/or authorities.

The periods of field work did not allow for extensive observation, or any participant observation. However, this investigator had spent the previous two summers studying fishing systems in Cordova, another Alaskan coastal fishing community. That research included participant observation as well as participant participation. Those experiences helped to provide an understanding of some of the basics of fishing and fishing communities as they relate to Kodiak and this study.

Impact Categories

An important delimiting and structuring procedure in this research was the development of impact categories. These categories serve as hypothetical constructs with which to measure impacts and/or changes over time within the sociocultural system. The nature, number and contents

of these categories was determined by deductively examining categories used in related studies (Worl Associates, 1978) and inductively comparing and adjusting their fit with the field work experience.

The impact categories reflect a mix of quantified and non-quantified measures. Contrasted with the physical sciences, the social sciences (and particularly anthropology) are often criticized for their lack of hard, quantifiable data. Economics has produced economic indicators to measure the economic health of the nation. Planners and some social scientists have developed and used social indicators in an effort at quantifying the social realm. A strict adherence to quantified data may overlook softer, non-quantified data which can assist in the overall analysis. Addressing this point in reference to the impact of reservoir construction, Johnson and Burdge (quoted in Wright 1975: 23) note:

> Our studies show that in many cases reservoirs lead to the destruction of community life . ..Just what have these people lost? They have newer houses than before, a little land, their same jobs, by in large, and most live in the same community. The intangibles, the immeasurable, that is, the fragile webs of community, social, and self-identity have been disrupted, and for older persons this disruption can be-fatal.

It is these “intangibles” and "immeasurables" which may be missed in abiding by a strictly quantified approach.

III. KODIAK: CONTEMPORARY SITUATION

INTRODUCTION

This section provides an overview of the location, environmental conditions, and population characteristics of Kodiak City as a necessary step in understanding Kodiak's sociocultural system. This information is set as a preface for the rest of the paper because a major assumption is that, while environmental factors (physical and natural) and population characteristics are not the only determinant of Kodiak's sociocultural system, they are systematically interrelated with it.

The sociocultural system is responsive to certain features of the environment and in turn can bring about significant modifications in certain aspects of the environment. For example, the salmon's life cycle regulates occupational activities and attendant social relations. Various marine species, like the sea otter, were hunted almost to extinction in Kodiak, only to be brought back as a viable population. Both the sanction for overhunting and the subsequent management practices were functions of sociocultural systems; though linked to economic interests.

Kodiak, as an island located in the North Pacific, is subject to certain climatic patterns. These patterns are of paramount importance for fishermen since their lives and livelihoods may depend on them. Kodiak's location, because of its isolation, affects its sociocultural systems.

COMMUNITY CONTEXT

Physical Location and Setting

The island of Kodiak is located on the western edge of the Gulf of Alaska (Figure 1). The island is dominated by the rugged Kodiak Mountain chain which is actually a continuation of the mountains of the Kenai Peninsula.

Kodiak Island is about ?00 miles long, up to 60 miles wide and has a land area of over 3,500 square miles. It is part of the Kodiak Island group which collectively has a land area of about 5,000 square miles. The next largest island is Afognak (to the northeast) which has an area of approximately 700 square miles (Alaska Geographic 1977:8). Kodiak Island is aligned in a northeast-southwest direction and is separated from the Alaska Peninsula by the Shelikof Strait (Figure 2). The land surface is characteristically steep, rugged and extremely glaciated. The mountains rise from 2,000 to 4,000 feet in elevation. The coastline is very irregular with numerous fjords and islands. The island is drained by short, swift streams and there are several lakes in the southwestern end of the island.

Climatic Conditions

Kodiak Island falls into a Maritime climatic zone. This climatic zone is dominated by its relation to the water. The warm Japanese current strikes the colder Alaskan continent and provides moisture-laden air. This warm current creates a warmer environment for the coastal regions than is present for the interior of Alaska <Alaska Geographic 1977:36). Kodiak City's temperature ranges, on the average, between 45 degrees

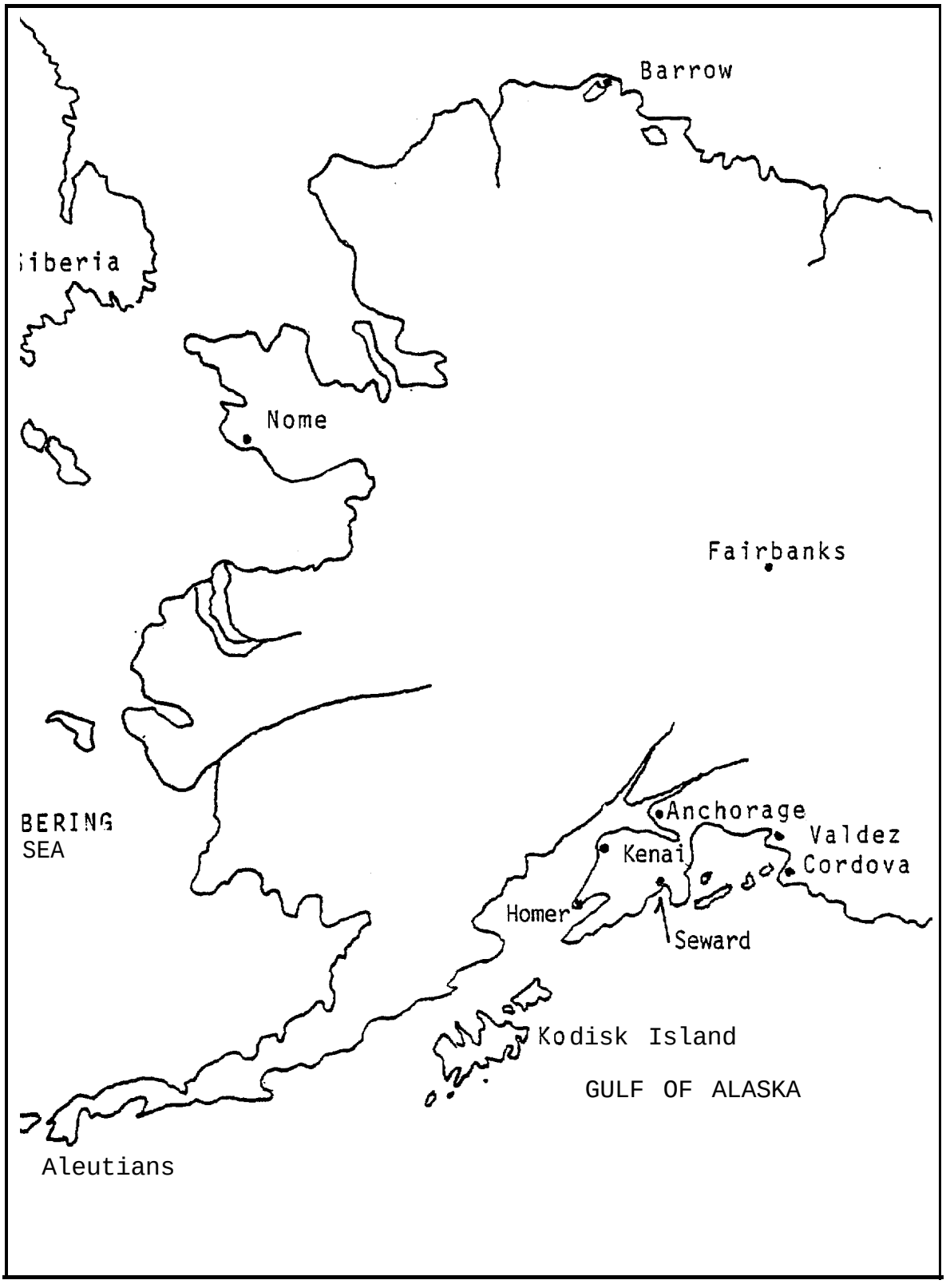


Fig. 1. Map showing location of Kodiak Island.

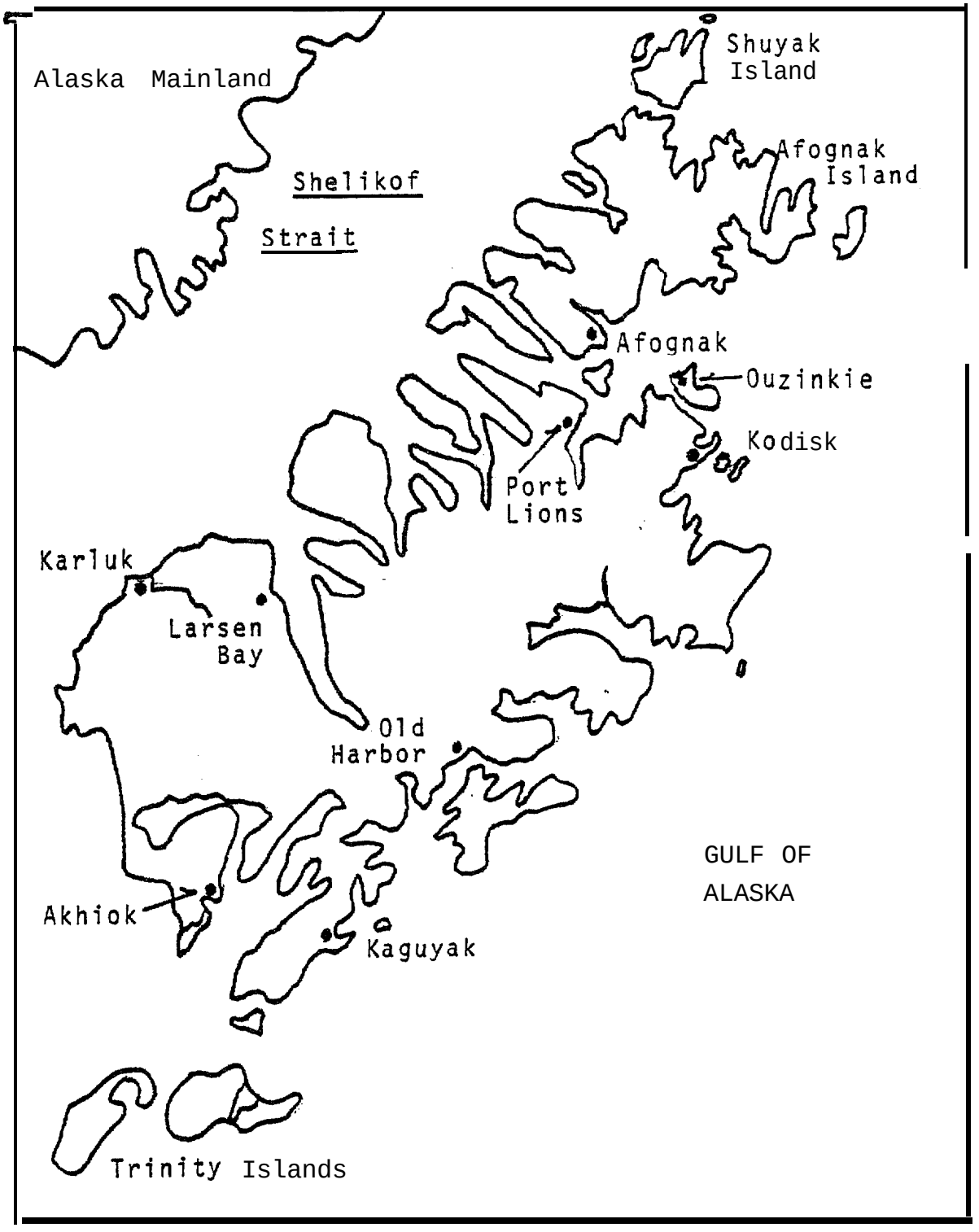


Fig. 2. Map of Kodiak, Alaska.

to 60 degrees during the summer and between 26 degrees to 45 degrees during the winter. Extremes range to minus 5 during the winter and 86 degrees during the summer. There is, on the average, 54 inches of precipitation during the year which includes 75 inches of snow. Prevailing winds from the northwest average 8.7 knots with extremes of 99 knots, especially from the southwest (Alaska Office of the Governor et al 1974:11). At times, sustained winds of 100 knots may occur in the ocean due to less resistance over the water (U.S. Dept. of Interior n.d.:15).

Icing is a complex climatic phenomena which results in ice forming on a ship to the point where the accumulated weight can sink the vessel. It is caused by freezing sea spray which occurs when the air is below the freezing temperature of the sea water. Fishing boats with extensive rigging are susceptible to this dangerous condition (U.S. Dept. of Interior n.d.:17).

An average of seventy percent of Kodiak's days are obscured by clouds throughout the year. The island is completely overcast for less than half of this time. Besides clouds, Kodiak has heavy and persistent fog from June through September. Also, there is rain, drizzle, freezing rain, snow, sleet, smoke and blowing snow which all hinder visibility (U.S. Dept. of Interior n.d.:17).

Vegetation and Wildlife

It is not the task of this report to inventory the vegetation and wildlife of Kodiak. However, in order to give the reader familiarity with the environmental situation, some of the more prominent species

are listed. Marine species will be described in later sections of the report.

Kodiak's vegetation is a combination of coastal Western Hemlock-Sitka Spruce forest, high brush, Alpine Tundra and barren ground and a few areas of moist and wet Tundra (Alaska Office of the Governor et al 1974:126). For a more detailed description of the nature of each of these vegetation zones, see Office of the Governor et al 1974: 125, 127-128, 130-131.

Most famous of Kodiak's animals is the Kodiak grizzly bear. There are an estimated 2,000 on the island. Other major animals of importance include the Sitka black-tailed deer, Roosevelt elk (on Afognak and Raspberry Islands only), mountain goats and feral reindeer. All of these were transplanted to the Kodiak Islands and appear to be thriving.

Most noticeable of the island's birds is the Bald Eagle. Though fairly common around the City of Kodiak, they still draw attention from the local populace, particularly when they are massed for feeding (personal observation). Numerous other birds inhabit Kodiak. Besides being a breeding and wintering habitat, the Shelikof Strait is used as a migration route along the Alaskan Peninsula. There are numerous coastal seabird colonies, one of which ranges up to 1,000,000 birds (Office of the Governor et al., 1974;136).

General Population Characteristics

If one were to ask a Kodiak resident how many people live in Kodiak,

he would probably receive the following reply, "Depends on what month you're talking about." Like many other communities with seasonal employment, Kodiak's population varies with the seasons. During August, employment increases to approximately 120% of its annual average. In March this level decreases to about 83% of its annual average (Alaska Consultants 1976;26). (Table 1 presents Kodiak City's population since 1880). The population of the Kodiak Island Borough in 1975 was 8,748 (Kramer, Chin and Mayo 1978:12). Simpson Usher Jones gives this figure at 9,620, based on growth of school enrollment (1977:136).

In 1977, the total population for the road connected area of Kodiak was approximatley 8,550 persons. This includes the City of Kodiak with 4,260 persons, Coast Guard Base personnel at 2,500, and 1,790 other persons residing in road connected areas (Alaska Consultants 1979;390).

In terms of composition, Kodiak City had a higher ratio of males to females in 1970 by 54 to 46 percent, which reflects the Alaskan state profile. This differs from the national ratio, where females outnumber males by a ratio of 51 to 49 percent. This larger number of males reflects the transient fishermen and cannery workers who come to Kodiak for the fishing season.

The figures in Table 2 provide an indication of the racial composition of Kodiak City. They must be judged cautiously, however, as they are from 1970. As in many other areas, the best possible data is not up to date.

TABLE 1

Population of Kodiak City, Alaska

Year	Pop.	Year	Pop .
1880	288	1929	442
1890	495	1939	864
1900	341	1950	1,710
1910	438	1960	2,628
1920	374	1970	3,798
		1977	4,260

Sources: Rollins (1978) for 1880 through 1970. For 1977, the source is Kramer, Chin and Mayo (1978).

Table 2

Composition of Population by Race and Sex

City of Kodiak, Alaska

1970

Race	Sex			Percent of Total
	Male	Female	Total	
White	1,668	1,426	3,094	81.5
Negro	27	17	44	1.2
Indian	32	,21	53	1.4
Aleut	244	235	479	12.6
Eskimo	14	17	31	0.8
Other	70	27	97	2.6
TOTAL	2,055	1,743	3,798	100.0

Source: University of Alaska, Institute of Social, Economic and Government Research. September 1973. Age and Race by Sex Characteristics of Alaska's Village Population. College. (Alaska Review of Business and Economic Conditions. Vol . X, No. 2.) as quoted in Alaska Consultants 1979:396.

These figures do not reveal a changing racial and ethnic pattern that has emerged since 1970. Two trends are occurring. First, larger numbers of Filipinos, Vietnamese, Koreans and Mexicans are seasonally migrating to Kodiak. A seasonal migration has existed in the past, but in recent years members of these groups have replaced Euro-Americans in numbers. This population falls into three legal categories: 1) U.S. citizens - these are U.S. citizens who were either born in the U.S. or are naturalized citizens and are of these ethnic backgrounds; 2) Permanent Alien Residents - these are Persons lawfully admitted for permanent residence in the U.S.; and 3) undocumented aliens.

The second trend is the increasing numbers of these ethnic and national groups who are taking up permanent residency in Kodiak. This reflects the diversification of the fishing industry which is providing more year around work. Tentative data supporting this contention are indicated in a yearly Borough School District ethnic survey. School enrollment suggests residence over the whole year, not seasonality. The figures in Table 3, when compared to Table 2 support this contention. Caution is suggested in using these figures as absolutes, as data from only four years are provided and children of military personnel are included.

By far, the largest of this group are Filipinos. Hard data are difficult to find. Dr. Salhazar, who conducted a survey for the Historical Commission, notes an increasing trend. She reports there were 1,600 Filipinos in Alaska in 1973 and migration has increased since then. (Kodiak Fish Wrapper and Litter Box Liner Nov. 1978:28). Another source puts, "...the population of Filipinos in Kodiak at

Table 3

Ethnic Composition of Kodiak Borough Schools[1]

School Year	Native	Caucasian	"Other
1974-1975	622	1,410	99
1975-1976[2]	n/a	n/a	n/a
1976-1977[3]	660	1,464	110
1977-1978[3]	628	1,342	123
1978-1979[3]	651	1,348	144

Source: Kodiak Borough School District Ethnic Surveys.

1. These are summary figures for the entire Borough. However, few children of the recent immigrant group reside outside Kodiak City.

2. Data not available.

3. End of First Quarter data only.

something over 500" (Johnson 1978:5). Other sources place the present Filipino population in Kodiak at anywhere between 700 and 1,000 (informal discussions). Another indication of the presence of a large Filipino community is the existence of Mama Osang, a grocery store specializing in Filipino foods.

Kodiak has a high proportion of young people, 10.4 percent under 5 years of age in 1970, relative to the national average of 8.4 percent. This is close to the state level of 11 percent. Kodiak's older population in 1970 was 26 percent (40 or more years of age), as compared to the state with 22 percent and a national average of 36 percent. The median age for males in Kodiak (1970) was 25.3 years, compared with the state median of 23.3 years and a national median of 28.6 years. Females on Kodiak (1970) had a median age of 22.9 years. The state median age for females was '22.2 years and the national female median was 29.3 years (Alaska Consultants 1979:395; 397).

In summary, Kodiak's population is similar to the rest of Alaska but differs from the nation as a whole. There are more males than females and they are younger than the national average. The young are more strongly represented and the older population "less so. The resident population is predominately white with 13-15 percent Native (Table 2). Though not indicated in the 1970 census data, tentative evidence suggests an increasing number of Filipinos have taken residency in Kodiak since 1970.

HISTORICAL CONTEXT AND IMPACTS

Kodiak has experienced numerous impacts in its history. The purpose of this section is to describe these events. Many of these impacts had a profound effect on Kodiak's residents and their environment and helped to shape the present situation. In absorbing these impacts the residents developed certain capacities for responding to resultant changes. An understanding of how Kodiak residents behaved in the past may provide clues as to how they will respond to future impacts such as OCS.

The Earliest Impacts

Kodiak's earliest impacts are located in the archaeological record. In this record the impacts are inferred from changes in tool designs, use of materials, burial practices, and other cultural traits. People were living on Kodiak at least 6,300 years ago. From analysis of artifacts certain distinctive cultural traditions can be seen to have evolved over time. The first of these was the Ocean Bay I culture followed by the Ocean Bay II culture. During the second millennium B.C. a new cultural pattern appeared on Kodiak, the Kachemak tradition. It is difficult to say if this new tradition represented an early impact. "We are not certain whether it developed from the Ocean Bay tradition or whether it represents a different people who invaded Kodiak." (Clark 1977:13).'

An exact understanding of the development of the next cultural phase, the

Koniag, is also blurred. It appears Kodiak's location made, it a communications center between the southern Bering Sea region and the northeast to Cook's Inlet and prince William Sound. The Kachemak people received diffused cultural traits from these areas. Around 1000 A.D., peoples from the east began to move into northern Kodiak. At about the same time peoples from the Bering Sea region were introducing new practices to southwestern Kodiak. The blending of these cultures, with the resident Kachemak tradition resulted in the formation of the Koniags. These people were the residents at the time of Russian contact.

The Koniags, like the earlier peoples, were adapted to Kodiak's maritime environment. They fished and hunted marine mammals. They hunted whales using darts tipped with slate tips that were dipped in an aconite poison.

Seasonality played a role in the Koniag's yearly cycle. During the Fall, after the salmon season, the people would return to their main winter encampments. These villages were located in favorable locations, such as protected bays. Dwellings per village were not numerous but several families would live in each dwelling. A settlement could hold between 100-200 persons.

The Russian Impact

The Russian colonization of Kodiak had a monumental impact on the Koniags. When the Russians were replaced by the Americans, the Koniags had almost disappeared as a viable culture.

Russian expansion into Alaska was economically motivated. Members of Vitus Bering's 17414742 expedition to Alaska returned to Russia with specimens of various animal skins they had gathered while shipwrecked on the island later named for Bering. These pelts were worth considerable sums in the Russian and European market.

Early contacts between the Koniags and the Russians were not hospitable. The Koniags had heard accounts of the Russian's treatment of natives to the west. In 1763 they fiercely resisted Glotov while he and his crew of the "Julian" wintered in southern Kodiak. Bragin was expelled from Kodiak in 1776. However, Shelikof subdued Koniag resistance after establ ishing a settlement at Three Saints Bay in 1784. This settlement suffered adversities and in 1792 Alexander Baranov, the new administrator, relocated the settlement to Chiniak Bay, the location of present day Kodiak (Hulley 1958). The site provided more timber than Three Saints Bay and was closer to Cook Inlet and Prince William Sound. Baranov had decided that pelt hunting and expansion must proceed.

The Koniags were organized into a work force. They hunted sea otters, trapped fox or worked at obtaining provisions to sustain the community. In great fleets of bidarkas they moved east and south in search of furs. Russian expansion eventually reached a"l1 the way to California with the establishment of Fort Ross.

The subjugation and reorganization of Aleuts and Koniags into an army of pelt hunting serfs, forced to migrate further and further away from

"their homes, had a profound effect on these people. The figures in Table 4 represent only a superficial picture of what happened to the total population of Aleuts and Koniags. The Russians had estimated there were 8,000 Koniags on Kodiak in 1799. A U.S. census estimated Kodiak's population had dropped to 1,729 by 1929.

Besides this massive population decline, "When the United States acquired Alaska in 1867, the Koniags had vanished as a distinct ethnographic group" (Freeman 1977:19). This decline was brought about by food shortages, village regroupings, disease, resettlement, separation of families, drownings and warfare with other tribes (Fedorova 1973).

The community of Kodiak had about 30 European buildings in 1805. A library and museum were started, though later moved to Sitka. During the early 1800's, attempts were made to open a school, which was only sporadically successful. In 1860 there is mention of a hospital in Kodiak. The town was threatened with starvation on several occasions due to supply vessels being wrecked during their long voyage from Russia (Chaffin 1967:35). Though small in population, and threatened with extinction on several occasions, Kodiak survived and was a significant settlement when the Russians transferred ownership to the United States.

The American Period

The sale of Alaska to the United States in 1867 was for the Russians a matter of cutting their losses. The sea otter population had been

Table 4

Fatalities and Mishaps Occurring to Kodiak Aleuts and Koniags During the Early Years of Baranov's Administration

1792	Killed by Kolosh during an attack on Baranov's home at Chugats Bay	12
1796	Captured by Kolosh during attack at Lituya Bay	20
	Drowned during same attack	2
798	On return trip, died on shore	8
	Drowned	10
799	En route from Sitka, poisoned by Shellfish	135
800	Drowned while being transferred to (Kodiak) Island	33
802	Killed en route to Sitka, by Kolosh	165
1804	Killed by Kolosh during attack on Sitka	16
1805	Drowned en route to Kodiak from Sitka	200'
	Drowned in baidarkas during storms in that same year	100
	TOTAL	701

Source: Dmytryshyn and Crownhart-Vaughan 1976: 145.
Note: This account was taken from Khlebnikov's reports of 1817-1832, hence the spelling.

depleted. The company was suffering financially. Events in Europe with the Crimean war and Russian expansion towards Manchuria, Korea and India revealed the Russians could not defend their American colonies. Company prospectors had found signs of gold in Alaska and feared a gold rush would end their rule, as gold had destroyed Sutter in California.

The early Americans made their own impact on Kodiak. Speaking of the U.S. military force sent to Kodiak, a resident noted:

> They had built soldier's barracks, guard house and all necessary buildings for a military post; and we had military law. At sun rise and sun set one of the brass pieces was fired; which scared natives and wild animals around surrounding bays. If a man stole or fought he would be placed in a guard house, placed on a ball and chain and given work outside. So all these rules and regulations made the people behave themselves straight and quiet (Chaffin 1967;39).

Other impacts in the early years included the almost total extinction of the sea otters. As Chaffin notes, "After the Americans took over, intensive hunting was begun with hundreds of men using rifles, shotguns, and steam launches as well as bidarkas and spears" (1967:42-43). Eventually these animals were legally protected in 1911.

The prelude to Kodiak's industrialized fishing industry began in 1882 with the opening of a cannery on Karluk spit. In the early 1900's, the U.S. Department of Agriculture established an experimental station on Kodiak. Its goal was to experiment with cattle development on Kodiak, and foreshadowed Kodiak's present cattle industry. Each of these latter impacts were to have long reaching effects for Kodiak's future.

Writing in 1880, W. J. Fisher (as quoted in Chaffin 1967;40-42) presents a picture of Kodiak City at that time. "The village of Kodiak contains 125 one-story dwelling houses, one church, stores and warehouses of the Alaska Commercial Co. and Western Fur & Trading Co., soldiers barracks, officers quarters, and storehouses errected for and occupied by regular troops some years ago". He also notes the condition of the streets in Kodiak totally deteriorated since the withdrawal of federal troops. It appeared the general health of the population was good though tuberculosis was the most common disease. No doctor was available; a former hospital steward of the Russian American Company attended the sick. Fisher felt there was little social trouble, no taxes and no lawyers; marriage laws were not strictly adhered to.

Mr. Fisher (as quoted in Bean 1887:87) also provided a record of the storage of dried salmon by the population for winter use:

> The annual supply of dried salmon (ukal i) put up by a native family, consisting of two adults and two children, is estimated at fifteen hundred fish, averaging about five pounds each before being dried, and, when cured, averaging about one-half pound each. The Creoles (native whites), in addition to the above, put up about six barrels of salt fish for winter consumption. These stores are not touched until the beginning of November, when, owing to inclemency of the weather, the catching of fresh fish has to be suspended. By the first of May, when the weather permits fishing again, these stores are generally exhausted. The dried fish or ukali is used to a great extent in lieu of bread. In addition to the above supplies, each family adds about one-half barrel of salmon spawn, more or less, to their winter stores.

The next major impact to Kodiak was not introduced by humans and looked as if it would end human occupation on Kodiak. On June 6, 1912, Mt.

Novarupta, thought to be an extinct volcano, erupted. It lay 100 miles away on the Alaskan mainland. The eruption was heard in Juneau and Fairbanks but for some reason not heard distinctly in Kodiak; only faint rumblings. The first indication was a cloud forming to the southwest. The cloud spread over Kodiak, turning day into darkness as ash began to fall. Besides fear of suffocating from the thick falling ash, the residents were exposed to gaseous fumes and earthquakes (Chaffin 1967).

The residents took shelter on local boats. They returned to Kodiak and found ash 18 inches deep covering everything. Some roofs had collapsed under the weight. The water mains were choked with the ash and distilled water from local ships was used.

The effect on Kodiak's natural environment was substantial. Shallow lakes were filled in. Steams became invisible and the dampened ash had a quicksand like effect. Ptarmigan, trout, small birds and game were killed. There was no fish for the cannery to pack that year. Of the vegetation, only spruce trees and the tough native shrubs survived. The eruption had just about destroyed the sheep, cattle and horse herds. It looked as if Kodiak was ruined for agriculture or for much of anything else.

However, the residents dug out and reorganized. Within two years, the vegetation, and particularly the grasses, had come back to such a point that the ash was considered a natural fertilizer (Freeman 1977:23). Kodiak had survived.

It was shortly after the eruption that Kodiak acquired its present name. For years it had been known as either St. Paul Harbor or Kadiak. The name Kadiak had been adopted by the Board of Geographic names in 1890 and finally in 1920 it recognized the local usage of "Kodiak"

If the volcanic eruption made a substantial environmental impact on Kodiak, the war years made a substantial social impact. Kodiak was a sleepy little fishing village prior to the war. Besides fishing, homesteaders had developed farming and cattle and sheep raising. These herds had developed slowly due to the tough environment, and at times almost perished. Bear hunting was another economic activity on Kodiak. In Kodiak City itself, social life centered mainly in visiting friends, card playing, and dancing. A big event was when a boat arrived from "outside". People walked as there were few cars. The town didn't have a sewage system, town water system, light system, bank, doctor, or hospital. It did have one grade school.

Tensions in the Pacific began a process that was to impact Kodiak dramatically. Fear of the Japanese using the Aleutians as stepping stones into the U.S. prompted the Navy to begin military preparation in Kodiak. In 1939 construction of a Naval base began about seven miles out of town. A year later the Army began to move in. Kodiak's 1939 population of 864 jumped by 1941 to 3,500. It was estimated that at one point there were 15,000 soldiers, 5,000 construction workers, and several thousand sailors and Marines on Kodiak (Chaffin 1967:56).

Construction boomed, as facilities were severely inadequate for the population. Business concerns were also inadquate. There was one nighclub. Water systems were privately owned. The sewer system was very old. The military established the first telephone line from the base to the town.

The Japanese attack and occupation of the Aleutians began with their attack on Dutch Harbor on June 3, 1942. It ended with the occupation of Kiska by Allied Forces on August 15, 1943.

The war brought the first radio station to Kodiak (KOOK). Kodiak prospered. Bars and liquor stores proliferated as did prostitution. In 1940 Kodiak was incorporated as a first class city. A mayor and city council were elected. Police, fire and utilities were organized and improved. A hospital was established. Kodiak had grown up during the war years.

After the war, Kodiak City's population declined. It dropped from around 4,000 to 1,710 in 1950 and rose to 2,628 in 1960. The Naval Base added around 3,000 more to that figure.

The submarine base at Kodiak was decommissioned in 1947; the operating base and air station were disestablished in 1950 and the air station redesignated to the Naval station.

