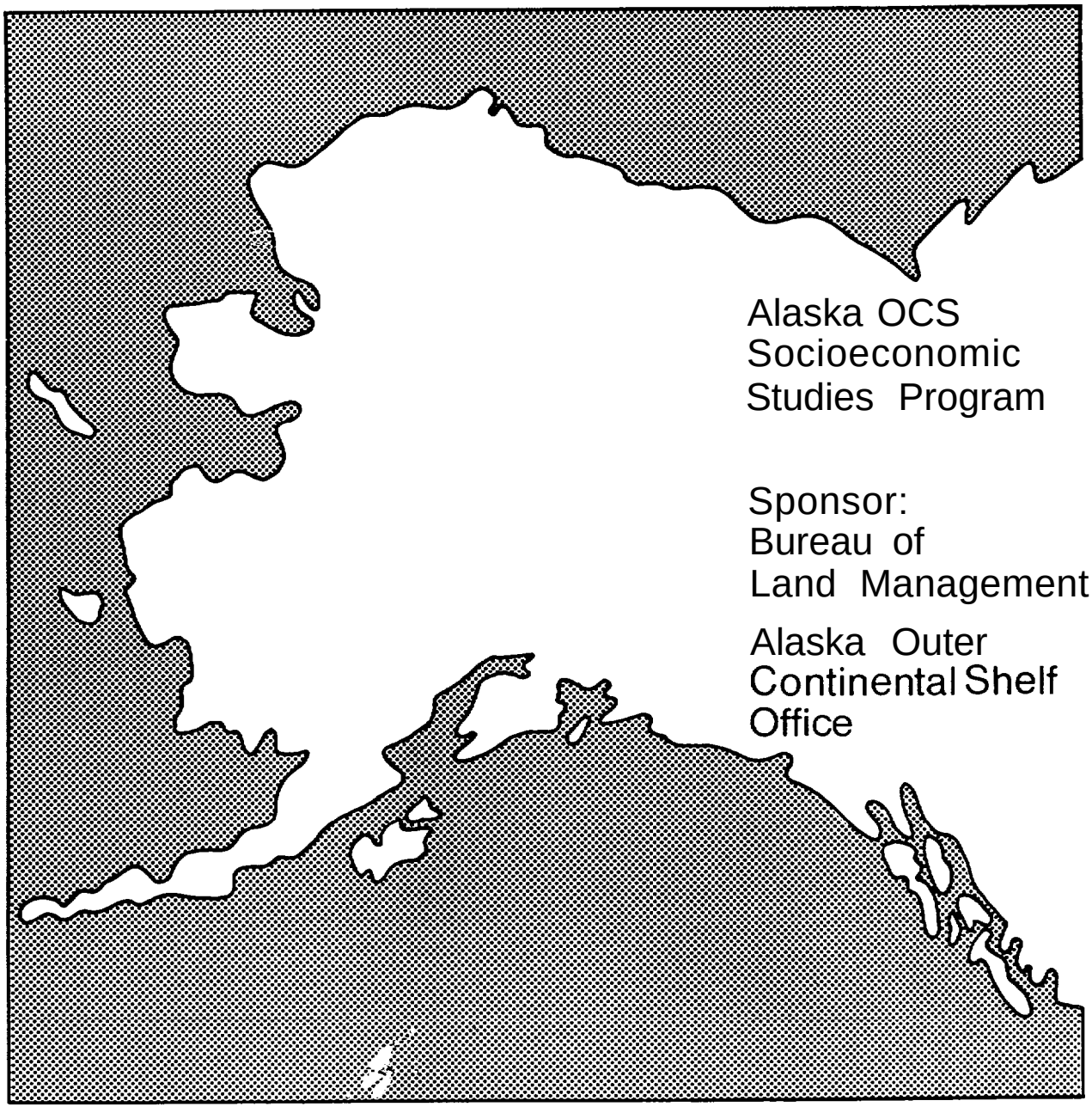
Technical Report
Number 36



Alaska OCS
Socioeconomic
Studies Program

Sponsor:
Bureau of
Land Management

Alaska Outer
Continental Shelf
Office

Northern Gulf of Alaska Petroleum Development Scenarios 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 Number 36 Contract No: AA550-CT6-61

Alaska OCS Socioeconomic Studies Program

NORTHERN GULF OF ALASKA
PETROLEUM DEVELOPMENT SCENARIOS
SOCIOCULTURAL IMPACTS

Prepared For

Bureau of Land Management

Alaska Outer Continental Shelf Office

August 30, 1979

NOTICE

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Alaska OCS Socioeconomic Studies Program
Northern Gulf of Alaska Petroleum Development
Scenarios Sociocultural Impacts