Kodiak saw modernization after the war. New buildings replaced false-fronted stores. Shellfish was being added to the salmon and halibut industries, but there were only a few large canneries in Kodiak at this time. In 1950 the total salmon catch for the island was 15 million fish. There was one dairy farm and about 1,200 cattle browsed the hills. Roads for the most part were unpaved. There existed daily air service to the mainland and steamship service to Seattle.

Kodiak had a public library, hospital, schools, churches, electricity, and a water system. Radio and TV were provided by the military.

Early in the 1960's the Kodiak Electrical Association was established. A new water and sewer system was built, as was a new small boat harbor. A good transportation system of cars, taxis, busses and trucking companies existed. The community had a clinic, three doctors, a dentist and two lawyers. The White Alice project improved communication.

Kodiak resembled other large towns of Alaska. It had a variety of services to meet people's needs, i.e. dry cleaning, laundry, a theatre, car rental and so on. Airfields were being built and improved. It was during this same period a new impact began to develop in Kodiak. Around the 1950's, Kodiak fishermen became interested in the potential for king crab. In 1950, king crab constituted only 6 percent of Alaska's total fisheries-wholesale-value. But in 1964 it accounted for 15 percent of the business. King crab in the early '60's looked to be very profitable for Kodiak.

The 1964 Good Friday Earthquake

Kodiak is familar with shocks. There was a severe quake in 1788 that affected Three Saints Bay. In 1886 another violent quake jolted Kodiak. The Scotch Cap lighthouse was destroyed and five men lost their lives from a tsunami caused by a quake i n the Pacific in 1946. This same tsunami killed 152 people in Hawaii.

The quake on March 27, 1964, was the greatest to be recorded in North America (8.4 to 8.6 on the Richter scale). It was not, however, the earthquake as much as the waves following the earthquake that brought destruction to Kodiak. Kodiak's downtown business district, the harbor, canneries, homes and businesses along the beach areas, were inundated. Numerous waves hit Kodiak with the highest cresting at 30 to 35 feet above mean low water. The water carried everything in its path, buildings and boats. Thirty homes were deposited in a lake. Every village on the Kodiak archipelago was hit except Karluck and Akhiok. The land subsided, depending on the location, from 2 to 6 feet.

Forty percent of the downtown business area was destroyed and 75 percent of food supplies were lost. Fishing boats had floated and settled al l over town. Damages in the city were estimated at $22,300,000.00. The Naval base suffered $10,000,000.00 in damage and the fishing industry lost $9,465,000.00. Forty-six boats of the crab fleet were destroyed and 86 were damaged, a heavy blow for a newly emerging successful industry. One resident stated she kept feeling the aftershocks for days.

"I kept going up the hill. The wave meant no jobs, no homes for many people" (informal discussion). And most tragic, 17 persons lost their lives.

After the earthquake, Kodiak dug out and rebuilt with the help of government funds. A new downtown area was constructed. To some people, the earthquake marked a changing point for Kodiak. They felt prior to the wave Kodiak had been a peaceful little town where you knew everyone. After the reconstruction the town started to grow. From a population of 2,628 in 1960, it has grown to 4,260 in 1977. "You don't know everyone in town like you used to" (informal discussion).

CONTEMPORARY CONCERNS

There are many issues that concern the residents of Kodiak. This section presents information on several of the major ones. Many of the other major issues (declining shrimp stocks, lack of housing, seasonal labor, etc.) have been presented in other sections. The issues presented below were consistently brought up during discussion with Kodiak residents. Kodiak's newspapers reflected this concern. Each of these issues has bearing on Kodiak's economic and sociocultural future. Many of them are interrelated. To avoid redundancy, the bottomfish development issue will not be discussed here. This major issue will be discussed in the NonOCS Scenario-section.

Ocs: Introduction

The OCS issue has a fairly long and emotional history attached to it. Kodiak has devoted a tremendous amount of energy, time and money to analyzing what OCS means to Kodiak.

At the time of the field investigation, OCS was a hot topic. Apparently, interest in OCS development in the Gulf of Alaska (lease sale #46) had waned to some degree, since its first appearance as an issue in 1975. But in December 1978, the Kodiak residents learned that lease sale #60 (Cook Inlet) extended down the Shelikof Strait. The Kadiak Times headlines for its December 14, 1978, issue read, "Kodiak has big OCS oil lease surprise: Cook Inlet sale all the way down Shelikof Strait."

Concern and some anger is felt about the lack of time available between the call for nominations and tract selection. It is during this period that citizens can gather information and provide input into the leasing process. The residents feel this time is too short to adequately respond. The second point which angers the residents about lease sale #60 is that it had always been referred to as the Lower Cook Inlet lease sale. They had assumed it had no relationship to Kodiak. When the news was released by the Homer News that the Shelikof Strait was included, the residents felt they had intentionally been denied information that was vital to their interests. As one resident said, he "objected to what he termed the 'sneaky way announcements are made' citing as an example the name given the Lower Cook Inlet proposal. 'Who'd guess the Lower Cook Inlet sales goes clear down Shelikof Strait to the south end of Kodiak Island?"

(Kadi ak Times, VO1. 3 No. 32, Dec. 14, 1978:9). Another factor important to the residents regarding Shelikof Strait is its economic significance. The fishermen made very clear their feelings that Shelikof Strait is critical for current fisheries and is a breeding and nursery area for bottomfish. This at a point when the bottomfish industry is just beginning. Many of the fears that arose in relation to lease sale #46 (Gulf of Alaska) have resurfaced. Kodiak residents are concerned about oil development for two reasons: what it will do to fishing and what it will do to the City of Kodiak.

OCS and Fishing. "Fishing made Kodiak. We don't want it destroyed" (informal discussion). To the fishing industry, particularly the fishermen and the processors who have most at stake, OCS is a real threat. In their eyes, it potentially could destroy their livelihood. This could occur through damage to the fish stocks, through oil spills or through blowouts . Simpson Usher Jones (1978:36) noted that the "likelihood of spill introducing oil into the natural environment is quite high. If SO there would be impacts, and some could be extreme." Al SO , "A major oil spill could contaminate or kill fish, a vital concern to the Kodiak economy. Kodiak's economy would definitely be adversely affected if this contamination caused a loss of catch or gear" (Simpson Usher Jones 1978:39-40). They refer to the BLM/OCS draft E.I.S. which states that, based on historical evidence, 433,000 barrels of oil will be spilled over a 25-year period. Fishermen are concerned about barges destroying crab pot lines and underwater lines that would hurt draggers. Heavy metal residues in mud and filings could hurt fish larva and contaminate

stocks . There is always the possibilityof collisions at sea with increased traffic.

At present, Kodiak acquires a premium price for its high quality seafood product. A spill might cause the product to lose its reputation and its premium. A second way OCS could hurt the fishing industry would be through the preemption of land-based services. At present Kodiak's harbor is too small (Alaska Consultants 1979:468). The "Combs Report" also substantiates this, " . ..at present the Alaskan fishing industry lacks adequate port and infrastructure facilities to handle even the traditional fisheries. Crab vessels tie up four to six abreast at Kodiak and many cannot find berths stall" (Combs 1979:108-109). This would mean either OCS would preempt space in the harbor or develop new docking facilities. This presupposes OCS would have need of harbor space. The fish processing industry is extremely dependenton water and electricity to run its operations. Both of these utilities are presently running at peak capacity (Alaska Consultants 1979). There is a feeling that OCS would be in competition for these utilities. Depending on the scope of development there could possibly be competition for labor. This may not be as true for OCS as it was for the pipeline. There would also be competition for flat land. Flat land is needed for crab pot storage and would be needed for oil supplies.

The general attitude among fishermen and processors is they don't want or need OCS. "OCS talks about how much money it will bring. But we don' t need it" (informal discussion). OCS is in direct competition with

their industry. The transient cannery workers' attitude is a bit different. "OCS won't affect us because we aren't tied to the island. Most of us are waiting for the gas pipeline to start. We're just working here to get the bucks to survive till it starts" (informal discussion). One resident felt the Filipinos might be for it if they could get jobs. But he also noted that oil would mean inflation and if the ecology changed and the fish were hurt it would severely affect the Filipinos.

One fear is that the fishing industry will be pushed out of Kodiak and forced to fish out of Dutch Harbor. This displacement, however, would be vessel specific. Only the larger boats would make that move. "Most of the boats are small. They can barely fish here. They fish in the winter, where they shouldn't be, because they have to. They wouldn't be able to go to Dutch" (informal discussion).

One fisherman felt there would be a very strong reaction if fishing and OCS had a conflict. "Rather than be pushed out of Kodiak to Dutch Harbor, there'd be a couple of barges burned" (informal discussion).

In discussions with all individuals related to fishing there was agreement that if OCS came to Kodiak with any "heavy handed" tactics, there would be an immediate and very active resistance. "Notonly the fishermen, but the type of people attracted to Kodiak feel you push me and 1'11 push you back harder. The result is a shoving match. That's if the oil companies get pushy" (informal discussion). This is their bottom line, if push came to shove. However, these people understand

that OCS is far too sophisticated for that kind of approach. They also understand they really can't stop OCS. "When Washington mandates something, it'll happen" (informal discussion). With this understanding, the attitude is to delay and control it rather than try and stop it. A delay would allow for better planning and preparation in Kodiak. It would minimize oil spills and improve clean-up procedures. If there is oil development they want a say in where it will occur and desire it to have the least effect on Kodiak. "We know we can't stop it but we want to control it with the least harmful effects on the fishing industry and community" (informal discussion). One person even felt OCS would be accepted if it built docks out of town and turned them over to the community after OCS left.

OCS and the Community. Concern about what effect OCS will potentially have on the community of Kodiak can be summed up in a quote from the Scottish OCS experience. "Onshore development is an inevitable result of offshore oil activity, and such development in town causes both immediate and long-term changes in community structure, shoreline resources, local labor markets, and housing supply. Local political and economic. structures can also anticipate equally inevitable general stress" (Baldwin and Baldwin 1975: 162-163). At a Coastal Zone Management workshop held in Kodiak in the fall of 1977, the participants expressed concern about the effects OCS would have on the Kodiak lifestyle (Coastal Zone Management 1977).

Besides changing lifestyles, some concern was expressed regarding the lifestyles of the oil-related workers. "What do you do when you have an oil worker sitting next to a fisherman in a bar? What do you do with a kid born in the United States trying to relate to a kid born in Kodiak?" (informal discussion).

When asked about the state's position on OCS, Pat Dobey of the Department of Natural Resources, said, "The State is kind of like a cow in a great big pasture with a fence all around. And off in the corner of the pasture is the biggest bull you've ever seen and he's looking at you. You know something is going to happen. You're just not sure in what partof the pasture it's going to happen to you next and how bad it is going to be" (Kodiak Fish Wrapper and Litter Box Liner, Vol. 2 No. 6, June 1976:2). To some extent this reflects the feeling of some of the Kodiak residents about how OCS will affect their community.

One of these effects would be the money and power of OCS. "A general perception people have is that big oil companies and support industries will come in, use their money and power to get their oil and then walk out and leave" (informal discussion). One business person expressed a fear of freight competition, "OCS would have expediters who keep their stuff rolling. They're on it all the time. Small businessmen couldn't afford an expediter and their freight would be the first to be delayed. During the pipeline, Kodiak's freight got backlogged" (informal discussion).

The oil companies' ability to pay for what they want causes fears of inflation and a "Boom Town" psychology. There is fear that housing, food, etc., will be priced out of the resident's reach. Speaking to this point, Pat Dobey gave the oil companies' perspective in terms of the overhead needed to keep an oil platform running. "If you need a wrench to keep a rig running or you would be shut down for a day - and you had a hardware store in this town - you could go in and take that hardware store, rip it up by the roots, buy the whole thing for $50,000 or $100,000, carry it out with a helicopter, shake it over a rig. The wrench falls out, pick it up and dump the rest overboard and you'd still be ahead of the game. Normal values cease to exist" (Kodiak Fish Wrapper and Litter Box Line, Vol. 2 No. 6, 1978:6).

More people would mean more business, but it would also mean more social problems, more demand for services and ultimately more taxes. A larger population would mean the "small town atmosphere" would decline. A resident wouldn't know as many people per overall population as before. As one lady said, "I feel that if the population got larger, I'd be somewhat afraid to walk the streets at night. As it is now, I don't feel that way" (informal discussion). Another factor would be people coming to Kodiak looking for jobs. To avoid a huge influx of job seekers, one resident suggested the press and radio should broadcast "Don't come to Kodiak looking for a job."

One aspect of this new population would be the effect it would have on the Coast Guard. Demand for services would increase because of the

drilling platforms (rescue, oil spills, evacuation, etc.). They would also be busier because, "Right now you have people with fishing backgrounds. Newcomers wouldn't have that background" (informal discussion). For an overall analysis of the Coast Guard and OCS, see Kramer, Chin and Mayo, 1977 page 1.8, and Energy Resources Co., 1978.

Kodiak's concerns about OCS resulted in action. As one resident said, "We had to get our stuff together. We saw what happened in Valdez. And thenwe saw hotels here filled with close-mouthed oil people with pointy shoes and cowboy hats" (informal discussion). At the time of initial excitement, the Borough had professionals working for it who knew granting and how to approach the situation. In March 1976, the Outer Continental Shelf Advisory Council (OCS Task Force) was created by the Borough. Its task was to oversee the preparation of a base-line study which included normal growth and OCS growth projections. It received $36,000 in state-federal funds and $18,000 of in-kind funds from the Borough.

Information and education of the public was done through the paper. An example is The Oil Lamp, a frequent column in The Kokiak Fish Wrapper and Litter Box Liner.

Planning documents include potential effects of OCS and provide projections and recommendations. For example, the Overall Economic Development Program for Kodiak Island Borough (Kodiak Island Borough Overall Economic

Development Program Committee 1978) and the Kodiak Island Borough Regional Plan and Development Strategy : Summary Report (Kramer, Chin and Mayo 1978).

Summary. OCS is a long and continuing issue in Kodiak. Not all residents are opposed, some feel a diversified industrial base would help the community. In general, however, "Most people would be just as happy if it didn't happen. We're here for the lifestyle and small population. We feel this would change with OCS" (informal discussion). There is a feeling, though, that it will happend and the desire is to work with the oil companies in controlling the situation. This is reflected in the following planning recommendation, "Therefore, a general arm' s-length pol icy is recommended towards onshore OCS-related development. It should be kept out of the urban area and the villages" (Kramer, Chin and Mayo 1978:75).

Dog Bay and Pillar Mountain

The Dog Bay/Pillar Mountain issue includes another aspect - bottomfish development. If bottomfishing is to develop in Kodiak, expanded harbor facilities must be developed. Boats used for bottomfishing are, in general , larger than those used for other types of fishing. The current harbor facilities are overtaxed. In 1978, 1,251 vessels utilitzed the Kodiak boat harbor, an increase of 22 percent over 1977. There are 225 stalls in the harbor. During peak fishing months, boats will be moored 5 to 7 deep at the ends of the floats for lack of stall space. Not only is there a problem with quantity but also a problem exists with increas-

ing vessel length (Kodiak Harbormaster 1979). The harbor was built for a maximum vessel length of 85 feet. Larger vessels have been accommodated. However, these vessels damage the floats. Besides space for the fishing fleet, there is an expected need for pleasure craft, float plane and commercial freighter facilities (informal discussion).

Potential harbor facilities are located in Dog Bay, south of the existing boat harbor by Near Island (see Figure 3). It appears funding is available for this project if it weren't for the problem of Pillar Mountain direcly across from Dog Bay. In 1978, the U.S. Geological Survey released a report warning that a landslide could occur from Pillar Mountain. Besides destroying the road and any facilities in its path, the slide would create a 10 to 12 foot tidal wave which would create destruction in the boat harbor and waterfront area (Kadiak Times, Vol. 3 No. 4 1978:2).

This threat has played havoc with funding for the Dog Bay boat harbor. It has also increased insurance rates on waterfront property, causing landslide exclusions to be placed in insurance policies, decreased the supply of loan money and increased the cost of borrowing money (Chamber of Commerce 1978). Bottomfi sh development is dependent on the Dog Bay Harbor being developed which is dependent on finding a solution to the Pillar Mountain problem.

To meet this problem a nine member geotechnical panel was formed. The U.S. Geological Survey report did not state probability of a rockslide.

It recommended further study to determine the exact threat and course of action. This is the responsibility of the geotechnical panel.

Unification Church and International Seafoods

International Seafoods, Inc. is an Alaskan subsidiary of International Ocean Enterprises. International Ocean Enterprises is a corporation set up by the Unification Church of the Rev. Sun Myung Moon. These organizations bought waterfront property in Kodiak in September 1978. According to their general manager, they intend to construct a seafood processing plant on the property. The 3 million dollar plant would process salmon, crab, bottomfish and halibut (Kodiak Mirror, Sept. 29, 1978). This event has caused considerable concern in Kodiak. The Unification Church gained notoriety when it was charged with using brainwashing techniques on new members. Some of these members were kidnapped by their parents and "deprogrammed." The church was also investigated by the U.S. Subcommittee on International Organization as partof its investigation into Korean-American relations.

Activities have occurred in Kodiak in response to this event. The Kodiak Rotary Club had an ex-Unification church member speak of his experiences in the church and his subsequent deprogramming (The Kodiak Daily Mirror, Vol. 39, No. 52, 1979). The Kadiak Times has run a series of continuing articles on the church. An article in the Kadiak Times (Vol. 3 No. 49 1979) describes the community's feelings about this issue. In part, it states that "There is concern, and there is hesitan cy. There are those who would welcome International Seafoods of

Alaska, whose parent firm is financed by Moon's Unification Church, with open arms; and there are those who advocate any measure to keep them out" (1979:1, 5).

Borough vs. City

When asked what major concerns existed in Kodiak, many people responded that relations between the City of Kodiak and the Kodiak Island Borough were a problem. This issue appeared to be a major concern for some residents during the field investigations in the first half of 1979. It was difficult to confirm as an issue through any other sources. There were no major news stories about City/Borough relations as there were about Pillar Mountain, Dog Bay, or OCS.

Later investigations indicate relations between the Borough and the City have subsequently improved and tensions between the two governmental units have lessened. When asked what the initial poor relations could be attributed to, residents cited a combination of reasons including growing pains, personalities, power politics, the differing constituency of each government, and empire building. Partof this may stem from the relatively recent emergence of the Borough as a power. Historically, the City of Kodiak has been the economic and political power base. It is still the main economic unit, but the Borough has grown in power since its incorporation in 1963.

In terms of constituency, the city government is responsible for the urban, predominantly white, town area. The Borough, on the other hand,

represents the whole island, including the villages'. The Alaska Native Claims Settlement Act and the development of the village and regional corporations has strengthened the importance of these villages. The villages are now requesting services that are to be provided through the Borough. These villages, as focused through the Borough, are gaining in importance. This is a new situation for the city and residents of Kodiak City. However, as noted by Davis (1979:182) relations between the Borough and the villages are at times strained:

> There appears to be a sense of tension between the Borough government and the Native villages. For example there is continuing conflict over taxes. Some of this is related to the allocation of tax revenues; the local people in Kodiak consider they are paying for the village schools. The villagers point out the raw fish tax levied on the canneries as helping pay for services in Kodiak, such as the swimming pool and the addition to the hospital.

In mentioning taxes, Davis touched an area that may have a lot to do with relations between the Borough and city; who controls what, who plans and has final jurisdiction over what and finally, who pays for what. When these issues arise, personalities can either compound or resolve the situation. An example of this was the annexation controversy that occurred in the beginning of 1979. The City of Kodiak had petitioned for annexation of a small strip of land along Mill Bay Road. The State's Local Boundary Commission, who approves on boundary changes, recommended expansion of the area to be annexed. It would include more of the north end of the island including the Island Lake, Spruce Cape and Monaska Bay areas. The City supported this recommendation. At

issue were City provided services, specifically water and sewer. The residents of this area, on the other hand, did not want to be annexed, preferred remaining in the Borough and wanted to institute a special water and sewer district. The Borough also opposed the boundary change. The City of Kodiak challenged the formation of a separate service district on the grounds that State laws say that separate service districts cannot be developed if the service area is contiguous to a governmental unit that can provide the services and can annex the area. The courts however upheld the power of the Borough to determine whether or not special services districts could be instituted within its domain.

The Boundary Commission submitted its recommendation to the State Legislature. The Legislature subsequently overruled the recommendation and instructed the Department of Community and Regional Affairs to oversee a resolution to this situation. The City and the Broough requested a years grace to work out this problem without State interference. This was acceptable to the Departmentof Community and Regional Affairs.

The Department of Community and Regional Affairs has recently met with the Borough and the City to review progress over the last year. Their conclusion (informal interview) is that good progress has been made on the issue. The Borough and City have been meeting regularly and discussing alternative solutions to this issue, such as a separate regional authority, annexation or unification. The City has reevaluated its position on annexation and is now less inclined to pursue that course. Unification of the City and Borough might be a solution. However, it

was defeated as a ballot proposition in the October 1978 election. According to residents, it is stil 1 a viable alternative and will probably be on the ballot again in Fall 1980.

Another factor noted by residents in a smoothing of relations is changes in personnel. There has been a turnover of Borough and City Managers and of Borough Assembly and City Council members. These changes have lessened personality conflicts and allowed more discussion and cooperation about common problems.

Though most of this section has focused on conflicts between the Borough and the City, it should be pointed out that they have the ability to resolve conflicts. In other areas they are quite able to cooperate. For example, the threat of OCS development produced the OCS Advisory Council which has strong support from both Borough and City.

RESPONSE CAPACITIES

The purpose of this research is to assess the current state of the sociocultural system. This information is used as a baseline to make generalized projections of changes within the system resulting from OCS and non-OCS development.

An important step in making these projections is determining how the community will respond to any new development. This assists in determining what shape sociocultural change will take. This is called a

community's "response capacity" and it is the dynamic aspect of the sociocultural system, where the impact categories are the structural aspect. This is an important point because it is this aspect of the sociocultural system which may modify or even halt the impinging event. Like the sociocultural impact categories, the response capacities are analytical. devices for understanding the impact process.

Based on the field and document research, the following response capacities were developed for Kodiak's sociocultural system. These response capacities are the characteristics of Kodiak's sociocultural system which will respond to an impinging event with the potential of modifying that event. The following sections describe each response capacity and provide a few examples of the capacity as previously described.

Aggressiveness

Aggressiveness is a community's ability to act on threats or opportunities in an assertive directional manner. As shown above, Kodiak has been extremely aggressive in utilizing the marine resources in its environment. The Kodiak fishermen are noted for their aggressiveness which is reflected in the conditions they are willing to fish in and by the number of lives lost each year. It is also reflected in their searching for new fishing methods and technologies on a world-wide basis.

When events have threatened Kodiak, the community has aggressively sought solutions. After the 1964 earthquake, the community acquired urban development funds and rebuilt, as it rebuilt after the 1912

volcanic eruption. Kodiak actively sought out and developed Alcoholism and Mental Health programs to meet these social problems. When OCS became an issue, the community organized, acquired funds and professional assistance-, planned and educated itself. Part of Kodiak's sociocultural adaptation is an active aggressive approach to issues confronting it.

Innovation

Innovation is a community's ability to create new and original ideas or mechanisms to respond to new or unusual situations. It is a reflection of the self-reliance of the community.

Kodiak is relatively isolated from sources of support, resources and "expertise." When confronted by new situations, the residents have adapted through creativity and innovation. This applies in most economic sectors. As shown earlier, Kodiak fishermen are known for their innovativeness in developing new fishing techniques and equipment. As one fisherman said, "When you're out there and somthing goes wrong, you've got to fix it yourself. There isn't anyone else around to fix it for you. And your life may depend on it" (informal discussion).

The canneries have had to be creative in running their operations in both technical and social areas. The business community has had to develop new ways of doing business due to freight and general transportation problems.

Kodiak residents are also innovative in the area of social relations. In Kodiak, especially among the military and transient cannery workers Y . there is a fairly high rate of turnover. Because of Kodiak's location, the new arrivals are away from familiar family and community support structures. In place of these support structures, family-like relationships are formed which assist individuals and fami' les in ways their own families or friends would (Dixon 1978:199).

The Coast Guard base was designed to be self-reliant. The base personnel must have innovative and creative skills to assure continued operations as they cannot rely on outside sources for assistance; particularly in an emergency. The materials and tools are available for fabrication. As one Coast Guardsman said, "If it breaks, we fix it or make one; the project will go" (informal discussion).

Social Cohesiveness

This is the ability of individuals and social units in a community to unite in the face of perceived threats or opportunities. Historically, Kodiak has had many occasions when its residents have been forced to join together, i.e. the 1912 eruption, World War II and the 1964 earthquake. Social cohesiveness is examined in the section on Political and Government Organization. For example, when something threatens the fishing industry, fishermen and cannery operators present a united front.

Social cohesiveness appears very strong in Kodiak and it is based upon the principle of common interest.

Awareness

Awareness is a sociocultural system's ability to monitor potential threats or opportunities. As pointed out, the fishermen are abreast of potential events that might affect them. This is done through their organizations and through the news media. Kodiak has three newspapers, TV and three radio stations. The citizenry can be kept informed of events. Also, there is the local "Mukluk Telegraph - if it's gossip and it's worth it, everyone knows it" (informal discussion).

Organization

This response capacity refers to the system's ability to organize in the event of threats or opportunities. Where social cohesiveness refers to the dynamics of peep' e or groups joining together, organization is the structural aspect. As mentioned in the section on Political and Governmental Organization, the sociocultural system of Kodiak is quite capable of organizing around a variety of issues or interests.

Political Linkages

This refers to the sociocultura' system's linkage into higher political systems that can be activated as a mechanism of response. Kodiak's political linkage extends to different areas through different mechanisms. Local governmental representatives are potentially accessible and familiar to the Kodiak residents because of the relatively small size and small population. These conditions heighten the probability of knowing, living next door to, or in other ways encountering these political figures. There are group affiliations such as fishermen's

organizations which are in contact with other organizations state-wide, nationally, and internationally.

SOCIOCULTURAL IMPACT CATEGORIES

Sociocultural systems are the distinctive ways of life of a people. The goal of this research is to determine how Kodiak's sociocultural system may be impacted by offshore energy development. The following socio-cultural impact categories have been constructed to provide a framework for describing the current situation and analyzing potential impacts.

These categories and their subsets were constructed on the basis of three criteria. First, social science literature helped provide initial grounding. Second, the specific nature of the research project (impact analysis) and the suggestions of the OCS Task Order scope of work shaped parameters. Certain areas were more important to analyze than others. The third and most important factor in determining these categories was the field work experience itself. Certain features emerged, during the on-site investigation, as more significant than others. These categories and their sub-sets are not fixed in social science theory. They are based on a judgement as to their fit in helping to analyze impacts upon Kodiak's sociocultural systems.

Maritime Adaptation

Cross cultural research has shown the importance the environment has on the way a society is structured and on the ideology it possesses (Bennett

1976; Bernard and Pelto 1972; Hardesty 1977 and Harris 1975). The residents of Kodiak live on an island surrounded by oceans rich in fish and other marine resources. These people have adapted to their maritime environment, and it is the base of their sociocultural systems. This is self-acknowledge by Kodiak residents themselves. When asking them what Kodiak is all about, many unhesitatingly reply with answers like, "Kodiak is about seafood," or "Kodiak's always been a small fishing community and always will be" (informal discussion).

What follows is a description of Kodiak's adaptation to its marine environment. The section includes information on: gross economic and employment statistics; a description of the cannery system; the role of the coast guard; a review of the expansion of the industry and a description of three of the more prominent lifestyles associated with maritime adaptation.

Maritime Economics and Employment. Kodiak switched to a fishing economy after being handed over to American administration in 1867. Salmon salteries on the Karluk River began that same year (Moser 1899: 144) and in 1882 the first cannery was opened at Karluk. In the 1880's two-thirds of the entire Alaskan salmon pack came from the 10 canneries on Kodiak. Almost all of this was from the Karluk River. This shouldn't be surprising. As one contemporary of the period put it, "Looking down into the water, it would seem that a lead pencil could not be passed down between the densely crowded fish; a bidarka cannot be paddled over them when the salmon are thick" (Bean 1887:96).

Fishing is Kodiak's most important economic and employment activity today. Kodiak became the largest fishing port in the United States in 1968, in terms of dollar volume (Dept. of Interior n.d.:413). Fishing provided 48.2 percent of Kodiak's civilian wage/salary payments in 1973 and 45.7 percent in 1974 (Simpson Usher Jones 1977:127). There were an annual average of 1,639 persons engaged in manufacturing (fish processing) in Kodiak for 1976. This is estimated to have increased to 2,489 for 1977 (Alaska Consultants 1979: 417).

Viewed differently, Kodiak's 1974 fish products were worth $252 million on the wholesale market (Freeman 1977: 91). Another source (Dept. of Interior n.d.: 244) placed the ex-vessel value (the price paid to fishermen at the dock) of the 1974 catch at 28.5 million dollars, or almost one-fifth of the value of the entire Alaskan catch.

Simply stating the number of employees engaged in direct fisheries-related activities or stating the volume of fish procured, does not provide the complete picture of this area's significance for the community. Because of Kodiak's fishing adaptation to the environment, the rest of the community, with rare exception, is tied into this adaptation. For example, government is also considered a basic economic activity. Government representation includes the State Department of Fish and Game and other agencies which are directly related, in one way or another, to fishing activities. Even the Post Office is as large as it is because of the numbers of people involved in fishing-related activities.

The largest governmental contingent is the Coast Guard. The Coast Guard arrived in 1947 when an air detachment with two planes and 37 men were stationed in Kodiak. The Coast Guard displaced the Navy as the Navy moved out. The Coast Guard base has over 30,000 acres of land, the largest base in the Coast Guard system. It is the second largest in terms of personnel. The total Coast Guard-related population for Kodiak, active duty and civilian, is 3,669 (Kramer, Chin and Mayo 1977: 3.6). Without the fishing industry it is doubtful if this "large population would be stationed on Kodiak to perform rescue and enforcement activities,

The Coast Guard from Kodiak received notoriety in its confrontation with Russian fishing trawlers, who had interfered with American fishing gear, specifically crab-pots. According to one fisherman, several American fishing vessels were inspected by the Coast Guard on the rumor they were importing recoiless rifles for a more direct confrontation with the Russians.

Secondary industries such as retail stores and restaurants also exist in Kodiak to service the fishing industry. The fate of these industries is directly related to the fortunes of the fishing fleet. When fishing is good, business is good and the reverse is true. During the field research, a dispute for Tanner crab prices was being settled. In discussion with retail merchants and their employees there was deep concern about the effect the "tieup" was having on their business. They were also concerned as to how long before a settlement would be reached and

the fishermen could go back to fishing and they could increase their sales. Without active fishing, the cash flow moves very slowly in Kodiak.

Processing and Processors. There are 14 processors in Kodiak City. Most of these are diversified though a few specialize in crab or crab and salmon only. One processor in Kodiak produces fish meal and other products out of crab shells and fish wastes (Alaska Consultants 1979:418). Many of these canneries are partially owned by Japanese firms. For an overview of Japanese investment in terms of majority and minority ownership, see Heggelund 1977 and Dougherty 1978.

According to one cannery operator, the processing system in Kodiak was built and perfected by the people in the industry. As the fisheries have grown and diversified, the processors have begun to look at fisheries in other parts of the world in order to gain more knowledge that might be transferred to the Kodiak fishery. "We realized there were people around, particularly in Europe, who have been processing bottomfish for a long time" (informal discussion). With shrimp production declining there is increasing interest in bottomfish. Cannery overhead is monumental thus the processors are gearing up for bottomfish in order to maintain operations and offset the overhead.

As the fishermen have modernized both vessels and gear, the canneries have been forced to keep up. An example is the live holding tanks (circulating tanks), which are a necessity for crab boats. Crabs must be alive at the time of processing. In the early years of crabbing,

a holding bag was used, which was kept in the water, over the side of the vessel to keep the crabs alive. Because of the processing requirement for live crabs, the bad weather and small boats, crabbing was done close to shore. More recently, live holding tanks, built into large, modern, weather-tough boats, keep the crabs alive (and salmon fresh) for long periods. This means fishermen can run farther, explore new fishing and crabbing grounds and catch more. This meant a larger volume of fish brought to the canneries.

Capital intensive mechanization was used to meet the increasing volume. This system also limited the number of laborers necessary for processing. The machinery is basically the same, but it has been innovated to be more efficient. Because Kodiak is a long way from machinery wholesalers and company regional offices, decisions and machinery must be made on location. Fabrication, innovation and modification are hallmarks in the evolution of the canneries. One operator gave an example where new gutters and flumes were needed. In the junk pile was some old stainless steel belting. From this they fabricated their own gutters and flumes.

Because of the perishable nature of the product (see Browning 1974 for specifics) and the increasing volume, any mechanical failure could mean a lot of spoiled fish. A cannery operator must know his machinery and how to fix it. Because of competition with other canneries and an increasing supply of fish, mechanical and procedural innovations are a necessity.

In terms of management, a new trend may be emerging. Traditionally, the cannery superintendents were older men who had worked their way up in the canneries from the bottom. Many had fished prior to entering the cannery business. They are either retiring or moving into vice-president positions. Their positions are being filled by younger, college-educated men. They often begin in the canneries as bookkeepers and accountants. These men are trained in modern business methods. They rely on outside expertise and on their floor people more than the earlier managers. This reliance on outside expertise is becoming more of a necessity, because of the increasing complexity of the industry.

What does it take to run a cannery? "The majority of your life is in the plant. You're working witha perishable. Holidays and weekends don' tmean anything" (informal discussion). A processor must be well rounded. He must be a diplomat, know labor relations, understand the science of quality control, understand accounting and financing and have a lot of horse trader in him.

In years past, the canneries and the fishermen were closely tied together. Canneries would finance boats and gear for the fishermen. In recent years, the canneries still provide financing, but are heading more towards guaranteeing loans to the fishermen. There are very few independent boats. Most fish for one company or another. A lot of this has to do with the fact there are no cash buyers for shrimp or crabs, only salmon. Other interrelations between some fishermen and the canneries include the use of the cannery machine-shop and paying

for day to day expenses, including groceries, though each cannery has its own way of managing this.

Though there is high competition between the canneries, there is also cooperation. "We help each other. If we need a part to keep running, we'll get it. If one plant isn't running, we'll give their workers jobs. If we are packed, we'll send our boats to them and vice versa. We trade people, machinery and boats" (informal discussion).

Flexibility and ingenuity are often required. One cannery wanted to test its bottomfish processing line. A fisherman arrived with a catch of mixed bottomfish he would sell only in a lot. The cannery only wanted cod. Through a quick decision, the entire lot was bought and all the rest, except cod, were sold to another cannery. Another incident indicative of cooperation and flexibility occurred when one cannery's plane flew some parts to a subsidiary cannery located in one of Kodiak's villages. A fisherman who worked for a different cannery at that village had just heard his father had passed away. Through a quick phone call, the fisherman was on the plane headed. back into Kodiak (informal discussions).'

One plant manager summed up what it takes to be a processor. "It's a demanding, time-consuming job. It takes a special breed to go into production. The only rewards are that you produce a quality seafood that goes world wide, touching all ports of call. This and the monetary rewards" (informal discussion).

Changing Patterns. Between 1970 and 1976 Kodiak's employment in fishing and fish processing increased by 120 percent (Alaska Consultants 1979: 408). This increase was due, in large measure, to fishermen and fish processing plants switching to year around operations. This has increased employment and lessened the seasonality of employment.

This year around processing has resulted from a diversification within the industry that has occurred quite recently. Like other fisheries in Alaska, Kodiak, in the early years, relied on salmon as its chief product supplemented with halibut and herring; the latter two industries beginning in the early 1900's. During those years, employment was mainly dependent on summer salmon fishing and processing. As one resident put it, "it was a carefree life with nothing much to do from September to spring when all hands turned out to repair nets and boats" (Chaff in 1967: 55). As new species were found to be commercially profitable they lengthened the employment season. For example, after the salmon season, the king crab season begins and then tanner crab. Until recently, the shrimp industry was year around. Now there is a break from late winter through spring for management purposes; but this is overlapped by the tanner crab season. The end result is some form of fishing in season all year which keeps the processors busy, keeps employment up and maintains an economic flow within the town.

Diversification began in the late 1940's, as the king crab industry started. This industry began with salmon purse seine type vessels

fishing in bays or near shore up through the late 1950's. Innovations in gear and vessels created a rapid expansion fran the late 1950's through the mid 1960's. In the 1965-1966 season the catch had grown to 94.4 million pounds from the average of 5.2 million pounds in the 1950's. There were expectations of topping 100 million pounds. However, the increases and innovations in gear and vessels caused a decline in stock abundance (Sea Grant ?978: 386; 388). After the peak 1965-1966 years the catch has declined to an average of 16.2 million pounds between 1969 and 1978. ADF&G projections for crab show an expected increase for the future.

The decline of king crab abundance spurred development of the tanner crab industry to fill the market. Beginning in 1967 the tanner crab fishery has become a stable fishery. The most recently developing fishery in Kodiak is bottomfish. Traditionally bottomfish have been used for crab bait. The 200 mile limit, expanding markets and increasing processing capacity are all working to establish Kodiak's bottomfish as a product for human consumption.

Like the tanner industry, the dungeness crab fishery also began in the 1960's. Beginning in 1962 with a catch of 1.9 million pounds, it peaked in 1968 with 6.8 million pounds. The dungeness crab industry has fluctuated due to biological, environmental and marketing situations (Sea Grant ?978: 400; 402).

The Kodiak shrimp fishery began in 1958 with a harvest of 2.9 million pounds. It peaked in 1971 with 82.2 million pounds. Figures have

reached up to 100 million pounds with landings both from the Bering Sea and Kodiak. There has been a steady decline ever since. The reasons for the decline are unclear (The Kodiak Daily Mirror Feb. 16, 1979: 1).

Scallops are another industry of the 1960's. Begun in 1967, this fishery's future is questionable. According to Sea Grant (1 978: 420), "The absence of a scallop fishery in Kodiak in 1977 and the expected absence in 1978 is due to low ex-vessel prices, difficulty in gathering experienced crews, and the relative attractiveness of alternative fisheries."

Predominant Lifestyles: Introduction. A full presentation of the lifestyles of all Kodiak residents may be desirable, but beyond the scope or capacity of this research. Since Kodiak is dependent on" fishing for its economic mainstay, and most occupational positions are related to the fish industry, an overview of fishermen's and cannery workers' lifestyles will be examined.

The term lifestyle in this context refers to an overview of a way of life. This section is qualitative in nature. It is very difficult to obtain any materials on what it's like to be a fisherman or cannery worker. However, certain distinctive aspects stand out as related by these people themselves.

Predominant Lifestyles: Fishermen. According to Dave Kennedy, a Kodiak fisherman, "Fishermen from other areas and fish industry

representatives new to Kodiak say there is something different about Kodiak fishermen. There's a compelling force that drives him, and it's like a whirlpool that draws others" (as quoted in Freeman 1977: 90}.

This same theme was repeated to this investigator during informal discussions. One fisherman who had fished in other communities besides Kodiak stated, "Well, fishing in other parts of Alaska is okay, but if you want to get into real fishing, go to Kodiak." The emphasis on "real" fishing may serve as a key to understanding Kodiak's fishermen. Fishing in Kodiak is both potentially very profitable, hard and dangerous.

The diversification of fishing in Kodiak in the 1960's created a boom situation. The goal of many job seekers is to get on a "good" boat. A "good boat" means a boat that has a reputation for making high wages (a highliner), is safe and comfortable and has a skipper who is fair and is not a "screamer." "Screamers" are skippers who yell at their crew all during the voyage. Skippers desire a crew that is experienced, works hard,is reliable and only has to be told or shown a task once and will remember it. Reliability is very important. A deckhand may be very good, but if he doesn't show up for "taking off" he's not any good at all. Both skippers and crewmen seek to maintain the same crew and skipper over the years. The crew though will generally keep an eye open for a different boat that provides more advantages or for the opportunity to skipper their own boat.

It is almost impossible to determine what an average “crew share” is for Kodiak. A crew share is the percent of the gross dollars for the catch a crew member will receive as payment for labor on the vessel. Crew shares are different per district, per species and per boat. A rough guess is they range anywhere between 9-25 percent, depending on the fishery and individual vessel. Often the crew will pay a percent of the gas and groceries used during the fishing season.

Table 5 provides an indication of average seasonal gross earnings per boat for Kodiak salmon purse seine, king crab and tanner crab boats over eight years. These figures are somewhat deceptive. First of all, they are averages, in that they include big and small boats and boats that usually fish in other fisheries. Second, they are for the Kodiak district only. They do not include the Bering Sea fishery where many Kodiak boats fish. Gross earnings in that district are much larger. This investigator has heard of crew earnings of $90,000 on a 9.5 percent crew share on Bering king crab boats, which crab for only around four months. Figures like these lure fishermen and potential fishermen to Kodiak. Though not as spectacular as the Bering Sea, good wages can also be made in Kodiak, as shown in Table 5. These are averages and if a person is on one of the top boats, very profitable incomes can be made.

Earning these high wages, however, demands long hours of very hard and dangerous work. The principle is very simple. The fish are out there, the season is open, and you can catch all you can, even if this means

TABLE 5

GROSS EARNINGS PER BOAT OF SELECTED KODIAK FISHERIES

	Salmon Purse Seine	King Crab	Tanner Crab
1969	$24,600	$24,600	$ 5,900
1970	19,700	29,405	9,500
1971	11,200	41,000	15,100
1972	9,100	66,800	22,300
1973	6,100	72,600	45,500
1974	22,000	62,903	44,500
1975	14,900	63,800	29,200
1976	45,800	64,800	46,900
	Average "Crew of 5	Average Crew of 3	Average Crew of 3

Source: Sea Grant 1978: 352; 389; 396.

non-stop fishing for 3 or 4 months, or longer. There are no time clocks, and no week-ends or holidays off. For married men with families or men with girlfriends or families it means long periods of separation. Family relations and activities are based on the fish, the season and the tide. This places tremendous stress on family relations (see section on Social Health). The only periods of relaxation are the trips to and from the fishing grounds (if the weather is calm), while off loading their haul in port and during closed fishing periods.

Though the time in dock is more relaxed than while fishing it is still a busy period. There are supplies to replenish, mechanical parts to buy, a new deckhand to hire, equipment to have repaired or purchased, family and business matters and many other tasks that must be attended to. If there appears a certain amount of frenzy occurring in town during a fishing season it's because these things must be done before it's time to return to fishing. Competition for services is intense. All the fishermen needing nets mended or rehung are competing with each other for the services of the net menders. Often it is financially more advisable' to purchase a new piece of equipment than to miss a fishing period while waiting for the old piece to be repaired.

Modern fishing is big business and relies on a very sophisticated technology. The fisherman must be a combination of mechanic, electronics expert, businessman, leader, carpenter, metal worker, know how to work fiberglass plus knowing how to fish. About the only

thing the fisherman doesn't do is overhaul his own engine. The professional mechanic is faster and, for a fisherman, time is money.

The development of the Kodiak fishery had a lot to do with the abundant resources and the island's isolation. The fish were out there, it was just a matter of catching them. In the years just preceding and during diversification there were few support facilities in Kodiak. Any new ideas were fabricated and welded into existence by the people themselves. "We would look at a picture, build it and if it floated, okay!" (informal discussion). The Kodiak fishermen developed their own style of fishing. For example, the first Double Rigged Stern Dragger in the United States was built for use in Kodiak. The use of sonar in shrimp fishery began in Kodiak. Experimentation with the size and weight of crab pots was an ongoing Kodiak development. "Because of the isolation there weren't the specialists around to say something wouldn't work. So the fishermen would say 'let's try it.' They did and were often successful. This reinforced the idea of assertive innovation" (informal discussion).

The boats themselves are quite expensive. Added to this is the cost of fishing gear and deck machinery. There are maintenance costs. Stepping into the cabins of some boats is like stepping into an electronics shop. For example, there are numerous radios (C.B. 'S, V.H.F. and Single Side bands), fathometers, Lorans, autopilots, and radar. There is the ubiquitous stereo tape deck. These items are expensive. There is insurance and license fees. The attempt here is not to detail

items and cost but rather to show the investment that is at stake. This places pressure on the crew, and particularly the skipper, to do wel 1. Where and how fishing is conducted is the skipper's decision which places more pressure on him. Crew morale is dependent on success, which adds yet further pressure.

Besides long hours and pressure to perform, there is the weather and the seas. As mentioned in the section on Physical Location and Setting (page 14), Kodiak experiences very rough weather and sea conditions. The ultimate of this situation is king crab fishing, what Browning calls, "the toughest fishing" (1974: 24). It's the toughest fishing because: 1) the boats must have "live tanks" which can affect the stability of the vessel; 2) stacked pots on deck while moving which lessens the already small freeboard because of the live tanks; 3) hurricane-force winds; 4) seas that are masthead high or higher; 5) temperatures 25 degrees below zero; 6) heavy icing and water so cold a human perishes after five minutes (Browning 1974: 24). These conditions coupled with long hours and financial pressures to produce create hazards. It is quite easy to lose fingers or break bones while handling heavy crab pots in freezing weather on a rolling sea; especially if your hands are frozen and you're seasick. Every year boats and lives are lost. Between October 1977 and October 1978, the Coast Guard reported 47 incidents involving a problem at sea. Ten died and nine were injured.

The effect of a death in a small community where "everyone knows everyone else" or is related to them, has an immediate impact. Everyone is affected and reminded of how dangerous a fishing occupation is. The casualty descriptions for the vessels include fire, disabled, sunk, capsized, injury, sinking, foundering and other problems (U.S. Coast Guard records). These statistics do not provide the emotional side to this situation. For a better understanding of death at sea, see Appendix A. In front of the Harbormaster's office in Kodiak is a monument composed of an anchor and a mast. On the plaque is inscribed the following: "Dedicated: In memory of all Kodiak, Alaska, fishermen who have lost their lives at sea." This is an ever present threat that all fishermen and their families 1 ive with.

The old saying of "work hard, play hard" applies to these fishermen. Recreation ashore can get somewhat boisterous for some fishermen. It's almost as if the intensity of play must equal the intensity of work to maintain a balance of nature. Drinking and partying are common activities. The "bel 1 gets rung" quite frequently. This expression refers to ringing a bell in a bar when someone buys the house a round. There are stories of "six packing" or "casing the place" where a six pack or a case of beer is bought and put in front of every person in the bar. In reference to drinking on the boats, one fellow said, "Ifyou think putting a boat into a bottle is difficult, try putting a bottle into a boat" (informal discussion). Though this may not always be the case, drinking is frowned upon by many skippers.

The low female to male ratio creates an imbalance for those fishermen looking for companionship. The few unattached females are competitively sought after. Bars serve other functions besides entertainment. If you want a job that's where you go to get one. Business transactions are conducted in bars. As one fellow put it, "You'll see a $50,000 business transaction occur based on a handshake. " Besides business, information is passed; where are the fish, how's the weather look, when do you think the tie-up will end, etc. Bars serve social functions and provide an environment for "shop talk." This is not to imply that all fishermen spend time in bars. Many participate in other social and recreational activities. The library in a fishing community is one of the most highly frequented institutions by fishermen. Reading is a major activity both at sea and on land. However, bars are important for business and information as well as for social relations and recreation.

This brief overview has attempted to highlight and describe in general terms the lifestyle of fishermen. A comprehensive description is impossible within this project. However, anyone interested in recent works in this area should look at Anderson and WadeI's North Atlantic Fisherman (1 972), Browning's Fisheries of the North Pacific (1974), Fricke's Seafarer and Community (1973), Orbach's Hunters, Seamen, and Entrepreneurs (1 977), Smi th's Those Who Live from the Sea (1 977), and a novel by W. B. McCloskey The Highliner.

Predominant Lifestyles: Cannery Workers. The historical pattern of cannery work in Kodiak is similar to the rest of Alaska. Up to the

1970's and the diversification of the fishing industry, cannery work was seasonal in Kodiak. The famous "China crew" composed of Chinese, Japanese and later Filipinos were brought up to Alaska, under contract, from west coast cities. They came for the summer salmon season in wooden sailing ships in the early years, to return to their homes when the season ended (Huyeke 1960). For a more detailed look at cannery workers and canneries in the early years of Alaska see Freeburn 1976 and Liljeblad 1978a and 1978b. The cannery workers in Kodiak were not and are not exclusively Orientals, Filipinos and Mexicans. Actual figures are difficult to obtain. One guess is that about 70 percent of the cannery workers are Filipino, Vietnamese, Korean, Mexican and Native. The majority of these are Filipinos. The remaining 30 percent are Euro-Americans (informal interview). Distribution in the canneries also varies. Some canneries use Filipinos almost exclusively. Others use Native, Euroamericans and Mexicans. Others have mixed crews (informal discussion). The early 1960's saw an influx of white college students and "Hippies" looking for work.

With diversification the pattern changed. "Between 1970 and 1975, substantial changes occurred in Kodiak's labor market. The increased importance of king crab, tanner crab, and shrimp caused canneries to significantly reduce their seasonal employment pattern which had been highly dependent upon salmon" (Kodiak Island Borough Overall Economic Development Program Committee 1978: 34). With year around employment, cannery workers began to take up residence in Kodiak. One estimate for the Filipino population, is that about 50 percent of the labor force

are transients and the other 50 percent are permanent resi dents (i nformal interview).

Like fishermen, the cannery workers are financially dependent upon “the catch.” Cannery workers are paid by the hour and the more fish the longer the hours. Workers can work for 12 hours per day, or more, for 7 days a week. As one worker put it, “When you get fish, you work straight through” (informal discussion).

As mentioned, there are resident and transient cannery workers. For the resident Filipinos, the housing situation has been quite limited. To adapt to this situation multiple families will live in one house. The excess of this situation is the “hot bunk” where two people share a bed; one person sleeps while the other works. The bed never cools off. Many single Filipinos will live with families who have houses. This has two advantages. First, the bunk houses are expensive and secondly, by not being tied to a specific cannery (by living in their bunkhouse) jobs can be taken at whatever cannery is processing. There are some boarding houses in town and some canneries have bunkhouses. These are for the transient workers. Room and board can be $70.00 per week for example. The bunkhouses have many small rooms with usually 3 or 4 people to a room. Men and women are separated. According to discussions with transients, life in the bunkhouse is, in general, interesting and hospitable. There is a chance to meet a wide arrayof people. There is a chance for a social life without going downtown. The best part of bunkhouse life is the comradeship that develops. People lookout for each other and

help each other, particularly after a 16-hour day. Troubles within the bunkhouse are usually settled among the transients themselves. There is usually a mediator. If it gets out of hand, a company official will step in.

The transient Filipinos come from both the U.S. and from the Phillipines. The Euroamericans come from all over the Lower 48. The transients form a tight-knit group. This is because they have common interests and share a common lifestyle. Most come to Alaska with little money and are looking for work. Since the transients travel around they hear the latest news. This information is shared and is critical for these people since their jobs depend on it. Examples are: where there are jobs, how much is being paid, how do you get there, will the cannery pay your way, are any bunkhouses open, what's the social situation, are there any racial problems, and what are the relations with town, if there is a town. One transient said that it was absolutely imperative to have friends (other transients) to provide a "home feel ing. " The transients are always looking for a better job. As one of them put it, "Most transients are waiting for the gas pipeline to open. They'll work in the canneries to get the bucks to travel to a better job. Often jobs just fall into place" (informal discussion). One worker compared transient work to the "fruit tramps" of years ago. If you made a bundle, great. If not, YOU scrounged to get the money to get home. Many of these transients "walk the dock" trying to get on a boat which is considered a step up from cannery work.

Besides money, a lot of people came looking for adventure. Others are looking for a fresh start and a chance to get away from city life. A few are running from the law. In general, both the men and women are an independent breed (informal discussion).

One transient described the life as follows:

> Kodiak is a town of extremes. You're either lonely or you have friends. You drinkor you don't. The canneries are working or they're not. You're rich or you're poor. You either have housing or none. If you work, you work hard; if not, you're begging for a break (informal discussion).

The person added as an afterthought that, "most of the transients would not trade this experience for anything."

Predominant Lifestyles: Coast Guard. Sixty to seventy percent of the Coast Guard's flying time is spent on fisheries patrol (Alaska Geographic 1977:79). Besides this enforcement activity, the Coast Guard also participates in search and rescue missions. In fiscal year 1975 the Coast Guard had 346 cases of Search and Rescue. There were 102 lives saved and 653 people receiving assistance. Twenty-five point three (25.3) million dollars in property was involved (Alaska Geographic 1977:78-79). Aid to navigation is also the Coast Guard's job. This includes buoys, lights and radio beacons (LORAN stations). The Coast Guard also inspects and registers ships.

The work for the Coast Guard is hard. They work 55 hours per week. The civilian employees on the base work over 40 hours per week. Despite the tough climate and hard work, the Kodiak base has one of the highest

re-enlistment rates in the country. Part of this may be because the job can be quite exciting and rewarding; i.e. saving lives and boarding ships that have broken laws. An article in the Kodiak Daily Mirror (Tuesday, February 20, 1979; Vol. 39, No. 36) describes the seizing of a second Japanese fishing boat within a month, which indicates the level of enforcement.

Besides these rewards, life at Kodiak has an appeal which may account for the re-enlistment rate. There is hunting and fishing and all the other civilian activities around the island. On base there is a bowling alley, auto hobby shop, woodworking shop, ceramics, raquet ball court, gym, theater, etc. Barracks life is quite unusual for servicemen in that there are usually only two men per room. According to one Coast-guardsman, "We tend to lean away from separation of ranks. The rules are the same as in other services but we don't push it. We tend to emphasize the human factor. Mainly because the boats are smaller and there may be only one officer on board" (informal discussion).

The Coast Guard base is basically autonomous in terms of utilities. It is its own little community. However, there are relations with the city. The dependents' children go to Borough schools. Fire and police services will aid each other. Hospital services are shared. Many of the officers involve themselves in the service clubs of the community. This helps establish communications so problems can be avoided.

Summary. This section has shown how the residents of Kodiak are adapted to and economically dependent on their maritime enrionment. 1) Their employment is to a large extent, either directly or indirectly related to the fishing industry. 2) The work is very demanding, often dangerous and seasonal in nature. 3) The type of work requires close cooperation though there are also conflicts. 4) The Kodiak milieu and exogenous opportunities have in recent years created a diversified, innovative, aggressive and very successful fishery. 5) The lifestyles most directly related to the fishing industry are structured by the requirements, both naturally and culturally, of that industry.

Cultural Values and Personality Characteristics

Without an extensive, in-depth and long term investigation, the cultural values and personality characteristics of an entire community are extremely hard to assess. This is particularly true of an urbanized, heterogeneous community like Kodiak with its varying ethnic and occupational groups.

In order to gain an understanding of the cultural values and personality characteristics of Kodiak, residents were asked to describe these features themselves. There is a strong congruence in their responses. The strongest and most frequently mentioned value is independence. This was closely related to people seeing themselves and others as individualists. Associated with independence and individualization was the value of tolerance. People were seen as accepting large varieties of behavior and accepting individual differences. This should not be surprising.

People who value their independence would also tolerate others' right to go their own way. This independence is the most frequently mentioned value and is in accordance with results from research on East Coast fishermen. When asked what they received from their work, "Independence" was the highest response. Second was "challenge" and the third highest response was "outdoors" (Poggie and Gersuny 1974:56).

Another value is hard work. This value, however, has a close association with the value of tolerance. As one person put it, "People here have a strong tolerance for different lifestyles. Lots of freedom of choice if you want to work and have some skills. A lot of personal freedom" (informal interview). Another said, "There's a strong reaction against people who want food stamps and people who don't want to work when work is available" (informal discussion). Apparently, Kodiak residents feel people have the right to be independent and live whatever lifestyle they desire provided they earn it and not expect it to be given to them.

Hard work is also a very strong value among the Filipino community. This may account for the ill feeling about one of their members going on welfare. It is discouraged not only because it goes against the value of hard work but also reflects negatively upon the group (informal discussion). For the individual experiencing economic difficulties, offers of assistance are extended either by individuals or from the Filipino community at large. Some residents perceive Kodiak as an almost classless society. There are no sharply defined symbols of class

separation such as place of residence, dress or limited access to entertainment and recreation. However, most Filipinos in the community are cannery workers. Based on the criteria of income alone, cannery workers would be considered working class. According to residents, there are no Filipinos known to be working on fishing boats. Though there is no discrimination in terms of access to recreation or entertainment, there are economic barriers. There are class, occupation and cultural preferences in terms of religious affiliation and entertainment facilities (informal discussion).

Though there is a negative attitude towards those who want without having to work for it, there is a strong value for sharing and helping. This is perhaps best stated by one resident who said, "If a fisherman has a bad season because of screwing around or drinking, he will get scorned. But if he has a bad season because it's a bad season, he'll get lots of hel p" (informal discussion). Another resident stated, "People are generous with what they have. For example, people with a boat will take people who don't have a boat out for parties or for hunting and fishing" (informal discussion).

People in Kodiak live very close to death. Each year the ocean takes its toll. Though they appear to accept it as part of the way of life they are deeply affected by it. They understand when something happens. As one person said, Kodiak is the "best place to live if something tragic happens. People rally around you. Really supportive" (informal discussion).

Other less mentioned descriptions of Kodiak residents are that they are friendly, adaptable, proud, straightforward ("don't play games") and talented. This last aspect may account for the large number of artists and writers on the island. The Kodiak Dancers are an internationally famous Russian dance group on the island. There are three newspapers in this small community. There are numerous writers who have published books as there are numerous books about Kodiak. Local arts and crafts are displayed in the community's art stores. One artist said Kodiak was great for artists, craftsmen and writers. There was such spectacular scenery for creativity and lots of bad weather to keep you inside creating (informal discussion).

As mentioned in the beginning of this section, cultural values and personality characteristics are difficult to assess. However, there appears to be a thread of consistency running through the traits listed above. The information suggests that these values and characteristics are related to Kodiak's environment, natural resources and major occupations.

Occupations i n Kodiak are governed by the natural behavior of the fish and shellfish overlayed by management regulations which constitutes the fishing "seasons." The salmon appear in Kodiak waters for a specific period. When they do arrive, their numbers build to a peak, then diminish. The crab seasons are short. If a fisherman is going to earn enough money to take him past the slack periods, it must be earned during these periods. A fisherman must fish intensely and is in competi-

tion not only with the climate and ocean environment but also with other fishermen. The fisherman who works the hardest and is innovative will be the most successful. Fishing is an independent life. A fisherman is tied to land by a small piece of line. Ingenuity and hard work will determine success or failure once that line is untied and fishing begins,

This intense seasonal activity affects the canneries the same as it does the fisherman. The fish arrive in rapidly increasing numbers. They must be processed quickly before they spoil. The result is long hours that get longer as the season nears its peak.

The business community is affected by the seasonal peaks. Demands on goods and services builds during the season. A frantic pace is reached trying to fill orders and keep shelves stocked. The lines grow longer as do the hours. Because of Kodiak's island situation and semi-isolation, all freight must arrive by boat or plane. According to one business person, a person in business in Kodiak must have tremendous patience. Orders are wrong, misplaced, backlogged and lost. "We feel we get the junk because the wholesalers know freight is so expensive we won't return it" (informal discussion). Because of freight problems and isolation, a business person has to be imaginative and innovative.' For example, many times flowers will arrive for a wedding but the greens used for filler won't. "You'll have to make do. You talk to people down below and they say you can't do a wedding without flowers. Our response is, 'Oh yeah! We've done it'" (informal interview). A business person must make sales during the

high demand periods of the seasons just like the fishermen and cannery people.

Government people's pace also quickens during the intensity of the fishing seasons. There are more people in town, more trouble, more fires, more services to be provided. The Coast Guard is busier because there is more going on in the oceans. Fish and Game becomes more active in managing the fishing. Many of the school teachers, who are away from their teaching jobs fish during the summer. So they also are involved in the hard, intense activities.

The end result for the residents of Kodiak is a pattern of intense activity (long hours, hard work and physical risk) during short periods set off against periods of less intensity. In order to adapt to and succeed within this pattern, the above-listed values and personality characteristics are ascribed to. Whether this lifestyle attracts people who hold these values and personality characteristics or whether it develops them within people is not at question. The point is that the nature of the environment, the natural habits of the fish, and the associated occupational and social organization require these values and personality characteristics.

Seasonal Recreation and Community Events. Outdoor recreation and community events appear to be another strong value for the residents. During the field-work portion of this investigation numerous residents

were seen participating in outdoor forms of recreation. This was confirmed by the residents.

During the winter there is cross-country skiing and ice skating. There is an active snowmobile group. House parties provide a chance for socializing that during better weather can occur outside. On January 14th (Russian New Year), a Russian New Year's Day Masquerade Ball is held. Because of the Russian Julian calendar, two Christmases and two New Years are celebrated. In March Praznyk is held, which celebrates the best actors and supporting actors from the stage play "Cry of the Wild Ram."

In the last week of May or firstof June (at the highest tide) there is the annual grunnion run. This lasts a couple of days and people catch the grunnion for food. It is as much a social event as an economic event. Dolly Varden sport fishing occurs in May. Clamming takes place in March, April and May. The spring King Crab Festival includes events like crowning the Crab Festival Queen, seal skinning contests, crab races, a local talent show, a 45-mile marathon race and a climb up Pillar Mountain.

During summer, residents participate in hiking, picnics, beachcombing, fishing and boating. There are raft floats down the Karluk River. A Buskin River raft race is held in June. The purpose is to build the most imaginable raft and race down the Buskin. The Coast Guard has a July Fourth picnic for all personnel and families.

The highlight of August is "The Cry of the Wild Ram", a play put on by local artists each year depicting the settling of Kodiak by the Russians. The end of this play marks the beginning of the Kodiak State Fair and Rodeo. The stock is provided by local ranchers. Fall also sees the "Purple Bubble Ball" put on by the Elks. On August 4th, there is the Coast Guard day picnic. This is a major "feed" with music, dancing and games for children and adults. Sport salmon fishing and hunting occur during the fall and are very important recreational and resource activities.

Subsistence. No subsistence hunting is allowed in Kodiak except for seals and sea lions and these by Natives only. A license is required for sports hunting. There is a limit of four deer and deer hunting is actively pursued by Kodiak residents. One informant stated that some residents don't buy all their meat but rather obtain much of their supply through hunting and fishing.