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August 1979

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ABBREVIATIONS USED

ANSCA	Alaska Native Claims Settlement Act
API	Alaska Psychiatric Institute
CDFU	Cordova District Fisheries Union
CEIP	Coastal Energy Impact Program
CNI	Chugach Natives, Inc.
CZM	Coastal Zone Management
HUD	U.S. Housing and Urban Development Department
IRA	Indian Reorganization Act
ISER	Institute of Social and Economic Research, University of Alaska
NOAA	National Oceanographic and Atmospheric Administration
Ocs	Outer Continental Shelf
PWSAC	Prince William Sound Aquiculture Corporation
RARE II	U.S. Forest Service Roadless Area Review Inventory
YACC	Young Adult Conservation Corps

I. INTRODUCTION

This report concerns the sociocultural systems of two towns within the arc of the Northern Gulf of Alaska--Cordova-Eyak and Seward. Its purpose is to provide both a methodology and a detailed community-based information base about these towns within the context of the broader objectives of the Alaska OCS Socioeconomic Studies Program. As one of several studies aimed at assessing the effects of Alaska OCS Petroleum Development upon the physical, social and economic environment of the Northern Gulf lease sale area, this study analyzes the social organization, social conflict, social change and recent events occurring within these two towns. In addition, it attempts to place these two towns and the effects of Alaska OCS Petroleum Development on them within a regional context while still maintaining a town focus. Attention is thereby drawn to the response capacity of the social system of these two towns to adapt to changes which have already occurred recently or are likely to occur in the near future.

By focusing primarily on two towns of the region rather than on the region as a whole, the analysis attends to certain changes while neglecting others. A town focus also tends to neglect family-level and individual level changes while emphasizing community-level change. The reader may need to compensate for these omissions as the report is read.

The report is organized in three sections. The first section (first chapter) introduces the reader to the analysis to follow, details the

methodology to be used, and provides an overview of the communities to be discussed in greater detail later on.

The second section of the report focuses on the community of Cordova-Eyak. First, a chapter on the community as a whole draws attention to community history and the community's relationship to its physical setting and regional environment. A second chapter focuses on community social structure and social organization. A third chapter treats social conflict and change focusing primarily on events occurring in the recent past. Finally, a chapter detailing a most likely sociocultural future without further OCS development is followed by a chapter on potential OCS impacts associated with three resource-level scenarios.

The third section of the report treats the community of Seward. The first chapter of this section deals with community history, Seward's physical environment, and its regional setting. A second chapter treats Seward's social structure and social organization. A third chapter focuses on Seward's social conflict and social change, particularly since 1976. Finally, a chapter detailing a community baseline without further OCS development is followed by one in which three OCS scenarios are discussed.

METHODOLOGY

The method of analysis developed in this report integrates a number of elements of professional experience, field study of social impacts, on-going field work in Cordova and Seward, and theoretical constructs derived from studies of energy development impacts in small communities around the world. It is an active-interactive method in the tradition of Barney Glaser and Anselm Strauss, The Discovery of Grounded Theory (1977). Starting with fifteen sensitizing categories either culled from literature and experience with social impacts in small towns or suggested by the present statement of work, the analysis moves through description of the on-going system in each town to analysis of impacts associated with no further outer continental shelf (OCS) activity and finally to analysis of the three OCS impact cases.

Professional education in the fields of Urban Sociology, Demography, Social Psychology, Survey Research and Theoretical Sociology was preparation for extensive involvement in coastal policy, community planning and community impacts research which have been conducted since returning to Alaska, my childhood home. Residence in Valdez during the construction of the trans-Alaska pipeline terminus there in 1974-75 provided some of the theoretical categories used in this analysis. Other categories were derived from the growing literature on sociocultural impacts of rapid energy development (Baring-Gould and Bennett, 1976; Freudenberg, 1978; Berger, 1978) as well as on an earlier paper by Coleman ("Community Conflict", no date).

Field work in Cordova-Eyak and Seward took place primarily during the summer and fall of 1978. In the case of Cordova-Eyak, field work was conducted in two phases--one in Cordova primarily, the second in Eyak. Analyses of community newspapers, talks and discussions with local residents and representatives of these communities located in Anchorage and talks with Alaska State officials, industry representatives and frequent visitors to the communities were completed during this time. Compilation of statistical information, newspaper and report reading and active listening and questioning concerning task relevant issues with community representatives led to a reduction in the number of relevant categories actually treated in the on-going analysis of each town. The analysis of impacts further focused attention on only those categories treated as variables in the three baseline chapters of each community analysis. Finally, community reviewers were selected who were sufficiently important to the over-all functioning of the system to reflect on the accuracy of the description presented in the baseline working paper. These review comments were utilized in revising the report to eliminate minor errors of fact or correct for other discrepancies.