Subsistence fishing for salmon is legal upon acquisition of a subsistence permit. Each permit allows 25 salmon for the permit holder and 25 for each member of the permitholder's household. Additional increments of 25 fish can be added to the permit if an individual can justify the need. In 1978 over 800 subsistence fish permits were issued. For 1979, 945 permits were issued as of August. According to several residents, subsistence permits and the hunting permits, particularly for deer, are a necessity for the poor residents. "Anyone who needs it Should have it" (informal discussion). There is a special Class 5A

sport hunting, fishing and trapping license that costs 25¢ and is similar in function to a subsistence permit. To obtain it, a resident must have received state welfare or have made less than $3,600.00 for the year. No records are available as to the number of these permits for Kodiak. For an analysis of the cultural significance of subsistence for the Kodiak natives, see Davis-1979.

Summary. When asked to describe their cultural values and personality characteristics a strong congruence of agreement appears among the Kodiak residents. Those traits most frequently mentioned are:

- Independence
- Tolerance
- Hard Work
- Sharing and Helping
- Friendly
- Adaptable
- Proud
- Straightforward
- Talented and Artistically Inclined

Kodiak displays a seasonal pattern of recreational activities, both social and subsistence oriented. Besides making their living off the sea (directly or indirectly), the residents recreate in the natural environment.

The cultural values and personality characteristics appear related to Kodiak's environment, natural resources, and major occupations. The seasonal fishing cycle, and fishing itself, creates a dynamic vacillation between periods of intense activity and more relaxed periods. Because of the interrelatedness of the community, most residents are affected by the shifts in activity level.

The intensity of fishing and the requirement for quick processing of the perishable product require hard work, hence its being held as a value.

Sharing and helping as. values may be attributed to the dangerous and isolated nature of fishing, the small community and the rapid turnover of population. Also, there is almost an understanding throughout the community that, for the benefit of all, everyone must pitch in and make sure the year's catch is processed. This sense of cooperation and assistance extends to personal relationships.

The isolation, island location, beautifully-rugged environment, and harsh climate may be related to the adaptable, proud, straightforward values expressed by Kodiak residents. And these same conditions may be what attracts and produces the talented and artistic.

Political and Governmental Organization

This section will examine the political and governmental structure in Kodiak. For purposes of analysis, this structure has been divided

into General Interest Organizations and Special Interest Organizations. General Interest Organizations are groups that are mandated to provide services to and represent the interest of the general public. In Kodiak, these are represented by the governmental organizations. Special interest organizations are groups that are organized to serve the special interests of their members. These can be formal, as in named associations, or informal, such as neighborhoods. Following the presentation of the structure, an analysis of the political dynamics of Kodiak will be discussed.

General Interest Organizations. The major general interest organizations on Kodiak are the local, state and federal governments and/or their representatives.

The City of Kodiak was incorporated September 11, 1940. It is a "home-rule", first class city, with a Council/Manager form of government. The City Council has six councilmen and a mayor, elected at large. The city has eight basic departments: Public Works, Finance, City Engineering, Parks & Recreation, Library, Fire Department, Police Department, and Cargo Dock/Boat Harbor. In 1975/1976, there were 74 city employees (Simpson Usher Jones 1977 :78). "Kodiak has all legislative powers not prohibited by law or charter except for those mandated to or subsequently assumed by the Kodiak Island Borough" (Alaska Consul tants 1979:513).

The Kodiak Island Borough is a second class government which includes all of Kodiak Island and some of the surrounding islands. The Borough was incorporated on September 24, 1963. It has a manager form of government. The Borough Mayor and the Borough Assembly are elected. The Borough has three mandatory powers: assessment and collection of taxes, education and planning, platting and zoning. It has also assumed area-wide health powers.

According to Alaska Consultants (1979:517) the 1977/1978 property tax rates for the City of Kodiak were 16.33 mills, the same as the previous year. Of this, 9.10 mills were remitted to the City, 2 mills were retained by the Borough for administration and 5.23 mills went for education. For this fiscal year, the mill rate was set at 16 mills, the assessment for schools dropping to 5 mills.

The Borough does not levy a sales tax. However, there is a 3 percent sales tax levied by the City of Kodiak. A portion of this tax is given to the Borough in lieu of personal property taxes which are levied throughout the Borough except within the City's corporate boundaries.

The largest state department in Kodiak is the Department of Fish and Game. It is composed primarily of the Western Region of the Commercial Fisheries Division. Other State agencies represented in Kodiak are: the Court system, Departments of Highways, Motor Vehicles, Public Safety, Public Works, and the Divisions of Corrections and Social

Services. There is an Employment Center and a National Guard Armory. Many of these agencies have sub-departments represented in Kodiak.

The federal government is not highly visible on Kodiak with the exception of the Coast Guard. However, it has its effect in terms of its policies. The largest branch, of course, is the Coast Guard. The next largest federal operation on Kodiak is the National Oceanic and Atmospheric Administration (NOAA). It includes National Weather Service, National Ocean Survey and National Marine Fisheries Service. It performs additional duties also related to the maritime environment, such as Coastal Zone Management, Marine Mammals Protection and Offshore Shrimp Fisheries.

The three remaining federal agencies on Kodiak are: the Federal Aviation Administration (regulating air commerce and air safety); the United States Forest Service (managing national forests) and the United States Postal Service.

Kodiak is represented in the Alaskan State Legislature through the following representatives. Senator Robert Mulcahy represents the entire Kodiak Island and the Aleutian Chain. Representative Fred Zharoff represents the City of Kodiak and the eastern end of the island. Representative Alvin Osterback represents the northern side of the island and some of the peninsula. ,

Special Interest Organizations. These can be as diverse as there are common interests that bring people together. These groups become political when they take action to promote the goals of the organization. This may include anything from persuading the City to allocate funds in a certain direction, or to making an effort to gain the use of public facilities for meetings. It is beyond the scope of this report to detail each special interest organization in Kodiak. Certain of the more prominent organizations will be discussed as examples of these groups.

As might be expected, Kodiak has a number of special interest organizations that are related to the fishing industry. The main organizations representing the fishermen are the Alaska Shrimp Trawler's Association (shrimp and bottomfish), the United Fi shermen's Marketing Association (crab and salmon), the Kodiak Island Setnetter's Association (salmon gilnetters), and a small boat halibut association.

The Alaska Shrimp Trawler's Association and the United Fishermen's Marketing Association represent their members in two areas. First they negotiate with the canneries on prices paid fishermen for their fish. These organizations are not unions. There are no strikes in Kodiak. Rather, there are "tie-ups" or "price disputes." Besides price negotiations, these organizations also serve as watchdogs for the fishermen's interests. They monitor management activities and proposed legislation that may affect the fishermen, before it becomes law. They also represent the fishermen on the State Board of Fisheries and North Pacific

Fisheries Management Council where fishing regulations and management are developed.

The Kodiak Island Setnetter's Association is a parent organization encompassing three regionally based setnetter associations: Olgo Bay/ Moser Peninsula Area, Uganik Bay Area and the Larsen Bay Area. Most setnetters live during the summers in cabins at their setnet site. Due to this residency fact, the three smaller associations were formed. Being in the same general area, with common interests and close communication, promoted this structure. During the winter the Kodiak Isl and Setnetter's Association assumes the responsibilities of the three regional organizations. It is a process of fusion and fission depending on the season. These organizations differ from the Alaska Shrimp Trawler's and the United Fishermen's Marketing Associations in that they don't negotiate fish prices. This is done individually. Their main function is to watch out for the special interests of the setnetters. In this regard they are similar to the other two organizations. They differ in one area, however. Because many of the setnet sites and cabins are located on Native Claims land, the associations monitor this settlement.

Other organizations related to the fishing industry include: the Alaskan Fishermen's Union representing the cannery workers; the Kodiak Seafood Processors Association composed of and representing the processors in Kodiak; and the Kodiak Fishermen's Wives Association, which

represents the interest of the fishermen's wives and the fishermen themselves.

Special interest ethnic organizations are also a strong force in Kodiak. As the Filipino community in Kodiak grew during the 1970's, so did their desire for an organization to represent them. The first Filipino organization was the Filipino Association of Kodiak Alaska (FAKA) which developed in the latter part of 1973. This group was organized for social purposes and eventually became inactive due to lack of participation. In 1977 a new organization, the Filipino Community of Kodiak Alaska, was organized. Its goals are to improve the life of the Filipinos in Kodiak and to improve relations between the Filipino community and other groups on the island.

The Association has attempted to improve the lives of its members because of relatively low wages, perceived lack of opportunities and a sense of some discrimination (informal discussion). The majority of the Filipinos are cannery workers, though a few have obtained other types of jobs in the community. The cannery workers are immediately vulnerable to any fluctuations in the fishing industry. Housing has traditionally been a chronic problem for the resident and transient Filipinos, as well as other people in Kodiak.

Native organizations in Kodiak City include the regional offices of Koniag and KANA and the Natives of Kodiak Village Corporation. For an analysis and comparison of these organizations, see Davis 1979.

Attempts to improve inter-ethnic relations stemmed from conflicts between Filipinos and other ethnic groups (see section on Social Health). Another group has developed in Kodiak also concerned with improving ethnic relations. This is the Multi-Cultural Forum Council, which grew out of a three-day workshop held in October 1978. The goal of this group is to bridge the gap between not only ethnic groups, but between people in general (Johnson 1978).

In reference to the variety of organizations in Kodiak, one resident stated, "On any night I can find at least two meetings to go to, just within my area of interests" (informal discussion). The organizations listed below would indicate the truth of' this statement. There are Democrat and Republican organizations in Kodiak. Service organizations are represented in Kodiak and are quite active. Included are: Rotary, Lions, Elks, and Masons. The Business and Professional Women, the American Association of University Women and the National Secretaries Association have chapters in Kodiak. The Veterans of Foreign Wars and the American Legion both have lodges and are very active. Business interests are represented in the Chamber of Commerce and the Kodiak Retailers Association. Examples of recreational organizations include the Society to Promote Amateur Radio in Kodiak (SPARK), the Snow Bruins (a snowmobile club) and rifle and skeet shooting clubs. The Kodiak Historical Society operates the Baranof Museum and promotes historical interests on the island. Kodiak-Baranof Productions are a culturally oriented group who are responsible for producing ".The Cry of the Wild Ram", the Kodiak Russian Dancers and the Children's Theater. Religious

concerns of the residents are reflected in Kodiak's church organizations. There are approximately 17 different churches listed in the Kodiak phone book.

Political Dynamics. The description provided above presents the variety and range of interests or organizations existing in Kodiak. It does not, however, describe how these and other organizations (or individuals) take political action, i.e., how they get things done.

When asked how things get done in Kodiak one resident answered with the not very encouraging response, "I've been here fourteen years and I still don't know" (informal discussion). However, discussions with other residents indicated there were certain factors which set the conditions and provided themes for Kodiak's political style. The following factors occurred consistently in these discussions.

The first of these factors is the relatively small size of Kodiak. This factor was summed up by one resident who said, "This town is small enough so the residents know immediately how the government's actions will affect them. It's small enough so people can rally and organize quickly. There are strong overlapping lines of communication. People know who to go to" (informal discussion). Kodiak's relatively small size allows for "face to face" interaction. People know each other in a variety of settings and role relationships. If something occurs, they know whom to see about it. Because the person is known from other

situations, the interaction will tend to be informal rather than formal and bureaucratic.

The small size and face to face nature of the community also allows people to organize quickly. All those who are affected or potentially affected by an issue are interrelated through intertwining sets of social and occupational networks. With limited shopping, recreational and other service opportunities, people tend to have contact with each other more frequently. This maintains a high level of information being exchanged and increases the ability and speed of organization.

Isolation is the second factor relating to political dynamics. Kodiak's island location, its intense occupational activities and its distance from large metropolitan centers makes it somewhat isolated. In this sense it is not much different from other rural Alaskan communities. These conditions tend to enhance concern about local political issues. Events occurring in Kodiak are more visible than in larger urban areas. According to some residents, this concern with local issues becomes somewhat overdrawn during the slower winter months. "In winter Kodiak tends to turn into itself. It gets nitpicky." Another resident said there were certain, "safe issues everyone can complain about when they run out of other issues. They're Wien, KOTV, the telephone and the Post Office. They're here all the time, affect everyone and aren't Kodiak based" (informal discussion).

It should not be inferred, however, that because Kodiak is isolated the residents aren't aware of outside events that affect their interests. For example, the fishermen are extremely knowledgeable regarding events that may affect them. Their organizations and the University of Alaska's Marine Advisory Program provide up-to-date information on political, economic and technological concerns. There are numerous trade magazines: National Fisherman, Alaskan Fisherman's Journal, the Alaska Fisherman, Fishing Gazette, Seas and Coasts, and the Fishermen's News. The Kodiak newspapers also provide up-to-date industry information.

They are also very sophisticated in understanding the political process and how to work with it. With the 200 mile limit and the increasing importance of Kodiak's seafood products, there is increased responsiveness to the fishermen in Washington, D.C. (informal discussion). The fishermen also understand the media. A reporter for Jack Anderson's syndicated column has established relations with the Kodiak fishermen (The Kodiak Mirror, January 17, 1979).

The third political dynamic factor involves length of residence. According to the residents, length of residency makes a difference in terms of political understanding and power. This is understandable given the transient nature of Kodiak's population. Besides the yearly seasonal transients, there is a turnover of governmental staff. One resident said, "The first year you're not accepted. People don't invite you in because in all likelihood you're not going to stay" (informal discussion).

Anyone who stays in Kodiak for a length of time would build a social network that could be activated politically. These individuals are seen as being effective. "Ifyou really need help, you go to these people. They know how the system works" (informal discussion). This ability "to get things done" is seen by some residents as achieved power as opposed to the ascribed power associated with governmental positions. For anyone interested in politics, this achieved power can make a difference; though, as one person said, "There's lots of leaders here but it's tough to get followers. There's a real chance to get into politics if you want to make that sacrifice" (informal discussion).

Segmentary interests is the fourth factor in Kodiak's political dynamics. Political organizing in Kodiak is a process of alignment and separation. If an issue arises that will affect numerous groups or individuals, they will fuse together to confront the issue. At the resolution of the issue the groups and/or individuals will separate back to their respective positions. An example of this are the Processors and Fishermen. Though these two groups may be in conflict over price settlement, if an issue arises that affects the entire fishing industry, they will cooperate.

Special interests is the final factor in Kodiak's political dynamics. One theme that appears to exist in Kodiak politics is an' attitude of "business as usual" unless a specfic issue affects a group. "The fishermen hold economic power and some social influence. However,

they aren't as active as they could be because they're fishing. They seldom use their power, but when they do, they get their way" (informal discussion). Another resident involved in government noted that if an issue affects people, it will be standing-room-only at public meetings. "A lot of our meetings are affected by the radio. People will hear the meeting live on the radio and will come over in their slippers" (informal discussion).

Ties to Regional Government. As stated above, the fishermen have extensive ties to regional, state and federal government. In reference to direct personal ties one resident said, "You know your state representatives. You bump into them all the time. You know your local government all the way up to Washington" (informal discussion).

Another resident said that Kodiak was not tied to Anchorage, but rather to Seattle. "We are more reliant on Seattle. Everything we eat, do, and drive comes out of Seattle. If you want a skiff built, it's cheaper to fly down to Seattle, pick one out and have it shipped here than to buy or have one built here" (informal discussion). Because Kodiak is so heavily fishing oriented, its ties with Seattle are strong because of the boat building and maritime supplies in the Seattle area and because Seattle also has a fishing community. Many of the fishermen are from Seattle and have family, friends and, for some, residences there they return to after the fishing season. Wein has introduced new direct flights between Kodiak and Seattle (Kodiak Times Vol. 3. No. 51, 1979:1-3). Western has had this run for several years.

"The tie to Juneau is minimal though the phone is used a lot" (informal discussion). This statement is perhaps a bit deceptive vis a vis Kodiak's relationship with Juneau. Though Kodiak shares a basic Euro-American cultural and historical pattern with both Juneau and Seattle, its ties vary with each community. As noted stove, Kodiak has economic, social and lifestyle ties with Seattle. The strongest ties between Kodiak and Juneau are their shared state residence and their political relationship. Funding and grants, for example for educational activities, come from Juneau. The State 'Legislature is located in Juneau and Kodiak is politically represented there. Because Juneau is the center of state government, decisions and laws that affect Kodiak, as well as the restof the state, are enacted there. The various state agencies have their administrative centers located in Juneau. The policy of these agencies and the legislative decisions and laws all affect Kodiak, which makes legislative activities in Juneau of extreme importance to Kodiak. On the other hand, because of Kodiak's importance as a fishing center, and because of the importance of fish to Alaska, Juneau is politically sensitive to Kodiak.

Summary. 1) Kodiak is politically structured in terms of both general interest and special interest organizations. 2) There is a large contingent of government-related organizations. 3) There are numerous special interest organizations based either on occupations, ethnicity, recreational or other interest. 4) Factors influencing Kodiak's political dynamics include: small size, isolation, length of

residency, segmentary interests and special interests. 5) Kodiak is culturally tied to Seattle and politically tied to Juneau and Washington.

Social Health

This impact category describes the more prominent areas of social problems in Kodiak City. The social conditions of a community can be used as social stress indicators measuring that community's adaptation to changing conditions. Within this category, the general social problem areas of alcoholism, mental health, crime, and race relations are examined. Each of these areas contain a further breakdown of specific social stress indicators; for example, prostitution is placed under the rubric of crime. The community's institutional response to these problems is also presented. Table 6 is presented prior to the discussion of these areas. It provides some of the more significant vital statistics and Public Assistance data for Kodiak. These data are placed here, rather than in the earlier section on population characteristics, because of their affinity with the other data in this section as social stress Indicators.

A few points need mentioning concerning the collection and utility of the data presented in this section. For some indicators, data was available at the Kodiak Borough, Kodiak Island or Southcentral Regional level only. Figures specific to Kodiak City as a distinct unit were not available separately. The separation of community data serves no purpose for some of the agencies reporting the information. The time

TABLE 6

VITAL STATISTICS ANO ADULT PUBLIC ASSISTANCE

FOR KODIAK CITY

Year	Marriages	Divorces	Deaths	Bi rths	Adult Public Assistance [1]	Kodiak City [2] Population
1959	N/A	N/A	10	100	N/A	N/A
1960	N/A	N/A	24	153	N/A	2,628
1961	N/A	N/A	N/A	N/A	N/A	N/A
1962	N/A	N/A	N/A	N/A	N/A	N/A
1963	N/A	N/A	N/A	N/A	N/A	N/A
1964	N/A	N/A	24	157	N/A	N/A
1965	79	29	30	126	N/A	N/A
1966	91	37	33	169	N/A	N/A
1967	88	26	27	134	N/A	N/A
1968	97	N/A	35	159	N/A	N/A
1969	81	N/A	42	161	N/A	N/A
1970	101	N/A	42	143	N/A	3,798
1971	123	N/A	38	166	N/A	N/A
1972	115	N/A	30	113	191	N/A
1973	126	N/A	30	110	193	N/A
1974	110	N/A	49	131	163	N/A
1975	116	N/A	31	136	159	N/A
1976	136	N/A	27	156	158	N/A
1977	N/A	N/A	N/A	181	172	4,260
i 978	N/A	N/A	N/A	N/A	? 60	N/A
1979	N/A	N/A	N/A	N/A	171(partial)	N/A

Source: Department of Health and Social Services. 1959-1979. Office of Information Services. State of Alaska.

[1] These figures are for Kodiak Island and represent total caseload for one selected month in each indicated year for Aid to Families with Dependent Children, Aid to the Disabled, Aid to the Blind and Old Age Assistance.

[2] From Table 1.

depth of the data is quite shallow for certain indicators and there are often yearly gaps of information. This lack of time depth prevents analysis for long term trends. Yearly population figures are not available for Kodiak City. As such, rate changes can only be estimated against what population figures are available. Given these provisos, the data are best used as standards of measurement to base future changes against.

Alcoholism. Kodiak Island Borough Health Resources Council's August 1975 report noted alcoholism as Kodiak's number one health problem. In reference to how extensively alcoholism affects people, one resident noted, "... like 9out of every 10 people in Kodiak, I have either had friends or relatives that have been affected by alcohol abuse and/or addiction during my lifetime" (Kodiak Fish Wrapper and Litter Box Liner Vol. 4 No. 2, Feb. 1978:2). Statistics support this contention. In 1975-1976, 14 percent of all admissions to the Kodiak Island Hospital were alcohol related. Twenty-two point six (22.6) percent of the Kodiak Fire Department's ambulance responses were related to alcohol. "In addition, the court system reported that 33 percent of the Superior and District Court cases combined were alcohol related" (Simpson Usher Jones 1977 :45). Statistics from the Kodiak Council on Alcoholism show that in 1977, 51.4 percent of court cases were alcohol related. This is quite an increase from the 1975 figure of 36.7 percent and the 38.3 percent of 1976 (Kodiak Council on Alcoholism 1978:1). The Kodiak Chief of Police estimated that about 75 to 80 percent of complaints were alcohol related. A Kodiak social worker also estimated, "that 80 percent

of our entire caseload is alcohol related. Of that 80 percent, I would say that child abuse and neglect are the highest on the list of alcohol related complaints" (.Kodiak Fish Wrapper and Litter Box Liner Vol. 4 No. 2, Feb. 1978:8-9). Table 7 tabulates alcohol related cases by agency.

Reasons for Kodiak's alcoholism are many. To some extent alcohol use is a social function. "The Alaska frontier image still exists. It's expected you'll be able to handle booze. It's a machismo and machisma thing to do. People don't realize the addictive nature of alcohol, and all of a sudden they're hooked" (informal discussion). Kodiak's bars are social and recreational gathering spots. "After weeks or months on end of fishing, people want to blow off steam. And not everyone wants to spend a quiet night at home" (informal discussion). Jobs, contacts and information are available in bars, making them occupationally quite important. For newcomers or transients, bars provide social companionship. One resident who grew up in Kodiak noted, "While I was growing up in Kodiak, I looked up to the seniors in High School and fishermen who drank. I looked around to see how we were supposed to behave, and drinking was it. Pretty soon it went from 'Let's go pick up a six-pack and head out the road' to picking up a six-pack on the way home, after leaving a bar" (informal discussion).

This same resident told of" fishing and alcoholism. He said many skippers refuse to drink while fishing. However, they will drink while ashore. For some of these a spiral of alcohol leading to bad fishing leading to more alcohol eventually ruins them.

Table 7

Alcohol Related Cases by Agency

Agency	Alcohol-Relatedness Estimate Percentage of Cases
District Attorney	90%
Legal Services Corporation (Public Defenders)	70-80%
Family Services Division, DHSS	80%
City Police Department	75-80%
State Troopers	90%
Public Health "Center	33%
Mental Health Center	50%
Public Assistance Office	03-05%

Source: Kodiak Council on Alcoholism 1978

All of these factors lead to some people having alcohol problems. Kodiak's attempt to respond to this problem is the Kodiak Council on Alcoholism, a nonprofit organization funded by state and local funds. The KCA was incorporated in 1971 and accredited in 1976. The Council has three facilities in the City of Kodiak. The first of these is the Hope House. It provides a four-week residential treatment program with follow-up care including a 60-day half-way-house program followed by after-care. The second facility is the Sleep-Off Center. As its name implies, it's a place to go for immediate treatment including coffee, beds and shower and laundry facilities. The third facility is the Information and Education Center. This center has educational materials, provides classes and referral and consultation services.

Mental Health. The Kodiak Aleutian Mental Health Center (KAMHC) was established in 1970 to provide mental health services to the community. It was one of the first of its types to be established in Alaska. The mental health center staff includes 2 clinical psychologists, 2 psychiatric social workers, a mental health associate and 2 office workers (Alaska Consultants 1979:478). Table 8 presents KAMHC's new mental health cases and presenting problems of those cases per year.

The center's services include 24-hour crisis intervention, diagnostic services and emergency hospitalization service. Its programs include: 1) Outpatient care - on-going therapy such as psychotherapy, marital counseling, family counseling and group therapy; 2) Inpatient care - short term hospitalization at the Kodiak Island Hospital or long term

Table 8

New Mental Health Cases by Year for Kodiak Island

	1973	1974	1975	1976	1977	1978
New Cases[1]	287	156	134	180	227	198
Presenting Problem[2]						
Mental Illness	N/A	N/A	N/A	14.9%	30.2%	33.3%
Mental Retardation	N/A	N/A	N/A	1.4%	0.0%	1.1%
Alcohol Abuse	N/A	N/A	N/A	5.4%	5.2%	5.3%
Drug Abuse	N/A	N/A	N/A	0.7%	1.0%	1.1%
Life Crisis	N/A	N/A	N/A	77.7%	63.5%	59.3%

Source: Office of Information System, Department of Health and Social Services, State of Alaska.

[1] These are new cases only. In terms of treatment, they are in addition to the existing caseload.

[2] Total percents per year may exceed 100% since more than one factor may be indicated.

hospitalization referral to Alaska Psychiatric Institute; 3) Partial hospitalization - involvement in part-time programs at the mental health center; and 4) Education and consultation.

According to Alaska Consultants (1979:479):

> The Heal th Center staff treats an average of 550 patients a month although this is higher during the winter when school is in session, the weather is bad and the commercial fishing fleet is not as active. Patient caseload is about one-third Native and two-thirds white. The most common mental health problems are depression, anxiety and personal crisis, which were indicated to result from Kodiak's isolated island location, from long periods of inclement weather and from fluctuations in the economy.

The isolation and inclement weather factors in cases of general depression (sometimes called Rock Fever) can be compounded by newcomers not having the familial, friendship, and neighborhood support systems they had in the communities they came from. Like civilian families, Coast Guard families are also subject to this; it's considered foreign duty. According to one Coastguardsman, "It's psychological distance. If they were based in Seattle, they'd feel closer to their families in Florida than they do now if their families are in Seattle" (informal discussion).

Crime. Crime i n Kodiak has occurred i n fluctuating trends (Table 9.) Total crime levels increased by 27.12 percent from 1970 to 1976, about double the rate of population increase during that period. ".. ..from 1970 to 1971, total criminal offenses declined by 30.1 percent, while in the next year (1971 to 1972), they increased by 56.1 percent" (Alaska Consultants 1979:461). Major crimes (homicide, rape, robbery, aggravated

Table 9: Criminal Offenses City Of Kodiak

Year	Part I Offenses[1]	% + -	Part II[2] offenses	% + -	TOTAL	TOTAL % + -
1970	4	---	501	---	505	---
1971[3]	1	-0-	352	---	353	---
1972	47	+ 15%	504	+ .05%	551	+ 2.0%
1973	40	- 15%	229	- 55%	269	- 39%
1974	50	+ 25%	503	+ 120%	553	+ 63%
1975	53	+ 6%	450	- 10.5%	503	- 10%
1976	97	+ 72%	551	+ 22%	642	+ 28%

1. Part I Offenses: Criminal Homicide (Murder & Nonnegligent Manslaughter) Forcible Rape, Robbery, Aggravated Assault, Burglary, Larceny, Motor Vehicle Theft.

2. Part XI Offenses: Other Assaults, Arson, Forgery & Counterfeiting, Fraud, Embezzlement, Stolen Property, Vandalism Weapons, Prostitution & Commercialized Vice, Other Sex Offenses, Narcotic Drug Laws, Gambling, Offenses Against Family and Children, Driving Under the Influence, Liquor Laws, Drunkenness, Disorderly Conduct, Vagrancy, All other Offenses (except traffic).

3. Incomplete data for 1971.

Source: Simpson Usher Jones, Inc. (1977) from City of Kodiak Police Department information reported to FBI.

assault, burglary, larceny and motor vehicle theft) have steadily increased at an alarming rate. Table 10 presents a specific breakdown of arrests in Kodiak City for the years 1974 through 1978.

According to Simpson Usher Jones and the Kodiak Police Department, this increase in crime rate is related to many factors. Chief among these is an increase in the transient population associated with the fishing industry. "Between 1975 and 1976, when the biggest increase in Part I offenses took place, Kodiak was reportedly also visited by a number of former pipeline workers from Valdez, Anchorage, and Fairbanks in search of employment. Local statistics indicate that there was a higher incidence of criminal offenders in these transient groups than in the indigenous population of the City" (Alaska Consultants 1979:463).

Race Relations. Kodiak has been a multi-cultural community since the Russians first stepped ashore. As mentioned in the section of Historical Impacts, relations between the Russians and the Koniags were initially combative. Russian subjugation did not further enhance these relations.

Relations between Natives and whites in Kodiak's recent past have varied. When asked if there is prejudice in Kodiak against the Natives, one resident said, "A Native would say yes, a white would say no" (informal discussion). The Alaska Native Claims Settlement Act (ANCSA) has had an effect on relations. "Before ANCSA, you didn't want to be a Native because of discrimination. You'd do anything not to be rejected.

TABLE 10

ARRESTS}- KODIAK CITY 1974-1978

	1974		1975		19762		1977		1978	
	J	A	J	A	J	A	J	A	J	A
Murder		2						3		
Manslaughter										
Rape								1		1
Robbery			1					1		1
Aggravated Assault		3		11		13		40	1	21
Burglary	5	3	6	12		13	4	14	9	13
Larceny-Theft	8	27	9	28	14	27	13	35	7	22
Motor Vehicle Theft		9	4	3	2	1		6	5	6
Other Assaults	1	22	1	29		6		9	2	26
Arson	1						1			1
Forgery and Counterfeiting		1		1				5	1	2
Fraud		1		3		2		9		12
Embezzlement		2		3						
Stolen Property		3		5		4	1	1	1	
Vandalism		2	1			4		6		17
Weapons; Carry & Concealed		13	1	8	2	4		6		8
Prostitution			1							1
Sex Offenses	3	16		6		1		12		8
Drug Abuse		12	1	6		14	1	15	6	12
Gambling										
Offenses Against Family		7		3				1		

(continued)

TABLE 10 (CONTINUED)

ARRESTS[1] - KODIAK CITY 1974-1978

	1974		1975		1976[2]		1977		1978	
	J	A	J	A	J	A	J	A	J	A
Driving Under Influence	11	107	5	147	2	54	7	176	3	187
Liquor Laws	48	46	36	42	11	27	9	64	18	94
Drunkenness	1	16		2		1	1	22	1	
Disorderly Conduct	3	19	1	46		38	2	74		75
Vagrancy		3				1		5		2
All Other Offense	14	109	6	129		37	4	200	9	120
Suspicion						7				
Curfew and Loitering	17		23		15		51		5	
Runaway	6		1				4			
Total	118	424	96	484	46	254	98	705	68	629

Source: Governor's Office on the Administration of Justice; Juneau, Alaska

1 J = Juvenile; A = Adult

2 Partial data only. Adult - January through June and the month of December (7 months). Juvenile - January through June only (6 months).

Before ANCSA, you were made to feel ashamed to be a Native. You were punished if you spoke your Native language. Overall it was always more beneficial to be white." (informal discussion).

This shifted with ANCSA. There is still some subtle discrimination. "Now the whites are somewhat upset that they have to cope with a powerful force. Some citizens wanted to hire a lawyer to oppose ANCSA. Those who bothered to inform themselves accepted it" (informal discussion).

If there is one issue currently causing conflict between the Natives and the whites, it is land. In its strongest form this comes out as, "BY god, we didn't steal" this land. We bought it from Russia. If the Natives want their money, they should go get it from the Russians" (informal discussion). Another area of contention is the fee'l ing that the schools being built in the villages will serve relatively few students and cost too much. Two of these schools are being funded by State bonds passed in 1976. The other two are being built through State appropriations acquired from oil.

Besides the land issue, there is a generalized frustration and anger that someone was "given something." One resident asked, "Why were they given all that money? What are they doing with the money?" There is also a hint of paternalism based on rumor suggesting that the Natives are not responsible enough to handle the financial obligations. "Why , in one village they couldn't even deliver the mail because no one over 16 was sober enough to sign for it" (informal discussion).

What has tempered these more stident feelings, keeping them from open conflict, has been the growing power of the Natives which requires the whites to remain in a bargaining position and negotiate. "This has been hard to handle for some of the old-timers who had considered the Natives second class citizens" (informal discussion).

A number of whites have taken the time to read the Lands Claims Act and attempted to understand the specifics. This has toned down the rumors. One resident noted that the personal factor plays a part. "The Natives refers to people you associate with and respect. So they're not some unknown group over there. Also, the Natives are as good or better fishermen than the whites which means a lot in terms of respect here" (informal discussion).

If there were some problems between the Natives and the whites, they were overshadowed with the arrival of the Filipinos. To many, the Filipinos were seen as a very tightly knit, potentially violent and troublesome group. This is deceptive because this "group" is far from homogeneous. "Most of the people who came were professional people from the Phillipines, who couldn't find jobs in their professions. We have civil, chemical, electrical and mechanical engineers. There are 24 nurses, over 36 teachers, 1 lawyer, a medical technologist, a chemist, accountant and a commerce graduate" (informal discussion).

There are resident and transient Filipinos. To whites, the Filipinos may seem much alike. However, the Philippines are divided by a multiplicity of languages, regional loyalites, religions and ethnic distinctions. Members of these varying areas and groups come together in Kodiak. "In the early years the Filipinos all worked together. Most were Illocano so it made it easier' (informal discussion). But as other groups arrived in numbers, traditional animosities from the Philippines would erupt.

Another factor leading to some tensions was the arrival of Korean, Vietnamese and Mexican workers. There are traditional, historical conflicts between the Filipinos, Vietnamese and Koreans. The Natives feel they have been occupationally displaced by the Filipinos.

These factors all led to a series of disruptions in the 1970's that have tended to give the Filipinos in particular a bad name. Upon closer examination, however, it would appear that the problems were more specific to certain groups. These were young, transient (and some resident), unmarried males competing over territory such as bar space or women. Some people feel these Filipino's method of fighting "in groups" with knives and guns to be contemptuous. This has backlashed on the stable Filipino majority.

Action was taken to try to ameliorate these problems. One existent factor in favor of the Filipinos was their reputation as hard workers, their reliability and the fact so few are on welfare. The Filipino Community of Kodiak Alaska was formed to solve these and other problems.

It attempts to maintain an integration of and control within the Filipino Community so problems can be aborted.

The Multicultural Forum Council has also been active at attempting to get various nationalities together and explore their common interests and appreciate their differences (Kadiak Times Vol. 3 No. 41:4-5).

Kodiak is proud of its multi-cultural tradition and community. Their differences are appreciated, as the article "Kodiak's International Community will Celebrate Christmas in Different Ways" (Kadiak Times Vol. 3 No. 33 1978:1, 22, 35), points this out. The November 9th 1978 issue of the Kadiak Times was solely devoted to the Native Corporation. The Russian heritage is celebrated in the events mentioned in the section on Cultural Values. One community activity that gained wide acceptance and support was sponsoring Vietnamese refugees on Kodiak (Kadiak Times Vol. 3 No. 33 1978:12-13 and The Kodiak Daily Mirror Vol. 39 No. 51 1979:1).

Summary. This section presented information on the social health of Kodiak. This information can be used as an indicator of adaptation to changing conditions. 1) Alcoholism - This is the Borough's number one health problem. Its causes are quite complex. Community action has been initiated to reduce this problem. 2) Mental Health - The community has developed an extensive mental health program. Major factors affecting mental health in Kodiak appear to be isolation, the

weather and economic conditions. 3) Crime - Crime in Kodiak appears to fluctuate according to economic conditions, not only in Kodiak but in Alaska as well. 4) Race relations - Kodiak has had sporadic incidents of racial troubles. Though there are underlying problems in existence, overt efforts are being made to remedy this problem.

Family Relations

Fusion and Fission in Relationships. For some of the inhabitants, male/female relationships in Kodiak are beset with many problems. Because of the disproportionate numbers of males to females, there is competition for the women. "A lotof the men have a hard time with relationships. Because they don't stay in one place for very ong, they don't have the time." (informal discussion).

Fishing has an effect on relations. Some spouses have a difficult time being separated from each other. Many wives adapt and make strong independent lives for themselves. Fishermen need and want their wives to be independent while they're fishing so the wives can manage the home front. This creates some problems, however, when the men come home. The Women have been running the show including disciplining the kids. All of a sudden the husband shows up after a long absence and wants to run the show. It creates friction (informal discussions).

Some transients expressed the feeling that relationships in the fishing and cannery areas were very difficult. “Marriages are on the rocks. A lot of guys come up here with their old ladies and a year later they're split. The women see all the good-looking men with money. It’s too strong an attraction. Many of the men are really embittered. The men feel 'We're fishing for fish and the women are fishing for rich fishermen’” (informal discussion). From the women's perspective, Kodiak is a very difficult place to 1) find a job on a boat without sexual pressures and 2) find a relationship that isn’t based on a “let me take care of you but something is expected in return” basis.

Another transient noted that, “In remote areas such as Kodiak it’s less easy to run away from relationships. People either work it out or split. If you have a fight with someone, you can’t avoid them because of the small community. You can’t write people off because the next day you’re going to need their support. Because of limited resources, you can’t alienate people" (informal discussion).

Several residents noted that people in Kodiak, particularly newcomers (and in the Coast Guard), tend to create extended fami lies. This “fictive kinship” serves as a support for their own families they left in the Lower 48. A similar situation exists in Fairbanks, as noted by Dixon (1978:199):

> ... for many people, Fairbanks is so remote that people who move to this isolated community find themselves removed from their traditional suppport structures. When a new baby comes along, Mama and Grandma aren’t there to give advice or take charge

> when a screaming child makes his mother feel like she is losing control. A long distance call is too expensive when a person feels like discussing a problem with an older brother or life-long friend. In the absence of extended families, Fairbanksans tend to develop family-like relationships with people to whom they are unrelated by marriage or kinship.

In the Filipino community, fictive kinship has been institutionalized within the culture and the language. Kin terms are used for adopted relatives. Kin terms are used as a sign of respect and address. There is a sense of responsibility for the adopted relatives and particularly for godparents.

A Filipino's first loyalty is to his family (nuclear and extended) and the families are strong. Children are the focus of family attention. (For a good understanding of Filipino values and social organization see Lynch 1970 and Schlegel 1964).

Education. The education system in Kodiak is extensive. It has a federally funded Headstart program and a parochial school. There is a community college and St. Herman's Theological Seminary. The Kodiak Island Borough is responsible for public education on the island. This includes 8 village schools and 3 elementary, a junior high school, and a senior high school in the city of Kodiak.

Elementary classroom densities average 20 to 25 students. Kodiak's elementary schools are in marginal to good condition and are running at peak capacity. The junior high has about 20 students per class and is

operating at capacity. Student-to-teacher ratio for the high school is 12 to 1. The high school is in good condition and could probably handle double its current enrollment.

Total school enrollment has declined 23 percent since 1970. This has occurred mainly in the elementary grades. This is due to declining birth rates and the introduction of secondary programs in the villages.

Summary. Male/female relationships (married or otherwise) are affected by several factors in Kodiak. 1) There is a disproportionate number of males per females. 2). Fishing affects relationships in terms of separation, dependence/independence problems and role conflicts. 3) There is some indication of people creating "fictive" extended families. 4). Kodiak has an extensive, comprehensive school system.

Town Environment

Land Use Patterns. Land ownership patterns in Kodiak are quite complex. "Perhaps nowhere else in the State is the status of land presently more in question than in Kodiak" (Alaska Consultants 1979:451). Afognak Island is entirely within the Chugach National Forest. Almost two-thirds of Kodiak Island is within the Kodiak National Wildlife Refuge. The picture is further complicated by the Alaska Native Claims Settlement Act. According to Davis (1979:142) the total amount of land to be conveyed in Kodiak remains undetermined. Until the actual settlement is determined and finalized, ownership is uncertain.

Information on land use within the Kodiak urban area is more specific. Kodiak's main industry, fishing, requires a certain land use pattern. The industry is dependent on waterfront locations. The steep topography in the southwest area of town has prevented development except along a narrow strip between Pillar Mountain and the ocean. The land begins to flatten out in the northeastern end of the island. This has been where development has progressed (Figure 3). This flatter northern end of the island, however, is outside the corporate limits of Kodiak City.

According to Kramer, Chin and Mayo (as quoted in Alaska Consultants 1979) there are about 1,500 acres of land suitable for residential development in the Kodiak area. There is also some land suitable for industrial development. Constraints on development outside of these areas include steep slopes, water and wetlands, and potential natural hazards.

Some residents are dissatisfied with the limited availability of land in Kodiak. Besides the natural constraints there are the politically imposed boundaries. One resident expressed his frustration by noting, "The government is in the real estate business. It'll hold off releasing the land for sale till the prices go up and the taxes go up" (informal discussion).

Future development (i.e. OCS and bottomfish) are seen to hinge on the availability of land for development. The following expresses

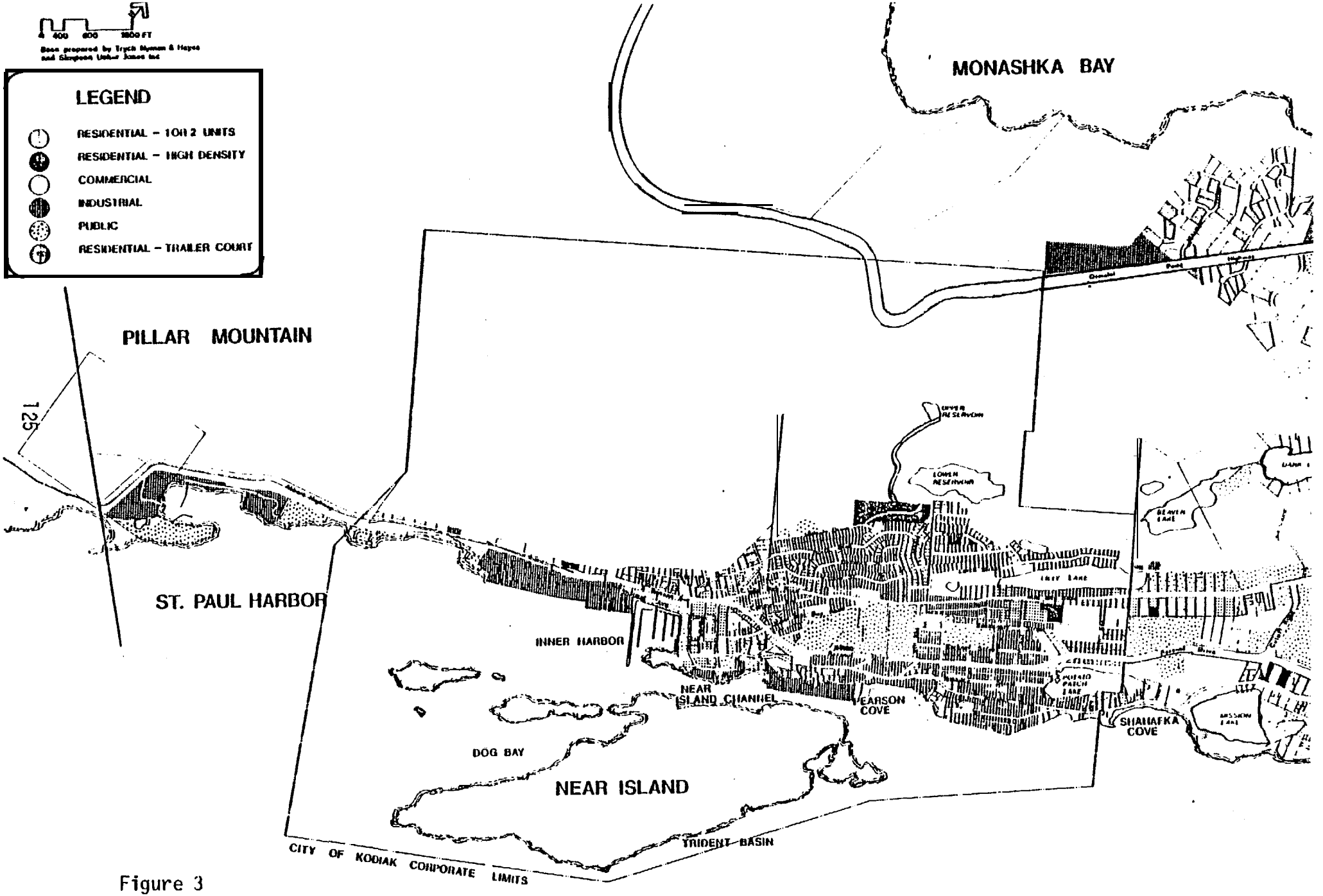
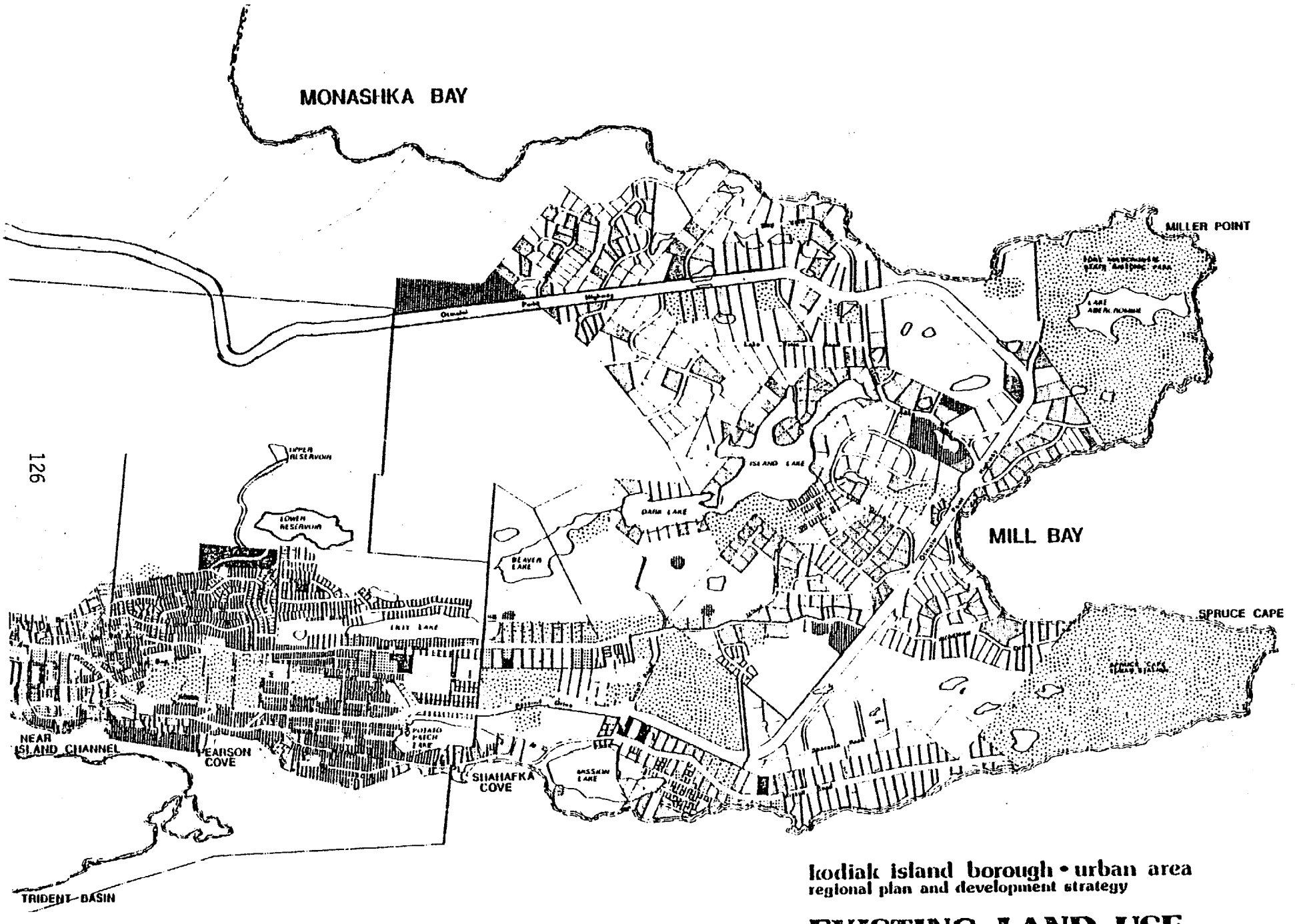

400 800 1800 FT
Base prepared by Tryck Nyman & Hayes and Simpson Usher Jones Inc
LEGEND
RESIDENTIAL - 1 OR 2 UNITS
RESIDENTIAL - HIGH DENSITY
COMMERCIAL
INDUSTRIAL
PUBLIC
RESIDENTIAL - TRAILER COURT
MONASHKA BAY
PILLAR MOUNTAIN
125
ST. PAUL HARBOR
INNER HARBOR
NEAR ISLAND CHANNEL
EARSON COVE
SHAHAFKA COVE
DOG BAY
NEAR ISLAND
TRIDENT BASIN
CITY OF KODIAK CORPORATE LIMITS

Figure 3



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kodiak island borough • urban area
regional plan and development strategy

EXISTING LAND USE

the view of some residents regarding land use:

> Bottomfishing cannot be assured in Kodiak unless adequate land can be found for expanded plant construction and for the construction of' supporting industries.
>
> Other communities in Alaska with more land available are actively soliciting the establishment of bottomfishing plants even though the potential for bottomfishing in their adjacent waters is much less than the potential harvest in Kodiak waters.
>
> Kodiak is facing a critical shortage of land for all types of development (residential, commercial and industrial). Therefore, more land must become available before any possible rezoning of waterfront property can be considered for industrial use.
>
> The Chamber is not making any specific recommendations, but is urging an early solution to the D-2 land allocation problems and then a careful review of all state land on Kodiak to determine those parcels which could be sold for private use (Chamber of Commerce 1978),

Housing. The chronic lack of housing in Kodiak is such a frequently expressed concern that it is almost an axiom. During the field research for this report several houses and apartments were available. This was pointed out as an exceptional situation by several amazed citizens.

In 1976 Simpson Usher Jones counted 1,973 housing units in the Kodiak road-connected area, with 557 on the Coast Guard Station. Of the 1,973 houses, 1,141 were single family dwellings. Five hundred and fifteen (515) were multi-family units and 317 were trai Iers. The high propor-

tion of multi-family units were accounted for by the transient population.

According to Alaska Consultants (1979) construction has increased in recent years, including a project for the elderly. "Despite new construction, however, Kodiak can be assumed to have a zero housing rate. The lack of housing for plant workers was cited as a problem by most cannery operators in Kodiak and it is apparent that this community has a severe housing shortage at least seasonally" (Alaska Consul tants 1 979:459).

A community with a large seasonal fluctuation would have a housing shortage almost by definition. The few bunkhouses and boarding houses in Kodiak reflect the older pattern of cannery crew housing. In order to meet housing needs, many of the transients have learned to adapt.

Many of the white transients lived in abandoned Army bunkers from World War II that are scattered throughout the island. Others lived in vans or camped out in tents. Some of these tents were handmade shelters of Visquine plastic sheets purchased in town. This pattern, reminiscent of the 1930's, was frowned upon by many of the residents. A conflict emerged. Documentation of the reality of the situation is almost impossible to acquire but the two points of view can be presented. From the resident's point of view, these transients were viewed as a threat. Many were seen not as potential job seekers for cannery work, but rather as "drifters". As noted in the section on crime, criminal statistics

increased with a larger transient population. Health was another factor since water and sanitary facilities were unavailable. Also, some of these transients espoused the "hip" lifestyle that had grown out of the 1960's. This was in direct contradiction to the independent lifestyle based on hard work ethic of Kodiak. Also, there was a fear of drugs.

From the transient point of view, they had come to Kodiak to work. Since no housing was available, they made do with what was at hand. The community's attitude toward them appeared to be "we need you" from the canneries but "we don't want you" from other segments of the populace.

The Filipino population adapted to the housing shortage in a different manner. A number of families and/or single individuals will all reside in one house. Individual families will have one room for themselves with bathroom, kitchen and living room areas being used jointly. Because the Filipinos have adapted to the housing shortage, it should not be assumed that this overcrowding is a desired situation. It is economically imposed and culturally managed. Filipino parents don't like to see their children leave home. "It is common to have three generations in one household. We have a tradition of getting along with lots of people in our household. Nuptial couples will live with the parents with the most money or move back and forth between parents. It's not just the couple who are tied together but the familes. When the young couple is financially better off, they will move into their own residence. But even then, there is extensive visiting of the parents" (informal discussion).

Small Town Atmosphere. Numerous long-term residents expressed the opinion that Kodiak had changed from the "nice little community" it used to be, prior to the earthquake. The tidal wave changed the downtown waterfront district which was completely redeveloped and modernized. This period also saw the burgeoning growth of the diversified fishing industry and population increase. "The whole town has changed from a small town to a city. You used to know everyone in town. Just a very small oversized village. You knew the minute a stranger hit town" (informal discussion).

Another indication of growth was a diminishing of credit. "In the old days, the stores gave credit to tide you over the lean periods which you'd pay back in the summer. This began to end with the urban renewal after the earthquake" (informal discussion). In a small town where people know each other, credit can be extended. As population increases, the merchant doesn't have the insurance of familiarity. Merchants no longer could afford to have increasingly large amounts of money outstanding. In the past, credit was a necessity to provide for the periods between salmon seasons. But then Kodiak was small enough so that all the residents were acquainted.

Another trend is potential polarization and stratification within the town . The community has extended northeast from the downtown area. On a small scale, it's reflective of the urban-suburban process in larger metropolitan areas. The people on the outskirts are tending to focus on themselves and services are beginning to concentrate to serve

these people. A supermarket is now located in this newer area so the residents do not have to go into the downtown/harbor area for retail goods . As one resident put it, "If you got a second high school, it would artificially split the town" (informal discussion).

Summary. The following points summarize the Town Environment category: 1) A major problem for Kodiak is the unavailability of land. This may affect future development. 2) The lack of housing is a chronic problem for Kodiak. This is related to construction costs, availability of land, seasonal occupational patterns and high financing. There are cultural adaptations to this shortage. 3) Kodiak is seen by long-term residents as having grown from the small fishing village. 4) Credit has diminished. 5) There is a potential polarization between the City of Kodiak and residents in the borough area.

Iv. NON-OCS SCENARIO

INTRODUCTION

This section describes projected impacts occuring within Kodiak's socio-cultural system through the year 2000 without OCS development. The first portion of this section summarizes the major economic, employment and population growth projections expected to occur in Kodiak by the year 2000. These are provided through Alaska Consultants. This is followed by a discussion of the effect these projections will have within each of the sociocultural impact categories.

SUMMARY OF GROWTH PROJECTIONS: FUTURE ECONOMY, EMPLOYMENT AND POPULATION

It is accepted that fishing will continue to be Kodiak's prime economic activity (see Table 11 for employment and population projection). The catch level of the species currently being caught is expected to increase. For salmon this is expected for a number of reasons. First, the 200 mile limit will restrict Japanese salmon catches as well as fishing by other foreign vessels. This means more salmon for the Kodiak fishermen and better markets. Second, there is some speculation that hatcheries and aquiculture ventures will be attempted in the Kodiak area. There may be resistance to this point by Kodiak fishermen. Some feeling exists that hatchery stocks would weaken native stocks. A factor for an increase in all species is the increased knowledge and expertise in managing the traditionally fished species.

There is general agreement that bottomfish will be a major new industry in Kodiak. Entering into an already existing bottomfish market has been a problem for the processors. Kodiak was instrumental in setting the standards for salmon and crab, but the production and quality standards for bottomfish are already established. Meeting these standards to produce a competitive, quality product demands training, organization and investment. For example, certain species are more profitably processed through hand-fill eting. This is a highly skilled job requiring at least six months of training. Another block to Kodiak's becoming involved in bottomfish has been the low profit margins compared to the high margin of other species. The 200-mile limit, better prices and stronger markets have opened this fishery to the Kodiak fishermen. It is expected many fishermen will enter this fishery.

Onshore bottomfish processing development is presently occurring in three plants and is expected to increase and improve dramatically. This may be modified as some bottomfish may be sold to offshore processors. The size of vessels currently utilized for bottomfishing will allow them to explore fishing grounds at some distance from Kodiak. However, as these vessels fish further west, some product may be lost to Dutch Harbor. But Kodiak's infrastructure and labor market will still maintain the port as a major processing location.

The introduction of bottomfish into Kodiak will diversify the industry even more than it is at present. This will lead to a more stable, year around resident labor force.

The use of Filipinos, Koreans, Vietnamese and Mexicans as cannery workers is expected to continue through the year 2000.

Traditional fishing and bottomfish would be expected to expand provided there are no major exogenous changes. These could include factors like fuel shortages or changing conditions in Japan or Korea which would affect these nations' business interests. For a presentation and analysis of projected quantitative data on the fisheries see Alaska Sea Grant Program (1979: 3.1-3.75), and Combs (1979).

It is expected that tourism and recreation will increase in Kodiak. There are plans underway to attract visitors and improve the facilities used by these people.

Timber harvesting on Afognak Island has been undertaken. It is expected that this industry will grow at a moderate pace. This will affect Kodiak City in terms of transportation, supplies and labor.

The Coast Guard personnel level is expected to remain at the current 1 evel. A large increase is expected in civilian employment at the base.

ASSESSMENTOF IMPACTS ON THE SOCIOCULTURAL SYSTEM

Maritime Adaptation

The projected impacts resulting from an expanded traditional fishery

Table 11

Forecast of Employment and Population
Non O.C.S. Case
Western Gulf of Alaska - Kodiak Area

1978- 2000

INDUSTRY CLASSIFICATION/YEAR	1978	1988	2000
COMMODITY PRODUCING INDUSTRIES			
Agriculture, Forestry and Fisheries	(878′	(1 ,312)	(1,539)
Mining	(--	(8)	(9)
Manufacturing (Fish processing(1	,496′	(2,234)	(2,620)
Contract Construction	(227	(389)	(419)
TOTAL	2,601	3,934	4,587
DISTRIBUTIVE INDUSTRIES			
Transportation, Communi-cations and Public Utilities	(215)	(439)	(629)
Trade	(628)	(1,179)	(1 ,589)
Finance., Insurance and Real Estate	(107)	(179)	(210)
Service	(448)	(860)	(1,199)
TOTAL	1,398	2,656	3,627
GOVERNMENT	1,938	2,250	2,414
TOTAL EMPLOYEMNT	5,937	8,849	10,628
RATIO OF POPULATION TO EMPLOYMENT	1.71	1.71	1.83
TOTAL POPULATION - KODIAK CENSUS 9IVIS1ON	10,152	15,116	19,556
Kodiak Road -Connected Areas	9,927	13,768	17,844
Coast Guard Base	2,595	2 ,500	2,590
Non-Military	6,527	11,268	15,344
City of Kodiak	(4,351)	(7,512)	(10,229)
Remaining Road-Connected Areas	(2,176)	(3,756)	(5,115)
Remainder Within Census Division	1,125	1,348	1,712

Source: Alaska Consul tants 1979a:54

and developing bottomfish industry will be mostly positive in nature. Fishing and fish processing are projected to be dominant industry in the year 2000. It is essentially a process of continued adaptation to the maritime environment. "Kodiak's identity as an island fishing community is assumed to survive and thrive. .." in this situation (Alaska Consul tants 1979 b:56).

There are currently more boats available in Alaska to harvest bottomfish than there are facilities to process the catch. One result of bottomfish development will be more larger-sized boats. Another result will be an increased knowledge of bottomfish by small boat owners.

> Though the tendency when discussing bottomfish is to focus on the larger boats and experienced fishermen, there are many fishermen on smaller boats who want to enter the fishery, but lack the experience and information to get started. Not all the boats will be suitable for trawling. Conversion of existing vessels to handle new gear types is expensive. If a new fisherman selectes a gear type which later proves to be incompatible with the normal operation of his vessel, the mistake could be very costly. (Penni ngton 1978:10).

The bottomfish industry is new to Kodiak as well as the rest of Alaska. New technology and techniques will be required for harvesting and processing. If the past serves as any indication, the Kodiak fishermen and processors will aggressively pursue this resource. This includes information searches in this and other countries and trial and error efforts. Where necessary, innovation will modify or create whatever is necessary to fill in the gaps.

Preparations for bottomfish are already underway. Management of the fishery is evolving (Kodiak Daily Mirror, October 9, 1978). Classes in processing techniques are being organized (Kodiak Daily Mirror, Sept. 14, 1978). Interest in and relations with other countries, long familiar with bottomfishing, are developing. "Alaska's potential bottomfish industry is forging a link between the rocky islands of the Gulf of Alaska and Bering Sea and the rocky, treeless Faroe Islands of the North Atlantic" (Kodiak Daily Mirror, August 23, 1978). A Danish firm bought land in Kodiak to develop a bottomfish salting plant (Kodiak Daily Mirror, August 29, 1978). The Norwegians proposed a floating drydock for Kodiak (Kodiak Daily Mirror, November 24, 1978).

Bottomfishing will provide year around employment for fishermen and cannery workers. Depending on permits, equipment and interest, a fisherman can presently fish almost year around by switching species. A year around bottomfishery will mean certain fishermen could specialize in bottomfishing while others add to their repertoire of diversification. One question for an expanding bottomfishery is whether the participants will remain independent fishermen or become, in effect, industrial workers. This will depend on the type of relationship emphasized between the catchers and the processors. If combination catcher/processing vessels are used, few persons would actually be doing the fishing. If, on the other hand, small or medium catchers are used, delivering to processors either afloat or on land, the traditional role will be maintained. This latter condition is forecast as the expected condition.

Year around processing at an increased level will mean more stability of cannery crews. There will not be as large seasonal fluctuations. Instead of a seasonal migrant who is expendable at the season's end, some cannery workers would be permanent resident industrial workers. This would probably increase the status of the position of cannery workers. Because of their training and skills, the hand filleters would accrue an even higher status. The cannery worker's relationship with other community members would be expected to change due to residency and higher status.

Coast Guard. Personnel levels are not expected to increase. However, increased fishing and maritime recreational activities, associated with the increased population, will increase their patrol responsibilities. This will require shifting Coast Guard personnel from non-patrol positions to patrol positions. The vacated positions will be filled by civilian employees.

Non-Basic Sectors. Increased fishing and fish processing activities will mean an increase in support services. Businesses and government services will expand. Some diversification would be expected in fisheries supplies to meet bottomfish needs. A year around fishery would mean a predictable demand rather than seasonal fluctuation for the merchants. This predictability and larger population would increase and, to some degree, stabilize sales volume. Larger demand would probably affect wholesalers' deliveries and responsiveness.

Cultural Values and Personality Characteristics

As previously described, Kodiak's cultural values and personality characteristics appear to reflect In varying degrees the occupations and recreational activities of the residents. These are associated with Kodiak's environment and natural resources.

Since projected economic activities will be consistent with existing activities, these values and characteristics are not expected to change to a great degree. Some modifications would occur from the more stable nature of bottomfishing as opposed to the seasonal intensity of fishing other species. This would tend to affect the cannery workers and support services more than fishermen.

Political and Governmental Organization

Bottomfish development and associated population increases would expand the responsibilities, services, and staffing patterns of the general interest organizations. Since most of the population increase and employment activities would be concentrated in the City of Kodiak, the pressures would fall on the City Council and government. Staffing levels may increase.

Special interest organizations would increase in membership and possibly in number. The fishermen's organizations would gain more membership. With year around operations, the cannery workers' union would increase in power as well as in numbers. If the trend of hiring minority cannery

workers continues, it would be expected that ethnic organizations would gain in membership, numbers, and power.

The increasing population would affect political dynamics. The residents would not "know everybody in town". This would mean more formalization of interactions because of unfamiliarity with bureaucrats from other social situations. Comprehensive intertwining and overlapping social networks would decrease.

Length of residency, as a critical factor in the political process, would decrease as the population increased. Group affiliation would take on more significance. The segmentary principle of organizations and individuals joining together for common interests would continue.

Economic activities have ramifications in the political arena. Bottomfish development is no exception. Three examples of political-related issues associated with bottomfish development are fresh water, electricity and Dog Bay/Pillar Mountain.

Expanded fish processing will require more electricity. Current peak demand periods have come close to maximum rated capacity, A hydroelectric facility has been proposed at Terror Lake to meet increasing needs. However, portions of the facility fall within the Kodiak Natural Wildlife Refuge. The project has been temporarily halted because, as

currently proposed, it is not compatible with the purposes of the refuge.

Abundant fresh water is also a necessity for expanding processing. Currently, during peak consumption periods, the water system operates at design capacity and where stream flow is low, shortages occur. A dam has been proposed for Monashka Creek to remedy this situation. However, this development is being held in abeyance until watershed ownership rights can be determined. The Ouzinkie Native Village Corporation has laid claim to this area.

The Dog Bay/Pillar Mountain issue has been described in the section on Current Concerns. Another issue associated with Dog Bay/Pillar Mountain is the development of Trident Basin. This is a natural harbor area east of Dog Bay on the other side of Near Island. This area has been proposed as an alternative or addition to the proposed Dog Bay Harbor (Kodiak Daily Mirror; Vol. 39 No. 103:1).

Each of these issues have become political in the sense that there are opposing forces competing for their own interests. It would be expected that these issues will be resolved in favor of the bottomfish interests. Electricity, water and harbor facilities will be increased by some means, be it those projects described above or through other means. These increases are expected for two reasons. First, the critical economic importance of fish processing for the entire community will engender strong political pressure. Second, the existing political power of the

fishing sector, which historically has assured a favorable environment for its activities, will continue to assert influence. Assuming this sequence is actualized, it will further enhance this political power.

Social Health

The social health impact category reflects n a more tangible form problems arising throughout the sociocultural system. The quantitative increases of the projected development would indicate a continued pattern of social problems, though modified by certain factors. The current alcoholism program would be expected to have some impact in lessening the rate of alcoholism. The population increase and lessening of economic fluctuations would tend to ameliorate mental health problems of depression, anxiety and personal crises. With a larger population, Kodiak would still be isolated but tending to become more self-sufficient.

A more stable employment situation will mean a lessening of crime associated with the transient, seasonal pattern.

Two factors could exacerbate race problems in Kodiak. One is the increasing power of the Natives resulting from the Lands Claims settlement. The Natives' control of land, for example Swampy Acres, will place them in a favorable economic position. The second factor is the increasing power of the Filipinos and other ethnic cannery workers arising from increased numbers , increased salaries and residency associated with a larger, stable fishery. With increased power, these

groups will likely tend to request more representation, services and, for the Filipinos, jobs in areas besides the canneries. These potential tensions may be lessened because of a continued and strengthening attempt by the community to mediate potential problems.

Family Relations

Male/female relations (married or otherwise) may change under the Non-OCS case. A year around fishery would tend to heighten the role conflicts associated with long term male absence. The tendency for some residents to create extended families would continue, though the population increase may modify this. An increased fishery will provide more opportunities for Kodiak's children to look to that area for employment. School enrollment in Kodiak has been decreasing in recent years (Alaska Consultants 1979:487). However, enrollment is pro jetted to almost double by the year 2000 requiring expanded school facilities and staff.

Town Environment

Land use patterns will change as the bottomfishery increases. Canneries would require more land which require water frontage. Land for housing will also be in demand as the population increases. And this population, will be more residency oriented than transitory, thus desiring permanent dwel 1 ings. This will increase a demand for more housing construction. It would be expected that housing will expand on the northern end of the isl and. As this area becomes more concentrated, there will be an increased demand for services. This in turn will cause the annexation issue to resurface, which has been defeated in the past.

"Small town feeling" is basically a subjective category. Newcomers might find Kodiak an ideal "small town" at the year 2000 if they came" from a larger metropolitan area. From the long term resident's perspective however, Kodiak would lose its small town atmosphere. It would be more than double in population. Continued expansion in the northern end of the island would mean this area would develop business and services and a life of its own. Residents would begin to identify this area as a distinct area separate from downtown. A larger choice of housing would present opportunities for social stratification of residence based on income, race or occupation.

SUMMARY

In summary, developments through the year 2000 will, in general, have a positive impact on Kodiak's sociocultural system.

In the maritime area there will be a quantitative increase in fish harvesting and processing. Kodiak's identity as an island fishing community will continue. There will be a new fishery - bottomfish - and traditional fishing should improve. Bottomfishing will provide year around employment for fishermen and cannery workers. This implies more permanent residency for cannery workers and subsequent higher status. Higher status will also be achieved for trained hand filleters. It would be expected that better relations will occur between cannery workers and other members of the community.

There is the potential for fishermen to become industrial workers with bottomfishing but this is forecast as unlikely. Increased Coast Guard patrols would be expected in relation to increased fishing activity. Business and government will expand. There may be more predictability for businesses in terms of demand.

Cultural values and personality characteristics would not be expected to change in any great degree. There will, however, be some stabilization and a lessening of the seasonal intensity. A doubling of population will increase the urban milieu which will affect values.

Formal organizations would expand in Kodiak. The cannery workers would be expected to gain more power. There would be a lessening of informal relations and more formalized bureaucratic relations which will affect personal politics. How long a person has resided in the community will not be as important as group affiliation in the political process. The political process will assure favorable conditions for fisheries expansion and this will strengthen that process. Consolidation of the Borough and City will continue as an issue.

Alcohol and mental health problems would be expected to decline to some degree. Crime rates should decrease with a more stable population. The ethnic groups would become more powerful and will request more services and access to differing occupations and representation. This may cause interracial tensions but these will be modified by the community's awareness and attempts to remedy potential problems.

Bottomfishing will heighten role conflicts between couples. It will also provide more job opportunities for local young adults.

A doubling of population will produce a more urban pattern in terms of the community's physical structure and social pattern. There will be an increased demand for land and housing. Annexation will continue to be an issue. The relative concept of "small town feeling" will be lost to long term residents as the community expands. However, to a newcomer, particularly from large urban areas, Kodiak would have the feeling of a small town. There exists the potential for a polarization of the community into two urban areas. More new housing will mean there is the potential for social stratification based on income race and/or occupation,

V. 95% OCS SCENARIO

INTRODUCTION

This and the following two chapters present a description and analysis of sociocultural impacts resulting from differing levels of petroleum exploration, development and production in and around Kodiak.

Each of the different activity levels are referred to as a "scenario" of interrelated activities and impacts. They are based on a "given this factor, these consequences will follow" type of logic. The initial scenarios were developed by Dames and Moore (1979) and present facility, manpower and scheduling data. These analyses were devived from U.S. Geological Survey petroleum resource estimates for the region. Dames and Moore's data was then analyzed by Alaska Consultants who subsequently developed a local socioeconomic and physical systems impact statement. These two sources are the primary quantitative data providers for this sociocultural analysis. The growth and impacts of each scenario provided are in addition to the projected non-OCS growth as presented in Chapter IV.

The 95% scenario is distinctive by its lack of activity or impact. The assumed volume of oil and natural gas is set at a level that has a 95% probability of occurrence. With this scenario, an exploration phase begins one year after the lease sale in 1981. Three offshore rigs drill a total of 17 exploration wells during three years in the Middle Albatross Basin and Tugidak Basin. No findings of oil or gas of com-

mercial value are discovered. The program is concluded at the end of 1983 which terminates OCS activity from this lease sale.

SUMMARY OF GROWTH PROJECTIONS: FUTURE ECONOMY, EMPLOYMENT AND POPULATION

The minimal effort associated with the 95% scenario results. in no appreciable effect within the economy. Marine support facilities are assumed to be located at Seward. What little activity ccurs is located in the air support sector. This is because Kodiak is closer to the exploration site than Seward. Personnel and light cargo transportation to the drilling platforms would be done by helicopter from Kodiak.

The 95% scenario has an insignificant effect on Kodiak's employment and population. Though there are estimated to be up to 168 workers on the drilling platforms, these are transient workers who are assumed to live outside Kodiak. Sixteen (16) jobs and 32 new residents are projected to be the only effect to Kodiak (Alaska Consultants 1979a: 98). These jobs would be related to the air support services. This minimal growth is assumed to last only during exploration phase and would end after 1984, at which point growth in Kodiak should reflect the projected non-OCS growth projection.

ASSESSMENT OF IMPACTS

Alaska Consul tants note i n their summary of the 95% scenario's impact on Kodiak:

Table 12

Forecast of Employment and Population
95 Percent Probability Resource Level Scenario - Exploration Only
Western Gulf of Alaska - Kodiak Area

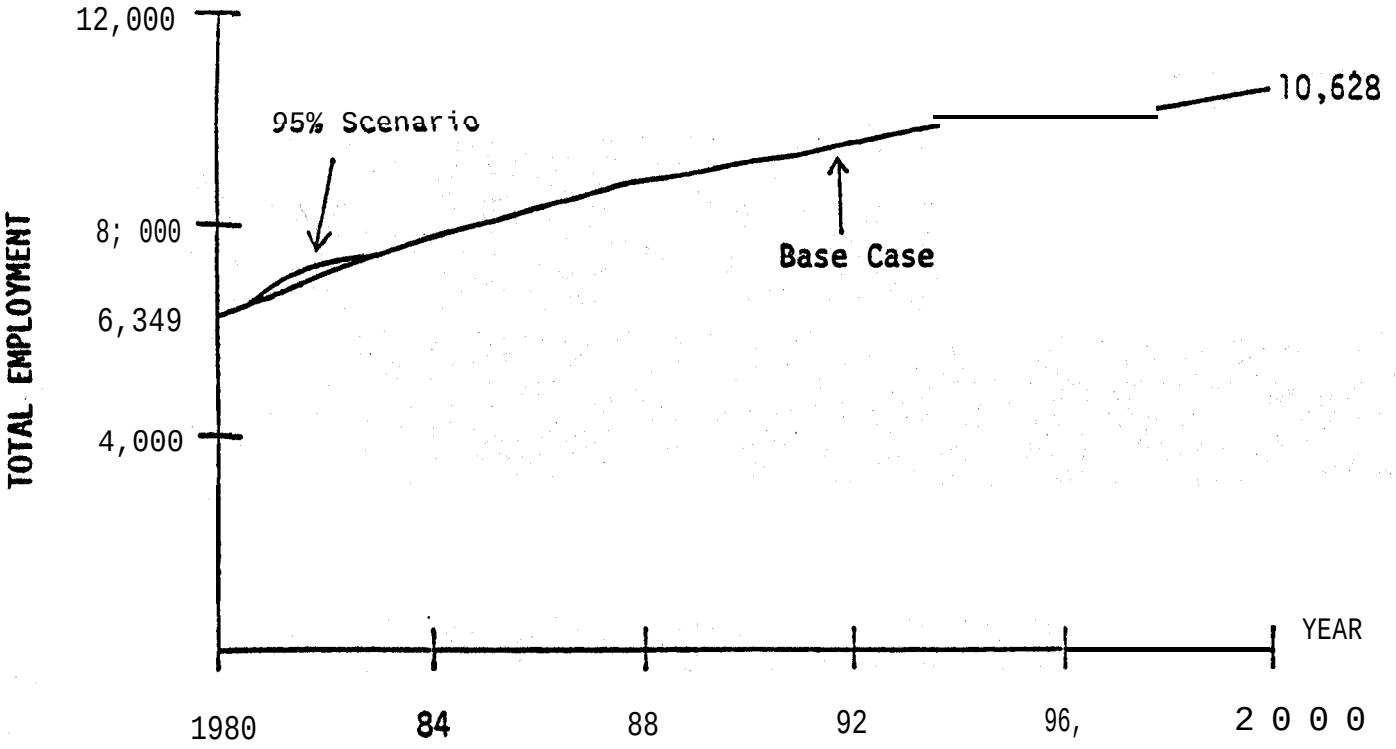
1981 - 2000

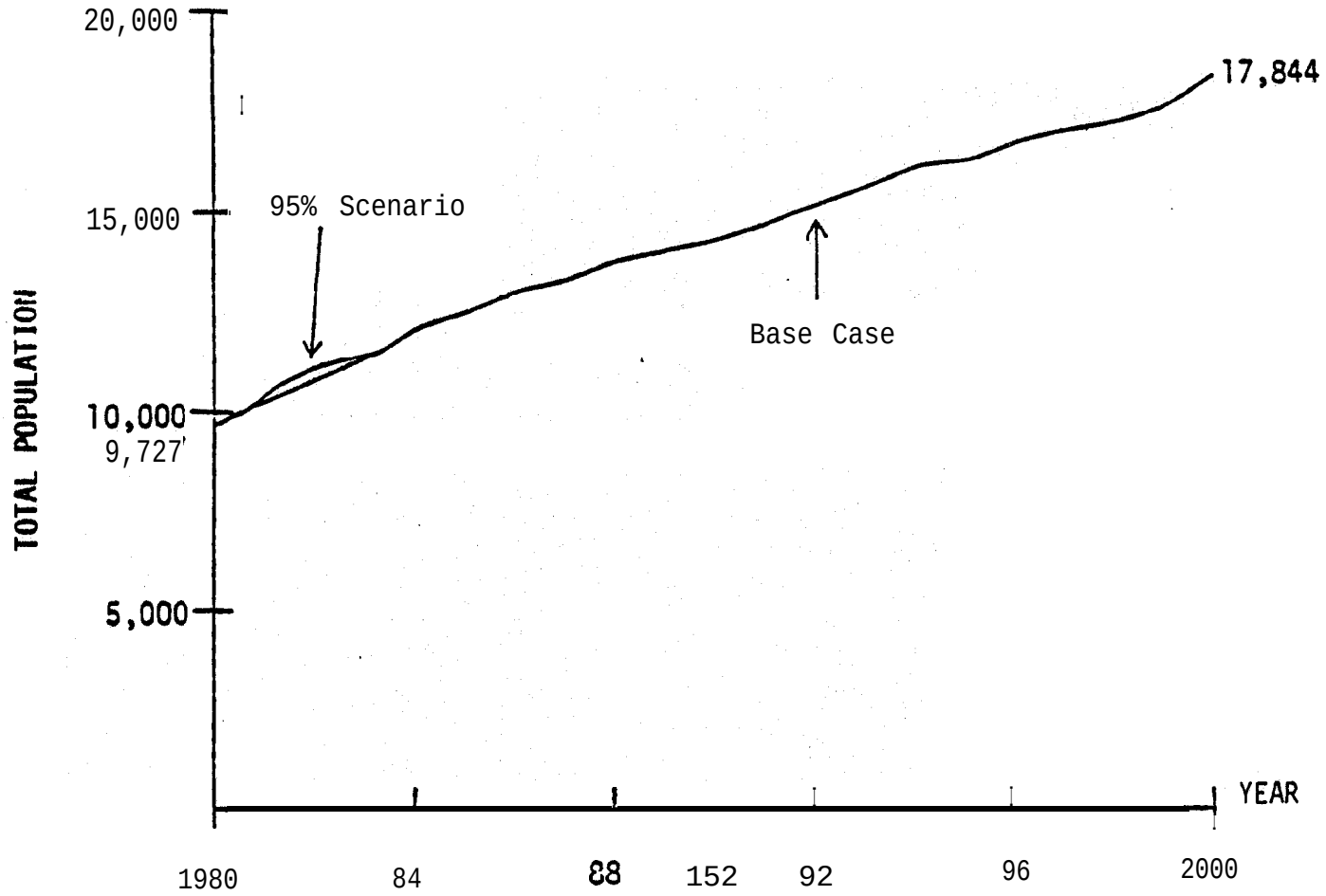
INDUSTRY CLASSIFICATION/YEAR	1981	1982	1983*
COMMODITY PRODUCING INDUSTRIES			
Agriculture, Forestry and Fisheries	(978)	(1,027)	(1 ,079)
Mining	(2)	(4)	(5)
Manufacturing (Fish Processing)	(1 ,666)	(1,749)	(1 ,837)
Contract Construction	(273)	(308)	(331)
TOTAL	2,919	3,088	3,252
DISTRIBUTIVE INDUSTRIES			
Transportation, Communications and Public Utilities	(275)	(295)	(317)
Trade	(734)	(806)	(883)
Finance, Insurance and Real Estate	(133)	(140)	(147)
Service	(550)	(595)	(643)
TOTAL	1,692	1,836	1,990
GOVERNMENT	2,099	2,120	2,141
TOTAL EMPLOYMENT	6,710	7,044	7,383
TOTAL POPULATION - KODIAK ROAD-CONNECTED AREA	10,314	10,849	11,388
Coast Guard Base	2,500	2,500	2,500
Non-Military	7,814	8,349	8,888
City of Kodiak	5,204	5,561	5,923
Remaining Road-Connected Area	2,610	2,788	2,965
Permanent Residents	(2,610)	(2,788)	(2,788)
Construction Camp Residents	(--)	(--)	(--)

Source: Alaska Consultants 1979a:99

*1984 - 2000 is same as Base Case

Kodiak Area
Total Employment and Total Population
Base Case and 95% Scenario
Western Gulf of Alaska
1980 - 2000





Source: Alaska Consultants 1979b: 100

> At most, OCS-related growth adds only a fraction of a percent to Kodiak's employment and population, and that for only a couple of years. Demand for public services and housing is not significantly affected. After 1984, upon termination of the exploration effort, the lease sale has no further impacts upon Kodiak (1979b: 98).

This is much the same situation within the sociocultural system; activities associated with the 95% scenario are projected to have an insignificant impact.

Maritime Adaptations

Except for the presence of the drilling platforms and their service vessels, there is no effect on this impact category. The platform would alert fishermen to the reality of OCS operations in their waters. Fishing would probably be avoided near drilling operations, though this would occupy minimal fishing space. The service vessels could potentially run through crab gear unless equipped with bright night-time running lights.

Cultural Values and Personality Characteristics

OCS operations and population increase are so minimal under this scenario there should be no impact. This is especially true when set against the backdrop of the significant activities and population increase projected to occur in the fishing industry.

Political and Governmental Organization

What little effect occurs is assumed to occur in the Political and Governmental Organization category. This impact may take the form of

residents expressing concern to their Kodiak-based governmental representatives. They will request information on what contingency planning has been done in case of possible blowouts or other accidents. There is the possibil ity of attempts to halt or modify OCS operations through legal channels; though the likelihood of these challenges occurring cannot be predicted.

This response is projected for the following reasons. First, there is a long history of concern by the residents about what impact OCS will have on Kodiak (see section on OCS under Contemporary Concerns-Chapter III). Second, the recent oil well blowout in the Gulf of Mexico, with its potential for adversely affecting that region's fishing industry, increased sensi ti vi ti es to offshore petroleum development. The final factor which may arouse residents' interest would be the exploratory activities themselves. News of the events will be presented in Kodiak's various media.

Activities associated with helicopter services at the airport would be noted by the residents. The drilling rigs themselves would be assumed to be observed by local fishermen and their description reported to fellow residents. Even though attempts would be made to limit platform crew time in Kodiak, weather conditions would occasionally require "layovers". This would mean the crews could spend time in Kodiak City.

Because of Kodiak's historic concern and attention to OCS, evidenced by the formation and existenceof the Borough OCS Advisory Council, resi-

dent concern is assumed to be met with up-to-date information, planning and organization. This would not necessarily diminish the intensity of citizen concern, but it could provide order, structure, and a mechanism for channeling this concern.

Social Health

The limited activity and population increase associated with this scenario is projected to have little, if any, impact in this category. Some anxiety associated with the initial operations may occur given the long history OCS has been a public issue.

Family Relations

Whatever anxiety and concern is experienced about initial petroleum exploration activities would be manifested in family relation. The extent of this impact cannot be projected. This impact would lessen substantially as residents become familiar with operations and the limited value of the fields are realized.

Town Environment

Alaska Consul tants posit only 32 new residents in Kodiak under this scenario. Also, there is assumed to be no OCS industrial construction in Kodiak. As such, the only impact would be the need for housing these few residents: Their need is minimal when viewed in light of the almost doubling of population by the year 2000, resulting from growth in fishing. This doubling of population contains the large demand for housing.

SUMMARY

The 95% scenario Is not expected to produce any significant negative impacts to Kodiak's sociocultural system. Economic, population, and employment increases over and above the base case condition are minimal and no demands on housing or social services are expected. There is the probability of concern with the advent of initial exploratory activities and the appearance of the drilling platforms. Local officials may assuage this concern because of previous planning and organization. After the three-year exploratory period it is assumed there would be no further impacts.

One positive impact left behind after the petroleum industry has departed may be a strengthening of the political organization. Kodiak organized in the past to meet the threator opportunity (depending on the perspective) of OCS. With OCS a reality, organizational strength, segmental fusion and communication and liaison between groups will probably increase. This process would likely heighten Kodiak's political strength and expertise. It is probable the community would once again know it has the capacity to meet challenges.

VI. MEAN SCENARIO

INTRODUCTION

Where the 95% scenario was characterized by a lack of impact to Kodiak's sociocultural system, the mean scenario is characterized by an attempt to exclude impacts to that system.

Under this scenario a very large oil field, 160,000,000 barrels, is discovered in the Middle Albatross Basin. Operations are conducted to recover oil. However, the following assumptions limit onshore impacts to Kodiak:

1. There are no commercial natural gas finds.
2. A single production platform suffices for field development.
3. An offshore transfer system for all oil production is technically feasible and economically preferred.
4. Thus, there is no onshore oil terminal and no submarine oil pipeline to Kodiak.
5. Camp accommodations are provided for the project workforce for the marine service base constructed at Women's Bay outside the City of Kodiak.

(Alaska Consultants, 1979a: 119-120).

SUMMARY OF GROWTH PROJECTIONS: FUTURE ECONOMY, EMPLOYMENT AND POPULATION

According to Alaska Consultants (1979a:121), "Overall, OCS development

accounts for less than one percent of the area's economic base. " in this scenario.

During the exploratory phase Kodiak is used for helicopter support services which accounts for few jobs. Once the decision to develop the resource has been made, the major economic impact would be felt. This is assumed to involve constructing a marine support base at Women's Bay. This project is labor intensive, employing an estimated 469 workers for one year only. Workers are to be sheltered on site, not in Kodiak. This may limit, to some degree, secondary impacts on Kodiak's economy and community facilities.

From the beginning of field development in 1985 to the shutdown in 1999 it s assumed Kodiak would have a limited labor investment in the project. These jobs would be primarily related to the marine service base and air support functions.

Employment and population impacts on Kodiak under this scenario are minimal except for the one year of marine support facilities construction. There are assumed to be an estimated 469 workers involved in that project. These workers may be contracted from outside of Kodiak. Throughout the rest of the project, there are estimated to be between 35 and 55 jobs and 70 to 110 residents who are related to these jobs. All other employment is expected to be rotated from the site to their homes outside Kodiak, as is the case for the exploratory phase of this

Table 13

Forecast of Employment and Population
Mean Probability Resource Level Scenario
Western Gulf of Alaska - Kodiak Area

1981 - 2000

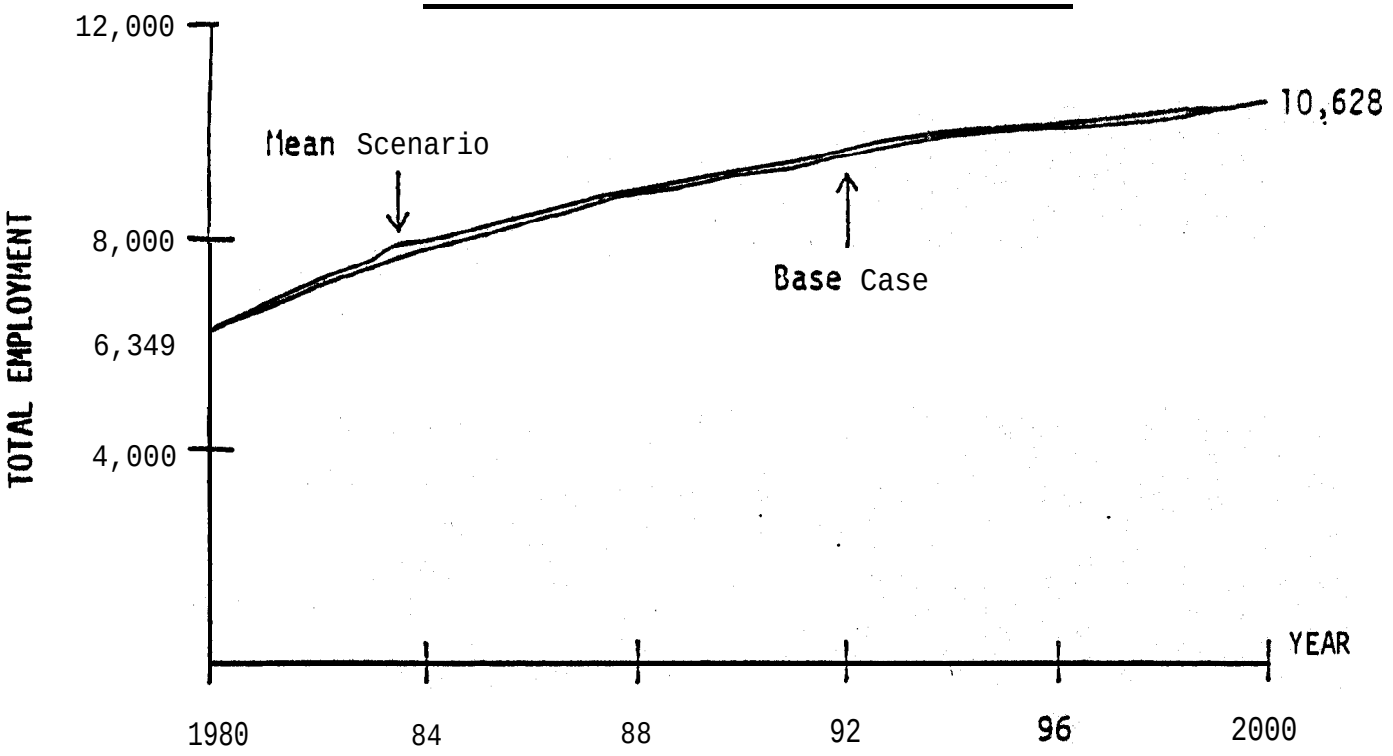
INDUSTRY CLASSIFICATION/YEAR	1981	1990	2000
COMMODITY PRODUCING INDUSTRIES			
Agriculture, Forestry and Fisheries	(978)	(1,365)	(1 ,539)
Mining	(2)	(12)	(9)
Manufacturing (Fish Processing)	(1 ,666)	(2,324)	(2,620)
Contract Construction	(273)	(373)	(419)
TOTAL	2,919	4,074	4,587
DISTRIBUTIVE INDUSTRIES			
Transportation, Communications and Public Utilities	(270)	(509)	(629)
Trade	(734)	(1,200)	(1,589)
Finance, Insurance and Real Estate	(133)	(187)	(210)
Service	(550)	(925)	(1,199)
TOTAL	1,687	2,821	3,627
GOVERNMENT	2,099	2,299	2,414
TOTAL EMPLOYMENT	6,705	9,194	10,628
TOTAL POPULATION - KODIAK ROAD-CONNECTED AREA	10,304	14,353	17,844
Coast Guard Base	2,500	2,500	2,500
Non-Military	7,804	11,853	15,344
City of Kodiak	5,199	7,892	10,229
Remaining Road-Connected Area	2,605	3,961	5,115
Permanent Residents	(2,605)	(3,961)	(5,115)
Construction Camp* Residents	(--)	(--)	(--)

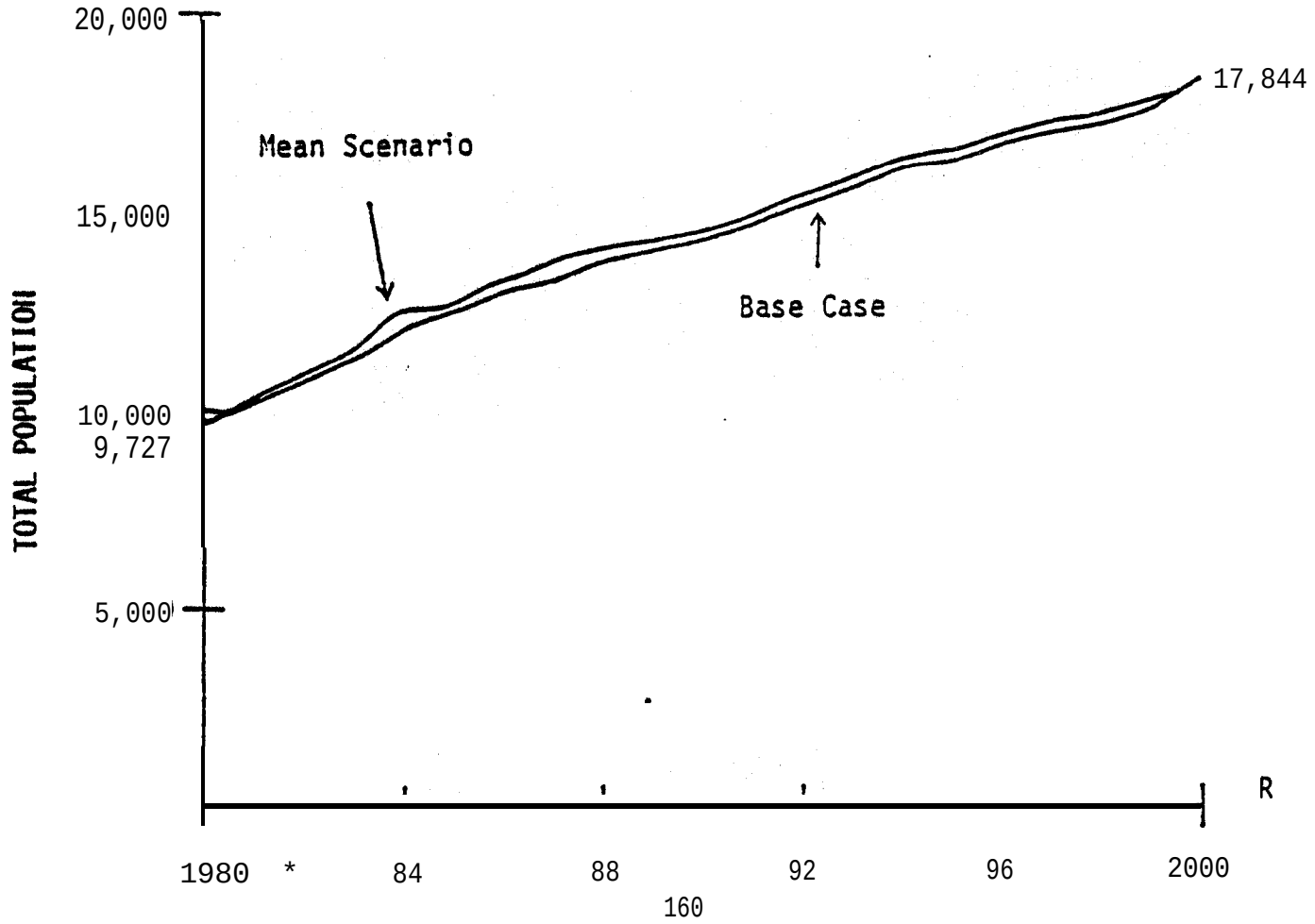
Source: Alaska Consultants 1979a: 122

*Note: There will be 469 workers in this category far the single year of 1984 only.

Kodiak Area

Total Employment and Total Population
Base Case and Mean Scenario
Western Gulf of Alaska
1980 - 2000





Source: Alaska Consultants 1979a: 123

TABLE 14

ESTIMATED ADDITIONAL CONSTRUCTION, PERMANENT AND TOTAL POPULATION
MEAN PROBABILITY RESOURCE LEVEL SCENAR10
WESTERN GULF OF ALASKA - KODIAK AREA
1981 - 2000

Year	Total Employment	Onshore-Onsite Construction Employment/Population	Permanent Employment	Permanent Population	Total Population
1981	11		11	22	22
1982	11		11	22	22
1983			6	12	12
1984	51:	469	47	94	563
1985	33		3 3	66	66
1986	49		49	98	98
1987	40		40	80	80
1988	55		55	110	110
989	31		31	62	62
1990	31		31	62	62
1991	31		31	62	62
1992	38		38	76	76
1993	38		38	76	76
1994	3a		38	76	76
996	38		3a	76	76
996	38		38	76	76
997	38		38	?6	76
1998	38		38	76	76
1999	35		35	70	70
?000	0		0	0	0

Source: Alaska Consultants 1979a: 127

scenario. At the end of this project in 19'39, the lease sale is expected to have no further impacts on Kodiak.

ASSESSMENT OF IMPACTS

Maritime Adaptation

The Mean OCS scenario should have little impact in the Maritime Adaptation Impact Category; assuming the following conditions:

- No oil spill or blowout that adversely affects the environment or causes damage to fishing gear
- Construction of marine support base outside of Kodiak city
- A limited number of platforms in existence during the production phase
- Limited employment shifts
- Efforts made to increase communication between the two industries and mechanisms developed for conflict resolution

The following, narrative explains these points in more detail.

Oil Spill and Blowouts. If a spill or blowout were to occur it potentially could have severe consequences for the environment and systematically for the economy and the lifestyle of the inhabitants. Direct damage to the fishing environment could directly damage the fishding industry which would directly disrupt Kodiak s economy and socio-cultural system. Oil on crab gear, set gillnets purse seines and trawls would also have economic impacts, requiring expenditures by fishermen for cleanup and/or repair.

The exact degree of impact to the environment and hence to the fishing industry of a spill or blowout, if one were to occur, is difficult to project. Projective measurements may eventually be available as results are obtained from research on the EKOFISH-B blowout in the North Sea, the Amoco Cadiz spill near the French coast (Halibut North 1979:219) and the recent Gulf of Mexico blowout.

The potential for a spill or blowout is a perceived concern of Kodiak residents. They earn their living from the sea; what threatens that environment threatens them.

Marine Support Base. Competition for harbor space, flat ground for storage and waterfront transfer space is a major concern about OCS by fishermen. The Mean Scenario assumes a marine support base will be built at Women's Bay. This OCS location will avoid pressures and conflicts over limited space in town.

One way in which OCS might be favorably received is by handing over, or selling at a reasonable cost, these facilities to the community at the termination of the project. With Kodiak's expanding fishery and limited harbor space there is a crucial need for more space. These facilities would assist in alleviating the space problem, assuming there is still a need for more harbor facilities.

Under this scenario these facilities would be in use by the petroleum industry until operations close in 1999. If the bottomfish industry is

still emerging at that time and has need of harbor facilities, the petroleum facilities would be useful . However, a rapid expansion of the fishing Industry would require a more immediate resolution to space and facilities problem; for example, the development of Dog Bay or the Trident Basin. If these areas are developed prior to 1999, the pressing need and utility of the petroleum facilities would be lessened.

Limited Number of Platforms. The Mean Scenario cal Is for one platform during the development phase. A limited number of platforms is important for two reasons. First there is the problem of fishing access. Even granting that under this scenario no sea oil pipeline is assumed, fishermen would not want to fish too close to the development area. There is the potential for debris fouling gear, traffic, undersea activities disturbing ecological patterns, and safety (Habitat North 1979:208-210). The more platforms the more these factors increase. The second reason for limited number of platforms is psychological. A large number of platforms dramatically emphasizes the presence of OCS operations and increases tension between the industries.

Employment Shifts. According to Habitat North (1 979: 201 -206) the risk of employment shifts from fishing to oil are stronger in the processing sector than among fishermen. This is especially true since Alaska has a growing fishing industry, where opportunities exist in fishing. The relatively low wages and seasonality of the processing sector for unskilled labor may not hold laborers when higher paying oil jobs are to be had. The problem for the processors, however, may not

be in losing unskilled labor but rather in losing skilled "key workers." These are the trained personnel who are usually paid higher than average wages. These "key workers" may be "poached" by the oil industry.

Under the Mean Scenario the chance of a large employment shift is not likely. There will be a large demand for workers to construct the Marine Support Base. However, this will be for one year only and the construction crew will, in all probability, be contracted from outside Kodiak; though local labor halls would probably contribute workers. As noted in the projected employment figures the remainder of the project will not require a large body of workers. As such, the processing industry may lose some workers under this scenario, but not a large enough number to affect operations.

One negative impact of the oil-related employment opportunities may be the arrival on Kodiak of massive numbers of job seekers. The reputation of numerous high-paying oil-related jobs is a legacy of the oil pipeline. As noted in the baseline section of this report, many people are waiting for either the gas pipeline or a similar project to occur. Despite the reality of a low number of available jobs associated with this scenario, job seekers would be expected to arrive. One method of avoiding the presence of a large number of frustrated job applicants is through a massive advertising campaign by the oil companies explaining that hiring would not be done in Kodiak. This activity would also help improve community/oil company relations. Even assuming an advertisement campaign,

it can be expected that some job applicatns will arrive in Kodiak. Many of these can be expected to find employment in the fishing industry.

Fishing/Oil Industry Relationship. Many of the assumptions and activities listed above may help to improve inter-industry relations. Even so, the potential for conflicts exists. There may be demands for compensation by fishermen for gear loss or damage through contact with oil-related operations and/or debris. The OCS Amendment Act of 1978 stipulates a Fishermen's Contingency Fund for direct reimbursement to fishermen for oil-related loss or damages. The formation ofa grievance board representing both industries would also assist in this. process.

Cultural Values and Personality Characteristics

The Mean Scenario is character zed by a lack of contact and employment/ population impacts to Kodiak City. As such, it is expected there will be little impact to the cultural values and personality characteristics of the Kodiak residents.

These characteristics will, however, have a lot to do with how OCS is received and upon the nature of relations between the oil industry and the Kodiak community. It is fairly reasonable to expect the fishing industry, or representatives, to legally challenge the lease sale. If this challenge were not to succeed, as this scenario assumes, it would be expected that representatives of the affected segments of the community and fishing industry would be assertive in establishing formal contact with petroleum representatives. It is further expected that this

same assertiveness will manifest itself if any conflicts occur. This assertiveness is not to be construed as pugnacity but rather as an attempt to control conflicts with the oil industry, through direct personal and organizational interaction.

Political and Governmental Organization

As in the 95% scenario, political activity relating to OCS can be expected to intensify as actual oil-related activities begin to occur, under this scenario. General Interest governmental bodies would be expected to feel pressure by concerned individuals and groups. They may respond through institutionalized policy decisions. The development of the OCS Advisory Council is an example of General Interest Group's policy response. It is expected that this group will monitor OCS activities, provide a liaison between the community and the oil industry, provide a public forum for continuing community concern and work as a clearing house for OCS/community-related issues.

Many of these bodies are mandated to maintain the public well-being (police, fire, social services, etc.). As such, it is assumed they will develop contingency policies in accordance with their specific charges. These contingency policies will be basedon a planned response to expected OCS impacts. For example, this could include the hiring of additional police personnel or social service workers. However, as illustrated in Table 14, the population increase to Kodiak, which would require increased services from these agencies is minimal.

Specific interest organizations would be expected to relate to OCS as its development may either hinder or assist their interests. The Native and Filipino organizations will be expected to approach the oil industry for any available jobs. As Davis (1979: 223-224) notes, "Natives in the Cityof Kodiak would likely have to take an aggressive stand in order to get in line for any local jobs which might occur. The role of KANA in assisting in that process might be considered. " There is the setting for potential conflict here. As Davis (1979:223) also notes, "If the new jobs are allocated only to previously-trained outsiders, or to other ethnic groups recently moved to the Kodiak area, then considerable conflict could be initiated. " There presently are mechanisms attempting to overcome inter-ethnic problems. However, employment expectations (large wages and occupational/social mobility) associated with OCS, if frustrated, could lead to serious problems testing these peace-keeping mechanisms. The fishing organizations would probably move to 1) limit OCS operations where they might jeopardize fishing interest, 2) seek to work directly with the oil industry in conflict avoidance and conflict resolution and 3) establish a method for compensation to any fisherman incurring OCS-related gear damage or fish loss, such as the Fishermen's Contingency Fund.

Social Health

The Mean Scenario with its low projected employment and population impact on Kodiak, still holds potential problems in the category of social health. As mentioned above, frustrations over job expectations may exacerbate problems in race relations. This potential conflict may be

modified by 1) whether or not work positions are fil led by local residents and 2) whether or not communications and cooperation are established between the oil Industry and representatives of the ethnic groups.

Even with prior public information about the low availability of jobs, there could be expectations of openings; particularly with the high workforce demand during construction of the marine support base (469 jobs). The expectation of jobs may bring an in-migration of job applicants to Kodiak City from the Native villages on Kodiak Island (Davis 1979: 221-222) and from outside Kodiak 1s1 and. There is no way of knowing how large this increase may be. Its size could be mitigated by how well public information is transmitted regarding the relativly small number of jobs and where hiring is to be conducted.

Crime and alcoholism rates and mental health problems could fluctuate under this scenario depending on several conditions. The first of these is the number of in-migrants looking for work. Second, the expectations these migrants have in finding jobs and actual success in acquiring jobs. Third, though the camp for construction of the marine support base is projected to be an industrial enclave located outside of town, it would be expected these workers would on occasion come into town. Fourth, even beside the one year of "boom" construction, there is a projected population increase throughout the duration of the project. These persons would be expected to add (though minimally) to the rate of social problems.

Family Relations

No significant impact is expected in this category under this scenario. Some additional population is projected which will mean a few more children needing educational services.

Town Environment

Under this scenario no development is expected in the City of Kodiak itself. Thus no industrial or commerical land use pressure is expected, shove normal growth pressure. Pressures for housing, on the other hand, would be expected to increase, though the exact degree of this pressure is not known. It would be assumed to result from the minimal population increase associated with petroleum development and in-migrants looking for jobs. This pressure for housing would be added to the expected pressure from fishing-related growth. The development of an industrial enclave for the marine support base construction workers outside of town could ease housing pressure during the single "boom" year.

SUMMARY

Though increases in economic, employment and population projections are minimal for Kodiak under the Mean Scenario some impacts are possible to Kodiak's sociocultural system. The most significant potential impact to the system could be in the maritime adaptation of the entire Kodiak sys tern. If a major blowout or spil' negatively affected the environment and subsequently the fish stocks, i· would have repercussions throughout the restof the sociocultural system. However, the exact probability of

an oil spill is not known nor is the exact impact it would generate (for a discussion see Simpson, Usher, Jones 1977: 39-41).

Construction of the Marine Support base outside Kodiak avoids direct conflict over already crowded harbor space. A positive impact of this development would be the handing over of the marine support base to Kodiak at the conclusion of the project.

One area of potential negative impact under this scenario may be the in-migration of job applicants. This may be modified by a public information campaign 1) stressing the low number of jobs and 2) stating that hiring will be conducted outside of Kodiak Island, Even with these two factors there may be an unknown number of applicatns arriving on the chance of a job. The strain on Kodiak's facilities and services will depend on the number and nature of these applicants.

Expectations of jobs may-also potentially affect ethnic relations on Kodiak. Besides in-migrants arriving from outside Kodiak, Natives from the villages on Kodiak Island may come to Kodiak City seeking employment. The Kodiak Filipino population may also desire jobs in the oil industry, as a method of mobility up from the relatively low wages of cannery work. Thus there potentially could be three groups with expectations of high paying jobs, competing for those jobs: 1) Kodiak City residents (white, Native, Filipino) 2) in-migrants from Kodiak's Native villages and 3) in-migrants from outside Kodiak Island. There is the potential of conflict in this situation on the basis of residency and race.

Certain of these groups will expect they have more of a right to any available jobs. This potential for conflict can be diffused through 1) the public Information campaign mentioned above and 2) pol itical cooperation between the various ethnic organizations, local government and the oil industry prior to and during operations.

Kodiak's political system could be impacted under this scenario. The residents of Kodiak maintain an awareness of potential threats or opportunities and act politically on those events. OCS has been monitored for several years and political action formalized in the OCS Advisory Council. Given the assertive nature of Kodiak politics it can be assumed that political attention and organization will heighten and focus as OCS activities become a reality.

Local governmental organizations and service bodies would likely develop OCS-related policies and contingency plans. Affected special interest groups, like the fishing and ethnic organizations would probably contact the oil industry to establish liaison. Political pressure might be used by the ethnic organizations to acquire jobs for their numbers.

Kodiak's housing stock will be strained depending on the degree of in-migration which is dependent on the conditions mentioned above. There is the potential for racial tensions to be exacerbated by competition for jobs.

Crime and alcoholism rates and mental health problems will fluctuate dependent on: the number of in-migrants; their job-related expectations; the degree of boom town psychology associated with the single year of large construction employment; and finally, the extra population brought in for the duration of the project.

VII. 5% SCENARIO

INTRODUCTION

The 5% Scenario represents the largest find of oil (1.2 billion barrels) and an additional discovery of large deposits of natural gas (2.8 trillion cubic feet). The majority of these discoveries are made in the Middle Albatross Basin with a smaller find in the Tugidak Basin.

Exploration and confirmation drilling occurs over a 7-year period beginning in 1981. Because of positive findings, gas development begins in 1984 and oil development the next year. Three gas production platforms and five oil production platforms are assumed, only one of these in Tugidak Basin.

Gathering and transportation is conducted by pipeline from the production platforms to a shore-based terminal except for the Tugidak find. Direct loading is used in the Tugidak location. A total of 74 miles of subsea pipeline is laid. An on-shore terminal for oil storage is constructed in Ugak Bay on Kodiak Island. All gas is delivered by pipeline to an LNG (Liquid Natural Gas) plant to also be constructed at Ugak Bay on Kodiak Island. The gas and oil is transferred from the Kodiak terminal to tankers for distribution. During the production phase, about two-thirds of support activities are based on Kodiak with Seward providing the remaining support. A major service-support base is built at Women's Bay on Kodiak Island.,

As can be seen from the high quantity of oil and gas discoveries and subsequent production activities, this scenario will have a high level of Impacts on Kodiak's sociocultural system.

SUMMARY OF GROWTH PROJECTIONS: FUTURE ECONOMY, EMPLOYMENT AND POPULATION

The major OCS economic growth activities for Kodiak are substantial under this scenario. A flow chart of these activities is presented in Table 15 (Table 16 and Figure 6 provide employment and population figures). Specifically, there will be helicopter service supporting offshore operations. Major construction on Kodiak is assumed to include: 1) initial construction and later expansion of the marine support base at Women's Bay, 2) and LNG plant at Ugak Bay, and 3) an oil storage and transfer terminal at Ugak Bay (Alaska Consultants 1979:130). Construction and maintenance of these facilities would require a large workforce. A segment of the offshore production platform workforce would probably live in Kodiak, adding to the economy. This spurs indirect economic activity.

one of the biggest economic benefits would be the establishment of $1.1 billion in increased assessed valuation from OCS facilities. This wuld be added to Kodiak Borough's (not the City) taxable property base. This would, for example, yield $7.8 million per year, based on the 1978 tax rate of 7 mills (Alaska Consultants 1979a:188).

TABLE 15

ASSUMPTIONS FOR THE DISTRIBUTION OF EMPLOYMENT
AMONG THE COASTAL AREAS OF SEWARD AND KODIAK
5 PERCENT PROBABILITY RESOURCE LEVEL SCENARIO - OIL AND GAS
WESTERN GULF OF ALASKA

Phase, Task and Area of Operations	Seward	Kodiak
EXPLORATION		
Survey		
Offshore Geophysical and Geological Surveying [area of operation]	N/A	Survey vessels conducting geophysical and geological surveys on Albatross and Tugidak Basins outside the Kodiak coastal area.
Onshore Service Base	Temporary and later permanent service base providing resupply, communications and a point for crew rotation for vessels surveying Albatross and Tugidak Basins.	N/A
Rigs		
Offshore Exploration Well Drilling [area of operation]	N/A	Rigs drilling exploration wells on the Albatross and Tugidak Basins outside the Kodiak coastal area.
Marine Transportation [port area]	Supply/anchor/tug boats transporting materials to rigs, moving rig anchors and towing rigs on the Albatross and Tugidak Basins.	Supply/anchor/tug boats transporting materials to rigs, moving rig anchors and towing rigs on the Albatross and Tugidak Basins.

Onshore Service Base	Shore base supplying rigs and boats on Albatross and Tugidak Basins with tubular materials, fuel, water, mud, cement, food and other cargo.	Shore base supplying rigs and boats on Albatross and Tugidak Basins with tubular materials, fuel, water, mud, cement, food and other cargo.
Air Transportation	N/A	Helicopter service from Kodiak Airport transporting offshore personnel and small volume, light weight freight to and from rigs on the Albatross and Tugidak Basins.
Construction	Pi/A	Constructing a permanent service base.
DEVELOPMENT		
Platform Installation		
Offshore Platform Installation [area of operation]	N/A	Locating, installing and commissioning platforms on the Albatross and Tugidak Basins outside the Kodiak coastal area.
Pipeline Construction	N/A	Laying and burying subsea gathering lines and a trunk line from Albatross Basin to the north shore of Ugak Bay.
Marine Transportation [port area]	Supply/anchor/tug boats transporting materials to platforms, lay barges and bury barges. Half of the vessels for the total WGA platform installation will be provided from Seward.	Supply/anchor/tug boats transporting materials to platforms, lay barges and bury barges. Half of the vessels for the total WGA platform installation will be provided from Kodiak.
Onshore Service Base	Shore base supplying boats and platforms with tubular materials, fuel, water, food and other cargo. Half of the total effort for platform installation in the WGA will be provided from Seward.	Shore base supply boats and platforms with tubular materials, fuel, water, food and other cargo. Half of the total effort for platform installation in the WGA will be provided from Kodiak.

Air Transportation	N/A	Helicopter service at Kodiak Airport transporting offshore personnel and small volume, light weight freight to platforms, lay barges and bury barges on the Albatross Basin.
Construction	Coating of all pipe used in subsea gathering and trunk pipelines at Seward.	Constructing onshore pipeline, oil terminal and LNG plant on the north shore of Ugak Bay.
Platforms		
Offshore		
Development Drilling [area of operation]	N/A	Development drilling on platforms on the Albatross Basin outside the Kodiak coastal area.
Marine Transportation [port area] .	Supply boats transporting materials to platforms on the Albatross and Tugidak Basins.	Supply boats transporting materials to platforms on the Albatross and Tugidak Basins.
Onshore		
Service Base	Shore base supplying boats and platforms on Albatross and Tugidak Basins with tubular materials, fuel, water, mud, cement, food and other cargo.	Shore base supplying boats and platforms on Albatross and Tugidak Basins with tubular materials, fuel, water, mud, cement, food and other cargo.
Air Transportation	N/A	Helicopter service at Kodiak Airport transporting offshore personnel and small volume, light weight freight to platforms on Albatross and Tugidak Basins.
PRODUCTION		
Platforms		
Offshore		
Platform Operations [area of operation]	N/A	Operating platforms with workovers and wellstimulation on Albatross and Tugidak Basins.

Marine Transportation [port area]	Supply boats transporting materials to platforms on the Albatross and Tugidak Basins. One third of the Albatross and and Tugidak Basins effort willbe provided from Seward.	Supply boats transporting materials to platforms on the Albatross and Tugidak Basins. Two thirds of the effort on the Albatross and Tugidak Basins willbe provided from Kodiak.
Onshore Service Base	Shore base providing one third the effort in supplying boats and platforms on the Albatross and Tugidak Basins with tubular materials, fuel, water, mud, cement, food and other cargo.	Shore base providing two thirds the effort in supplying boats and platforms on the Albatross and Tugidak Basins with tubular materials, fuel, water, mud, cement, food and other cargo.
Oil Terminal and LNG Plant Operations	N/A	Operating oil terminal and LNG plant . on the north side of Ugak Bay processing oil and gas from Albatross Basin.

Source: Alaska Consultants 1979a: 137-140

Table 16

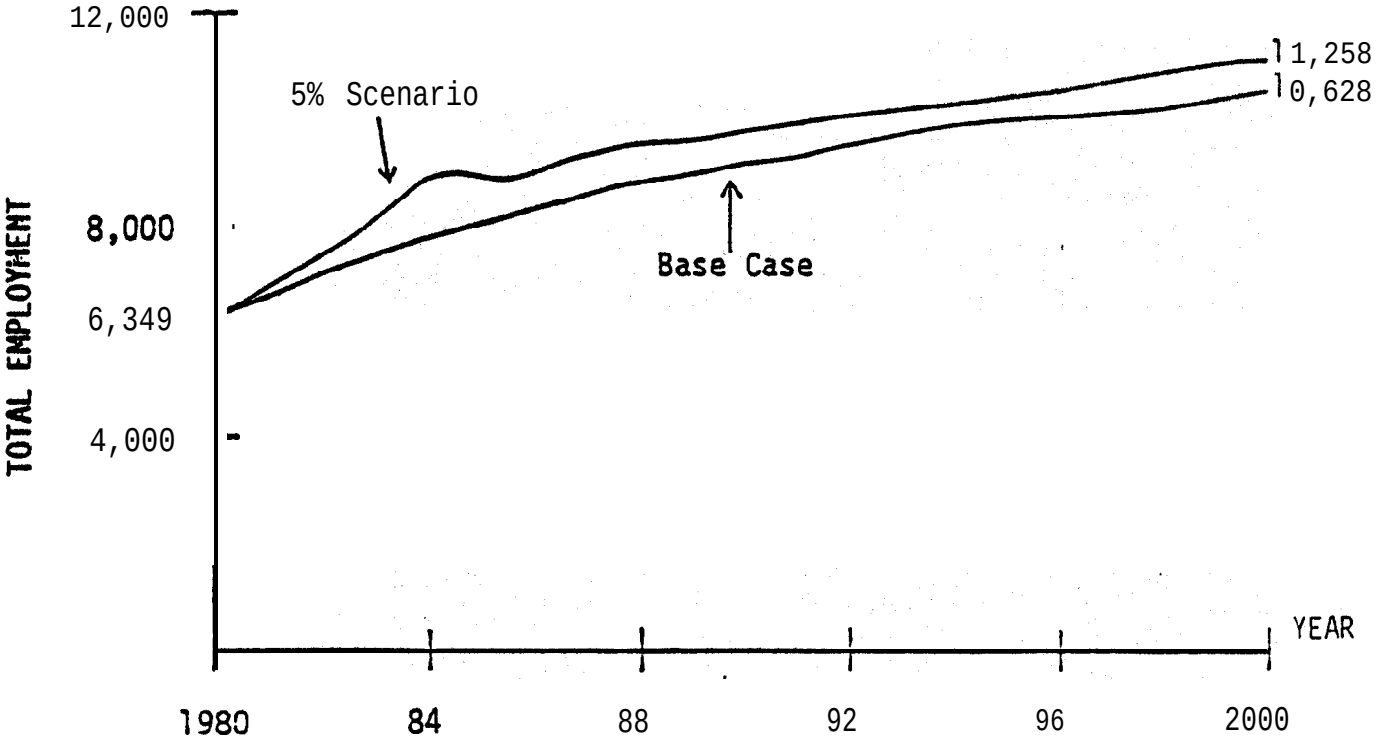
Forecast of Employment and Population
5 Percent Probability Resource Level Scenario - Oil and Gas
Western Gulf of Alaska - Kodiak Area

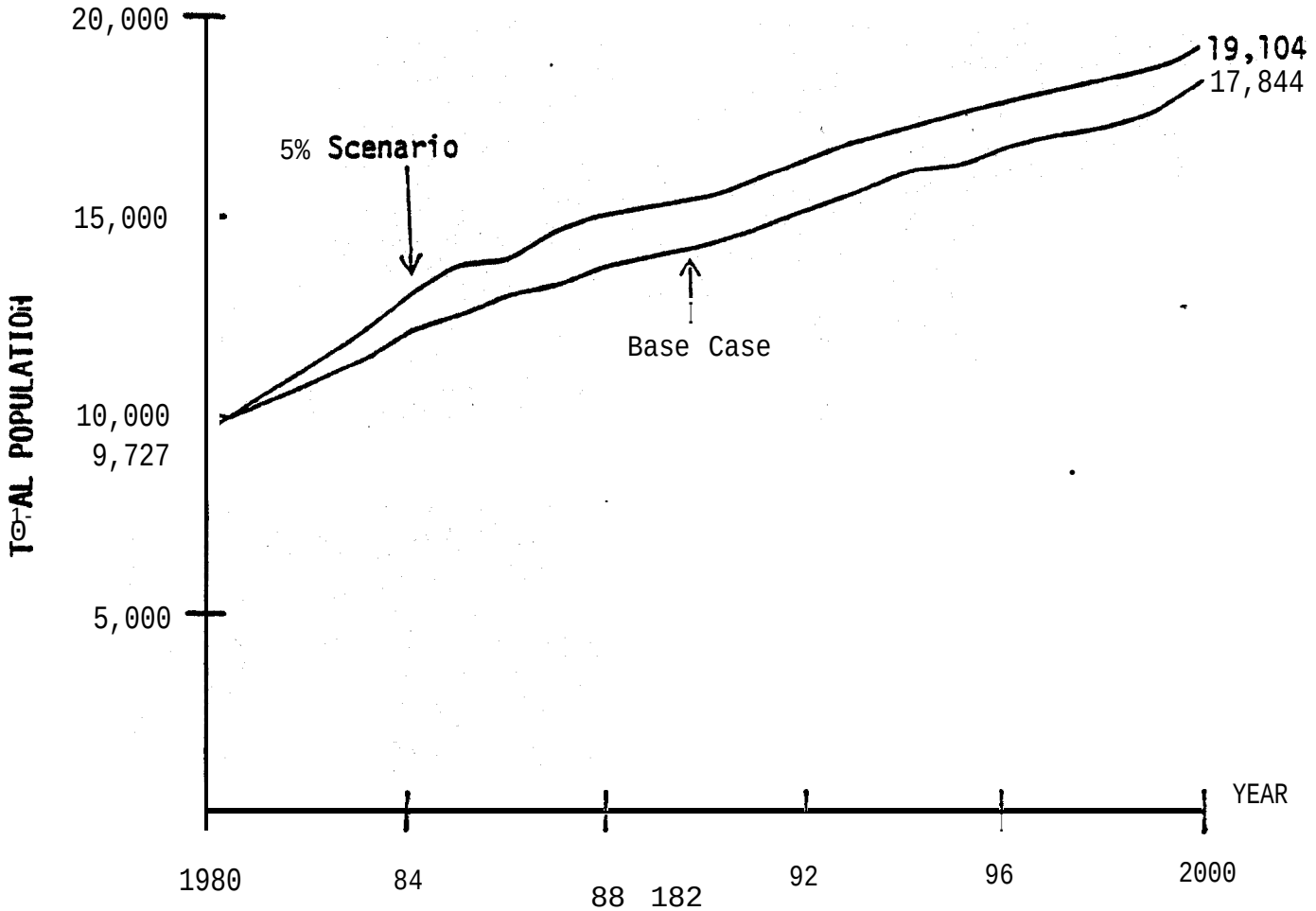
1981 - 2000

1NDUSTR% CLASSIFICATION/YEAR	1981	1990	2000
COMMODITY PRODUCING INDUSTRIES			
Agriculture, Forestry and Fisheries	(978)	(1 ,365)	(1,539)
Mining	(2)	(66)	(75)
Manufacturing (Fish Processing)	(1 ,666)	(2,3S0)	(2,677)
Contract Construction	(273)	(394)	(439)
TOTAL	2,919	4,205	4,730
DISTRIBUTIVE INDUSTRIES			
Transportation, Communications and Public Utilities	(269)	(841)	(953)
Trade	(734)	(1 ,245)	(1,636)
Finance, Insurance and Real Estate	(133)	(196)	(221)
Service	(550)	(966)	(1,241)
TOTAL	1,686	3,248	4,051
GOVERNMENT	2,099	2,361	2,477
TOTAL EMPLOYMENT	6,704	9,814	11,258
TOTAL POPULATION - KOO IAK ROAD-CONNECTED AREA	10,302	15,593	19,104
Coast Guard Base	2,500	2,500	2,500
Non-Military	7,802	13,093	16,604
City of Kodiak	5,198	8,512	10,859
Remaining Road-Connected Area	2,604	4,581	5,745
Permanent Residents	(2,604)	(4,581)	(5 , 7 4 5)
Construction Camp Residents	(--)	(--)	(--)

Source: Alaska Consultants 1979a:175

Kodiak Area
Total Employment and Total Population
Base **Case** and 5% Scenario
Western GuI f of Alaska
1980 " 2000





Source: Alaska Consultants 1979a:176

TABLE 17

ESTIMATED ADDITIONAL CONSTRUCTION, PERMANENT AND TOTAL POPULATION
5 PERCENT PROBABILITY RESOURCE LEVEL SCENARIO - OIL AND GAS
WESTERN GULF OF ALASKA - KODIAK AREA
1981 - 2000

Year	Total Employment	Onshore-Onsite Construction Employment/Population	Permanent Employment	Permanent Population	Total Population
1981	10		10	20	20
1982	22		22	44	44
1983	734	656		156	812
1984	1,113	973	1::	280	1,253
1985	1,114	909	205	410	1,319
1986	568	325	243	486	811
1987	885	587	298	596	1,183
1988	696	87	609	1,218	1,305
1989	648		648	1,296	1,296
1990	651		651	1,302	1,302
1991	635		635	1,270	1,270
1992	625		625	1,250	1,250
1993	606		606	1,212	1,212
1994	614		614	1,228	1,228
1995	622		622	1,244	1,244
1996	630		630	1,260	1,260
1997	630		630	1,260	1,260
1998	630		630	1,260	1,260
1999	630		630	1,260	1,250
2000	630		630	1,260	1,260

Source: Alaska Consultants 1979a:180

Initial employment impacts for Kodiak are minima- with only 20 jobs for aviation support during exploration activities. As finds are made, the level of employment Increases. The major potent" al impact would be during a five year (.1983-1987) increase in construction when major facilities are built. During this period, construction employment varies between 325 and 973 jobs. These construction projects account for 40% of the total direct OCS employment for the 20-year forecast period. Alaska Consultants (1 979a:171) notes that this high demand would outstrip Kodiak's resident workforce capacity and result in an increase in temporary transient workers. Workers for these projects are assumed to be housed i n industrial enclosures at the work sites outside of Kodiak City.

> As the OCS facilities are completed and put into operation, the temporary construction jobs give way to the permanent operational jobs. It is anticipated that this operational phase will attract a relatively stable workforce, with low turnover, which would effectively be added to the resident employment base of the Kodiak area. (Al aska Consultants 1979a:172)

About 420 of these stable permanent jobs are expected. It is estimated these jobs would generate about 210 indirect jobs in the Kodiak area economy. These 630 jobs will account for 6% of all Kodiak employment, and only 15% of new additional employment forecast for Kodiak by 2000. Fishing is expected to account for the bulk of the new employment, assuming there i's no shift of the fleet to a new location such as Dutch Harbor.

OCS related population growth for Kodiak should be viewed in terms of permanent population growth rather than total population growth. The

latter case includes the large number of transient construction . workers.

The off-shore exploration and development phase is expected to bring about 600 new residents to the Kodiak area. These residents would be supported by basic employment in air and water transportation industries or through secondary economic activities near Kodiak City. It is assumed most of these residents will settle in Kodiak City (Alaska Consultants 1979a:173).

Around 250 plant workers and their families are projected to arrive when operations begin at the LNG and oil terminals at Ugak Bay rather than in Kodiak City. This would produce a new satellite community on the Island.

With the start of oil and gas production it is assumed some of the platform workers will settle in the Kodiak area. These workers and secondary economic activity workers are assumed to reside in or near Kodiak City.

Overall, 1,260 new residents are expected to move into Kodiak by the end of the 1980's. Half are expected to live in Kodiak City with the rest residing on the road-connected area: mainly in the Ugak Bay vicinity. This distribution of the incoming population should ease the projected population growth to Kodiak City under this scenario. About 20% of the population growth from 1978 through 1990 is from OCS

developments. By 1990 about 8% of Kodiak's urban population would be directly or indirectly dependent on OCS (Alaska Consultants 1979a:174).

ASSESSMENT OF IMPACTS

Maritime Adaptation

In their discussion of the social impact of the 5% Scenario, Alaska Consultants (1979a:181-182) note:

> ...the main social impacts are likely to be qualitative rather than quantitative in nature. It is clear from many public meetings and discussions that the adventof OCS development at Kodiak will be controversial since a significant part of the existing fishing community perceives oil development as a threat to the environmental and economic well-being of the town's primary source of livelihood. Thus, the potential seems high for institutional conflict at the outset of any OCS exploration between Kodiak residents and the governmental and industry groups sponsoring oil and gas development.

As noted in the 95% and Mean Scenarios, the communities' entire socio-cultural system can potentially be affected by changes to their maritime environment. The 5% Scenario radically heightens the potential problems discussed under the previous two scenarios.

Oil Spills and Blowouts. With the vast amount of oil and gas handled in this scenario, the likelihood of a spill or blowout is increased. See Simpson Usher Jones (1977) for a discussion of oil spill potential . Besides the offshore platforms and ocean shipments, as in the Mean Scenario, there is also the added variable of the underwater pipeline.

Any further discussion on spills or blowouts is the same as in the Mean Scenario, except for the following additional note. The sheer magnitude of the petroleum find assumed In this scenario will engender a great deal of publicity and development activities. These two factors will increase resident concern about potential oil spill and blowouts, as each significant development occurs.

Marine Support Base and Terminals. For the most part, conditions for the 5% scenario are similar to that of the Mean Scenario. Construction of onshore OCS industrial facilities outside Kodiak City would avoid pressure on existing limited harbor space. Providing these facilities to the community at the close of operations may ease some of the strain between the fishing and petroleum industries; though as noted in the Mean Scenario discussion, their utility will depend on the developmental timing of the fishing industry.

Two further points specific to this Scenario must be added. First, the oil terminal provides a potential for petroleum accidents that might damage the offshore and onshore environment. Second, the assumed high yield of this scenario would mean a high level of petroleum-associated vessel traffic (tugs and service boats as well as tankers) with attendant risks of accidents and gear loss. It is projected that the petroleum vessel traffic would not be well received by the Kodiak fishermen, if the Valdez case is any comparison. The petroleum vessels plying the Valdez corridor are the subject of negative feelings by the Cordova fishermen (personal observation).

Platforms and Undersea Pipeline. The increasing number of platforms in this scenar o may further limit fishing access. The existence of the undersea pipel nes further complicates the picture. Knowledge of these pipelines may ncrease apprehension on the part of bottom, crab or Long-1 ine fishermen. Marking these lanes may avoid accidents. However, the platform sites and the pipeline lanes are expected to be restricted for fishing. In effect, the Kodiak fisherman woul d be denied the right to fish these waters or fish at their own risk. This fact, coupled with the visual presence of the platforms, would be a constant reminder to the Kodiak fishermen of limitations placed on them by OCS, and possibly reinforce their negative feelings towards the OCS project.

Empl oyment Shifts. Due to the large find and associated activity, this scenario presents a strong case where there could be employment shifts from fishing to petroleum. As noted in the above section on employment impact, there is assumed to be a large number of workers required for construction and operations. As with the Mean Scenario, i t is doubtful if these workers would be drawn from fishermen with the rising fishing opportunities projected under the non-OCS Scenario. They could be drawn from the processing workers. The shiftof unskilled and skilled key workers may not seriously damage the fishing industry. What it might do, however, is slow down the projected rate of growth of the industry (Habitat North 1979:205). The industry will grow, even with the loss of skilled "key workers". It just won't growas fast.

The potential for in-migration to Kodiak City of workers from both outside Kodiak Island and from the villages on Kodiak Island would be dramatically increased in this scenario. The large find, the need for workers and the attendant publicity could lure job seekers holding expectations of pipeline type wages. Again, this potential may be modified by a public advertising campaign by the petroleum companies. Also, strong cooperation between local governmental officials and the petroleum industry may help mediate this problem.

Fishing/Oil Industry Relations. Under this scenario, there is the potential for conflict between these two industries. Both industries would be developing their valuable and profitable resources simultaneously. It would be a growth and expansion period for both industries. The most negative impact to the community that could result from poor relations between the industries would be a residential shift of the fleet. This would certainly alter long range projected economic, employment and population estimates as well as the quality and nature of life of Kodiak.

The locating of support facilities away from Kodiak City should help avoid this conflict. The Fishermen's Contingency Fund also should ease tensions, as would a grievance board where representatives from each industry actively participate.

At the personal level, it is somewhat difficult to project exactly how individual fishermen and oil workers would relate to each other. As noted in the population section there would be a number of oil workers

who would be expected to reside in Kodiak. Also, the temporary constuction workers would be expected to spend leisure time in Kodiak City. Conflict between these two groups would depend on two variables. First, the nature of the oil workers; are they professional, technical, or manual workers and secondly, are they stable family residents or predominantly single, males? These two variables could affect how the oil workers approach the community. If it is approached as a community to live in and raise a family in, conflict at this level could be minimal. On the other hand, if Kodiak is seen as a "boom town" there could be conflict over bar space (turf), women, entertainment, housing and purchasing ability.

Relations will also be affected at this level by what happens in the production area. Spills, blowouts, loss of gear, or any other negative contact between the industries or rumors of negative contacts could heighten tensions; Kodiak City is expected to be a very busy, crowded place under this scenario, with an expanding fishing industry, petroleum development and in-migrants looking for work. It would be difficult to not project some conflict between the industries and between individuals representing the industries.

Cultural Values and Personality Characteristics

As noted in Chapter IV, cultural values and personality characteristics may be impacted to some degree under the non-OCS Scenario. With the advent of bottomfishing, the employment pattern is expected to become more stable, avoiding the, emotional and activity vacillations associated

with other fisheries. Since the cultural-values and personality characteristics are so closely tied to the occupational and recreational patterns, It is expected these areas will also stabilize, though the degree cannot be projected.

The 5% Scenario is also expected to alter this category. As Alaska Consultants note (1979a:173-174) most of the' petroleum industrial workers are assumed to have stable jobs, except for the transient workers associated with the major construction phase. They would not be involved in the intense vacillation cycle associated with seasonal fishing. Thus they will add their share to stabilizing conditions, though again it must be stressed that the degree is unknown.

The specific "fit" of aspects of cultural values and personality characteristics between the fishing-related population and the new petroleum industry workers cannot be projected. There is no information on these personal aspects available relating to the OCS petroleum workers that would come to Kodiak. The closest comparison that could be drawn would be from the workers on the Alaska pipeline, who may vary from the OCS workers. There are also the differences between the residents of the cities of Kodiak and Valdez to consider. However, the following may provide some indication:

> To a very surprising degree the basic characteristics of pipeline camp workers parallel those of other members of the Valdez community. Although fewer of the pipeline workers were married (41%) and they tended to be younger in age (an average of 32 years), they shared characteristics such as similar levels of education, religious affiliation and race. One exception to this was that

more pipeline workers interviewed were native. They also shared many attitudes and values common to Valdez: in answer to questions on the desirability of small town attributes, camp workers responded as similar or stronger adherents of the small town ethic than Valdezians themselves. As compared to town people, a higher proportion of camp workers also perceived modern changes as negatively affecting traditional Alaskan values and more were actually opposed to those changes occurring in Alaska, particularly those concerning a loss of personal friendliness and low population density. Similar to Valdezians, they perceived economic factors and jobs as the major gains in a changing Alaska (Baring-Gould and Bennett 1976:22),

Political and Governmental Organization

As in the two previous scenarios, political activity is expected to intensify as OCS-related activities steadily accelerate under this scenario. Overall, the response would be similar, though more intense, to the Mean Scenario. Some exceptions are as follows. First, friction between groups for occupational opportunities might intensify because of real occupational opportunities (325 to 973 construction jobs and 630 production related jobs).

Secondly, there is around a billion dollars of industrial property added to the Borough's property tax rolls. Alaska Consultants note, "...the city would obtain about half of the OCS-related growth impact and most of the base growth impact, but would receive no share of the OCS industrial property tax revenues..." (1979b:188).

This situation would tend to heighten the tension between the City and Borough, though admittedly this tension is difficult to define (pages 48-49). It is assumed the City will feel that since it is receiving

some of the OCS-related growth impact it should receive some fiscal benefits as compensate on. Alaska Consultants project a solution to this situation:

> The addition of a billion dollars in industrial properties to the Borough government's property tax rolls may have consequences for the division of fiscal and governmental responsibilities between the City of Kodiak and the Kodiak Island Borough . Presumably, the strengthened financial position of the Borough under this scenario would support the assumption of additional powers by the Borough and, perhaps, some transfer of powers from the City to the Borough level (1 979a :182).

Another solution to this potential situation is unification of the Borough and City. Unification has been proposed and defeated in the past; this situation may increase an affirmative vote.

Social Heal th

The 5% Scenario has the potential to heighten social problems in Kodiak. As Davis notes, "All communities experiencing rapid growth report' increased fragmentation of the social structure and greater friction between the parts of the structure" (1979:237).

The five-year (1983-1987) heavy construction period is expected to require 325 to 973 workers, plus the permanent stable workforce of 630. It is assumed there will be competition between Kodiak's differing ethnic groups for these jobs. With the large petroleum find and the relatively high number of jobs in a nearby location, occupational expectations could be high.

There is also the factor of the increasing political power of the ethnic organizations. As mentioned in the non-OCS scenario, these organizations are expected to gain power during fishing-related growth. It is assumed much of individual job expectations will be channeled through these ethnic organizations.

At the macro organizational level, potential conflicts might be avoided, depending on: 1) whether or not the positions are filled by local residents, 2) whether or not communication and cooperation is established between the oil industry and representatives of the ethnic organizations and 3) the degree of cooperation established between the ethnic organizations themselves.

The exact sequence of events cannot be projected. However, some factors that would be expected to exist are: the potential for high job expectations, competition for these jobs and an overture to the oil companies by the ethnic organizations requesting jobs for their members. A total ignoring of these factors, particularly the overtures by the organizations, may result in political pressure on the oil companies.

Racial tension and conflict at the individual level could depend to a large degree upon what occurs at the macro level. A satisfactory compromise on job allocations may reduce tensions between individuals and groups. Ongoing communications between the relevant organizations with information disseminated to members could also help.

Some incidents and problems can be assumed to occur. It must be remembered that at the time of OCS development Kodiak will also be experiencing tremendous growth in fishing and in resultant population. There will be competition over "bar space", "turf", housing and other services and facilities. In other words, the pattern noted under the Base Case will continue, though modified by the stability of bottomfishing. This pattern will fluctuate as a result of OCS depending on the points mentioned above.

As noted in the Mean Scenario, crime and alcoholism rates and mental health problems could vary under this scenario, depending on: 1) the number and nature of in-migrants looking for work, 2) their expectations regarding jobs, 3) the frequency and attitude of workers visiting Kodiak from the construction camps, and 4) the population increase associated with the stable permanent OCS population (page 183). As noted throughout this discussion, transient in-migrants may potentially be a factor in the nature and degree of impacts. As such, it is worthwhile to compare the effect of in-migrants on Valdez. In their conclusion, Tremblay and Banta state:

> "In conclusion, then, the concerns of the community regarding problems of transient workers was not born out. The transients did not create any strain in the system and, on the contrary, even made a significant contribution in terms of the economy. The majority of them came to Valdez hoping they could find employment. Those who were successful stayed and worked while those who were not simply left without engaging in criminal behavior, applying for welfare, or creating any other problems" (1974:53).

Whether this parallel would hold for Kodiak cannot be predicted.

Family Relations

OCS development under the 5% scenario in Kodiak would be occurring during a growth period of the fishing industry. Though not necessarily a boom period, these two activities occurring together would create an expanding, dynamic environment. This may have an effect on family relations. A year-around fishery would tend to heighten role conflicts associated with long-term male absence. It would be expected that families and individuals would continue to form fictive, extended families.

Specific to OCS, the five-year construction period would probably introduce more males into the lopsided sex ratio existing in Kodiak. This would be expected to create higher competition for female companionship during that period. Once the construction phase is completed it is assumed the permanent OCS workers would be accompanied by their families, helping to stabilize the community. However, potential opportunities in the expanding economy may have consequences for families similar to those experienced in Fairbanks. In discussing mental health in Fairbanks during the pipeline, Dixon noted some changes that affected family relations:

> As a result of greater employment opportunities for women and teenagers, as well as new jobs and career advancement for men, people established new roles and new identities in the community and in their families. At the same time, people were forced to consider conflicting values between jobs and families, affluence and change in lifestyle. The new roles and value conflicts may have contributed to stress within individuals and families. These types of stress may be reflected by greater utilization of counseling services, more marital problems and divorces, and increases in runaways and juvenile trim (Dixon, 1978:222).

The implications of Dixon's findings can be suggestive for projecting potential effects on families under a changing situation with occupational opportunities.

Town Environment

Alaska Consultants assume that Kodiak City would need about 265 additional dwellings as the result of OCS development under the 5% scenario. They state further that, "... the supplyof land at Kodiak* is adequate for this level of development" (1979a :183). About the same number of additional dwellings would be needed at the industrial enclave at Ugak Bay. The question that cannot be answered, however, is even though the demand and the land are there, would the dwellings be built? This question cannot be answered because of too many exogenous variables related to real estate financing. However, if the past is any guide, supply will lag behind demand.

This scenario posits OCS-related industrial development outside of Kodiak City. Also, a camp is expected to be located at the construction site to house the workers. This means the City would not be affected by either of these developments. Regarding the construction camp being located outside Kodiak, Baring-Gould and Bennett (1976:40) notes a comparison from Valdez, "The fact that most of the transient population in Valdez has been housed separately in self-contained construction

*This refers to Kodiak Island.

camps outside of town has greatly reduced the strain on most Valdez institutions and services. "

If the above assumptions are the reality of development, OCS under this scenario should not have too great an impact on the town environment. There would be some housing demand for the permanent workers, but this is minimal compared to the demand for residential and industrial development associated with the expanding fishing industry.

However, if these assumptions change and the reality is large numbers of people vying for minimal housing there could be an extreme inflation in the dwelling adaptations noted earlier in this report. A warning by Baring-Gould and Bennett (1976:43) from the Valdez experience suggests the worst from ill planning as it relates to housing:

> "Lack of housing may constitute one of the most important impact problems in small coastal communities. It was the most important single issue in Valdez. It caused distinct hardships for many; it created problems for supplemental staffing of local services; it created animosities between groups with differential access to adequate housing; it generated high personnel turnover in key medical and educational services, and therefore affected the continuity of these services; and the reliance on temporary dwellings and trailers has probably shaped the housing patterns that will predominate in Valdez for the foreseeable future. Skyrocketing land values and the inflationary construction wages have elevated housing costs to levels that greatly supersede conventional mortgage ceilings. In addition, banks in Valdez were unwilling to amortize loans over conventional long-term period. The result is that construction of new and permanent housing has become a luxury available to only the very few."

This is also true for that more subjective area, “small town feeling”. This is a relative term, depending on the perspective and length of residence of the individual. Growth related to fishing would affect the sizeof the community but not its nature. Though quite expanded by the year 2000, Kodiak would still be a fishing community. Ifa large number of petroleum workers moved in, however, it could become a mixed community.

SUMMARY

The 5% Scenario holds the greatest potential to impact Kodiak’s socio-cultural system.

The magnitude of the find proportionately increases the potential impacts to Kodiak as were noted under the Mean Scenario. There is the potential for spills and blowouts which could have extreme negative consequences throughout the rest of the sociocultural system. Besides these two major threats, there are the annoyances and dangers of increased vessel traffic, debris, and limited fishing access. Though employment shifts might not damage the fishing industry, they could slow it down.

There is potential for in-migration to Kodiak due to the magnitude of the find and the relatively large number of jobs, particularly during the five-year period of major construction. The number of migrants could be modified by public announcements and the hiring location. The nature of these in-migrants and their impact cannot be predicted, though

there is comparative evidence from Valdez suggesting minimal negative impact.

Potential conflicts between the oil and fishing industries could be modified if there is: 1) no major ecological damage affecting fishing, 2) separation of fishing and OCS ports, operational facilities and support services, 3) direct and on-going liaison and communication actively pursued by both industries, 4) Fishermen's Contingency Fund and 5) the potential for transmitting OCS port facilities to the community after production is completed. At the individual level, relations would depend on the characteristics and number of the oil workers and what occurs at the macro level.

The characteristics and number of petroleum workers may affect the cultural values and personality characteristics of the community. Unfortunately, no adequate projected profile of the OCS petroleum workers is available. Comparative data from the trans-Alaska pipeline is only suggestive.

Political activity is assumed to be very intense under this scenario. Fishing and other affected segments of the community would be expected to actively pursue a policy of interaction with the oil industry. The intensity of political activity may increase at the beginning of each phase of operations. It can be expected that attempts will be made to halt or modify petroleum development. The extent and source of these attempts cannot be predicted.

Political pressure can be expected to be brought to bear over the allocation of jobs in relation to residents, especially ethnic groups.

The addition of massive tax revenues to the Borough could potentially result in a change of relationship between the Borough and City. This could be, for example, a shifting of powers or unification.

Racial tensions and conflicts would be expected to depend, to a large extent, on what occurs in the occupational and political spheres. Crime and alcoholism rates and mental health problems would vary depending on the number and kind of in-migrants. Some increase would likely be associated with the actual population increase.

Strain may be placed on family relations due to the occupational opportunities of a growth economy. There would be opportunities not only in the OCS area but also in an expanding fishery. Fictive extended families would be assumed to continue to form and provide functions created by geographic and psychological distance. The school system would probably expand.

Though land is available for increased housing needs, there is no way of knowing if actual housing would be built. If the historyof housing in Kodiak is any indi cation, a shortage would be expected. The degree of this shortage would have repercussions on family and ethnic relations.

Assuming all petroleum development is-outside Kodiak, there would be no industrial impact on the town environment.

If the assumptions are correct regarding increases in petroleum worker population residing in Kodiak City, it should continue to remain a fishing community, though an expanded one.

APPENDIX A

". ..God, be merciful, I want to live."

by Nancy Freeman
Kodiak Fish Wrapper & Litter Box Liner
Vol. IV No.11
November 1978

When the three young fishermen left Kodiak harbor October 1, there was no hint that only one would return.

George Bourgeois, 29, from Covington, Louisiana, had been fishing salmon out of Kodiak since 1973. This was his first job on a king crab boat.

Jerry Allain, 28, had also started out fishing salmon but now felt he was ready to make it king crabbing - maybe even run his own boat.

At the wheel of the 42-foot Marion A was Delno Oldham, 25, several years a fisherman, originally from Washington State.

It was their first season together, but Bourgeois and Allain had known each other for five years; and Bourgeois considered Oldham "a new good friend."

Like dozens of others that weekend, they were headed south to move crab gear. The 13-year-old boat carried three, four tons above the rail - including 16 new king crab pots, boxed herring for bait, and line.

The weather was mild for Kodiak; a little rainy, cloudy, 53 degrees. The marine forecast called for east winds increasing to 20 knots; moderate seas building to seven, eight feet. More rain.

By 10:30 the next morning, however, the sea was menacing and the Marion A started listing to port. In notorious Geese Channel, "it was real choppy," Bourgeois said later. "We were right in the part of the channel where the tide rips were and the waves were breaking from every direction."

"We were taking the sea head on . . ..the list got real bad and we were over to port. Water was on the deck." Allain and Bourgeois were on top of the pots . "I got down. I'm standing and Jerry hollers, 'Tell him to turn it into the sea.' So Delno turned into the sea but there was another sea still coming off the port side. Another big one came and I thought we were going all the way over."

"Then, all of a sudden, it started turning the other way. And when it went the other way, it went way over - all the way over to starboard and it laid."

"About that time I hollered, 'throw the survival suits down' to Captain Delno. He was at the wheel, trying to get the boat stable. I just saw him grab his hands up (like overhead) and then the boat was under water. He swam out through the door."

"We all kind of hovered around the boat for a second and then it turned upside down and we were all holding on to the bottom of the boat and tried to climb up on top. The waves were breaking over us and everybody was drinking salt water.

"Finally the boat started tilting, the stern kicked up in the air and she just sunk. "

Bourgeois figures only a minute and a half elapsed between the time the port list was bad and the Marion A went under.

There had been no time to radio for help. No time to put on survival gear.

As the boat was sucked down, Bourgeois pushed away, swimming maybe 20, 30 feet. "I saw Jerry." he said, "I didn't see Delno anymore."

In the next few minutes he felt a survival suit strike the back of his head. "I didn't see it go out the door; I didn't know it was out there." Bourgeois knew it was his because he had left it open, unfastened.

Afloat in the water, the suit was collapsed. Bourgeois kicked off his shoes and tried repeatedly to get into it only to have the sea "wash it right off my leg."

"Jerry was next to me, trying to hold on to the foot of it for me. I said 'just let go for a minute; I 'm going to go under water. ' Which I did. I tilted my head back and kicked my legs up - kicked the seat of the suit up in the air. When I did that, my leg got *to* break through it and opened out the suit."

"I told Jerry to hold around my waist. He kicked while I kicked and swam. I told him to just keep kicking."

"We were closer to the island side and I wanted to go that (direction) but the wind was blowing us directly away. Every time I tried to turn into it, Jerry would say 'turn around, just go with the tide, go with the wind.'"

With no protection from the descending walls of cold water, "it was maybe less than 15 minutes" until Allain "just slowed down. Started talking real slow. He knew it and I knew it. It was going to take too long to hit land."

"He said, 'I love you Jerry.'

"I said, 'I love you, too.'

"He kissed me on the cheek and I kissed him on the cheek."

"I said, 'we're going to make this; just keep kicking; open your eyes.' I held him until he collapsed in my arms and then I held him longer. I was sure he was dead. I finally let go."

His survival suit billowed out. Bourgeois was driven across the heaving surface of the ocean.

"You always approach God when you need something the worst, and I was begging. 'They say You're a merciful God, be merciful, I want to live.' I kept saying over and over 'I want to live. I choose life. I've got this far, I just want to make it.'"

"Once I got maybe a couple hundred yards out of the channel, I could predict when the sea was going to crash over me and I tried to make sure my nose and mouth were closed . . . . I was worried I'd shoot down the channel . . ..but I kept swimming enough in a straight direction so I did hit the island."

Drifting and swimming, it took him two to three hours.

If one ordeal was over, there was a new one ahead. Bourgeois had lost his glasses, struggling to get into the survival suit, and his vision was impaired. His only provisions were two water-logged matches.

The desolate island on which he landed was a ledge of rock, sand and driftwood . "No people, no trees, no bushes. Just low grass, tall grass, and a little beach grass. Moles. Fox."

But it had fresh water and Bourgeois built a leanto of driftwood in the sand.

The first day he had nothing to eat. Later he subsisted mostly on wild celery and pulled mussels off the reefs at low tide. (Bourgeois said he had read many times a pamphlet in the Kodiak library about edible and poisonous plants.) After six days he found beach greens; and on about the seventh a half gallon of fresh milk (dated Sept. 23) and a Hershey bar washed ashore.

The milk was cold and sweet. He saved half of it for another day.

He prayed he wouldn't get sick or hurt his legs. He tried to walk carefully but he tore holes in the feet of the survival suit when he climbed out on the reefs.

His hands and feet were swollen and aching. His legs chafed raw.

It rained and stormed all but three days. "I knew the wind was going to get colder," he said, "because I could see the snow on the mountains. It was almost the middle of October. This is Alaska. It was time for it to start freezing. That would have been the test. Luckily I didn't have to go through it."

"I couldn't have lived without that suit, I know it. I witnessed it, for one thing. I realized it each day. This thing was protecting me. There is no way I could have taken it off and been able to stay alive, especially in that wind."

Every day Bourgeois pulled himself as far out on the reefs as he dared, praying *to* be spotted by a boat or an airplane. Using driftwood, he had constructed a huge "help" sign on the beach.

The second day, two airplanes passed overhead.

Coast Guard aircraft flew within a mile and a half of the area during that first week.

At night, Bourgeois said, he could see the lights of fishing boats anchored up (probably at Russian Harbor). "Boats in there like crazy. If I could just get over there. That was the frustrating thing, being on an island that nobody had any reason to come near."

Deep down, he understood. '{Usually there is only one man taking the boat through the channel and he's interested in the course. The crew is asleep or they are getting ready to get up and go pick gear. I figured no one was looking."

His eventual rescue, Bourgeois says, was a miracle. For one thing, the sunken vessel was never reported overdue. No one even knew he was missing.

The morning of Friday, October 13, Bourgeois included in his prayers one that went: "This is the 13th, You know. I've never had any lucky numbers. Let me have a lucky number; let this be my lucky day...."

Some 50 boats had already passed during the two weeks. Another boat went by. "It didn't see me. Then I saw it getting bigger instead of smaller. It had turned around and was coming right at me."

Ole Harder, owner/skipper of the Moonsong, said crewman Buddy Walton was looking through the glass when he saw something red/orange on the beach. At first Harder thought it was probably a red poly crab buoy. But he had a little time, so he swung in. Walton said, "Hey, I think it's a man and he's waving. "

Bourgeois ran limping toward the Moonsong and then back after the ring to his survival suit. "I ran just as fast as I could," he said, "My feet were sore as it was but I beat 'em up good." He dove into the water and swam the last 100 feet.

(Walton is a friend Bourgeois hadn' t seen for four years.)

At 1:30 p.m., Harder radioed the Coast Guard which sent a helicopter. The chopper first searched the area and then hoisted Bourgeois aboard.

He was transported to Kodiak Island Hospital where he was treated for a fever and for aching and swollen hands, feet and legs. He had lost 22 pounds.

Five days later, Bourgeois still had an eye out for the weather. It had to clear before he could fly from Kodiak to rejoin his wife and young daughter in Louisiana.

"I'll be glad to see them, just to see them," Bourgeois said. "It makes you feel you got a second chance. A big second chance to live your life again."

Delno Oldham, 25, skipper of the ill-fated Marion A, was a "good fisherman," friends acknowledge, "a man who was doing exactly what he wanted to do."

He had fished steadily since he moved to Kodiak at age 18. Oldham had crewed on the 24-foot F/V Ibis; the Captain Joe; Wafico 20; and fished halibut on the 30-foot Paula, owned by Oldham and his brother, Deryl.

The youngest of the three sons of Les and Frances Oldham of Port Orchard, Washington, Delno was an innovator. He was among the first to commercially fish king crab from a small boat in Kodiak and made his own "5 by" pots.

"He swore by survival suits" and made sure his crewmen were familiar with the suits aboard the Marion A, a brother said. "Unfortunately, he didn't have time to get his."

Oldham was a non-swimmer and wasn't known to have a regular check-in system when he left and returned to port.

A popular member of Kodiak's young fishing community, Oldham worked and played hard: "He lived at the speed of light," a friend said. "Itwas just 1 ike him to leave a bit of question in everyone's mind about what happened."

Appendix B

List of Persons Contacted

Tom Azunbrado
Jim Baglien
Ben Ballenger
Roberta Bannister
Sandy Beach
Chris Blackburn
Karen Brown
Al Burch
Charles Carrel 1
Ernesto Casulucan
Junior Cross
Leon David
Pam Delys-Bagl ien
Stuart Denslow
Don Fields
Nancy Freeman
Ken Freeze
Renee Giddins
Howard Goddard
Mary Goddard
Clair Harmony
Gary Hovanich
Duncan Hunter
Kathy Hunter
Rosi Jarussi
Betts Johnson
Wally Johnson
Art Jordan
Sandy Kavanaugh
Julie Knagin
Bruce Kyle
Wayne Marshal 1
Palmer McCarter
George McCorkle
Huong Na
Ed Naughton
Sharon Naughton
Sid Omlid
Roger Page
Mary Pederson
Paul Pederson
Hank Pennington
Bob Peterson
Frank Peterson
Carl Pohjola
Pat Polland
Jack Rhines
Mark Routzahn
Larry Rowe
Jerome Selby
Terry Severeid
Jeff Stephan
Gary Stevens
Smoky Stoffer
Edward VanFleet
Mike Vivion
Betty Wallin
Dave Woodruff

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