Sociocultural impact categories

The sociocultural impact categories listed below provide a theoretical framework for the systematic analysis of the characteristics of the sociocultural systems of Cordova-Eyak and Seward which are potentially influential to impact assessment. These categories were selected for their theoretical relevance as well as their application to the cases of Seward and Cordova-Eyak. Some of the sociocultural categories are quantitatively

measurable while others must rely on more qualitative indications. All are concerned with the response capacity of the social system to the demands of rapid energy development, should it occur.

The emphasis on ability of a sociocultural system to respond quickly to the demands of rapid energy development is a relatively stable generalization in the social impact field. Freudenberg has recently noted that communities impacted by rapid energy development go through a heightened process of "eel 1 division" or social differentiation (Freudenberg, 1978). This speeding up of social processes under the demands of rapid energy development is at the heart of the demands placed on socio cultural systems in impact situations.

1. Community isolation - A number of recent social impact assessments indicate a strong negative relationship between the degree of community isolation and successful adaptation to rapid energy development. Not only is community isolation strongly associated with small size and limited ability to grow due to economic and transportation disincentives, but it also tends to encourage personal and system rigidities which make the system as a whole less adaptive to rapid energy development demands.

2. Coastal location - While one of the preconditions of urbanism is location at the cross-roads of several modes of transportation, many of Alaska's coastal towns have a unique set of constraints on rapid energy development. These constraints may outweigh the advantages of centrality to several modes of transporation in

determining that town's ability to benefit from rapid energy development. Economic disincentives may be too great to offset development prospects, for example. Transportation costs of materials may be too great. These constraints may differentiate small coastal Alaska towns from other western towns discussed in the growing literature on boom town growth and change.

3. Wilderness setting - In addition to being isolated, communities surrounded by extremely wild and scenic environments tend to attract and keep residents who value these attributes above and beyond other reasons for selecting this location such as job opportunities, the ability to earn a living, or occupational advancement. Insofar as a decision to migrate and environmental preferences interact, individuals living in wild and scenic environments can be expected to prefer lifestyles which minimize alteration of the natural environment.

4. Cultural Heterogeneityy - Communities with more heterogeneous populations may be more likely to respond slowly to energy-induced change. If their leadership structure is more dispersed and less centralized, decision-making requires negotiation by a large number of parties before consensus is reached. The greater the degree of consensus about economic development options and the more efficient the process by which community consensus is formed, the greater the speed of response.

5* Community size - The size of the host community tends to be directly related to its ability to adapt to rapid population

growth. The larger the community, the more likely it will be able to absorb increases in its population and economy. The smaller the community, the more disruptive will be the additions to its population and economy. This is so partly because small communities typically have little excess housing, land, sewer, water, electrical or telephone service capacity. But in addition, small communities tend to involve their members in many activities and lifestyles which are more difficult to integrate with urban industrial occupations. The ebb and flow of subsistence, for example, combines family, economic and community roles into an integrated way of life which is difficult to mesh with the demands and routine of specialized industrial employment. Small-scale commercial fishing and farming activities also tend to be more easily disturbed by large influxes of dissimilar individuals (Freudenberg, 1978).

6. Cohesiveness - Communities differ in the degree to which common understandings are shared and individuals participate in the on-going life of the community. The more cohesive the community, the more likely will be its rapid response to change induced by external development (Gilmore and Duff, 1976).

7. Openness of communication channels - Communities vary in the openness of communication channels, i.e. in the extent to which newcomers or new ideas or technologies are free to migrate into the community as opposed to being formally or informally discouraged, or channeled through carefully selected community

"gatekeepers". The more open the community, the more likely it is to welcome change (Hawley, 1971).

8. Degree of political integration with higher levels of government - Communities vary both in their present level and history of integration with higher levels of government which in turn effects that community's ability to manage its own growth and development; to accept and utilize expertise available at the regional, state and federal levels; and to foster this managerial expertise on the local level. The more politically integrated the community, the more rapid will be that community's response to rapid energy development.

9. Degree of economic integration with regional and state economy - Communities vary in their history and present level of integration with a regional, state, national and international economic system which in turn affects the level and quality of leadership in the community, opinion-on development-related issues and the availability of manpower of sufficient training and skill to meet the demands of new industry in the community. The more integrated the community with its regional, state, national, and international economies, the more rapid will be that community's response to rapid energy development.

10. Level of local unemployment - The level of unemployment in a community is likely to affect its response to rapid energy development. The greater the levels of unemployment in a town, the

more rapid will be its response to new industrial opportunities. On the other hand, unemployment levels can also be negatively related to response of a community to new industry if community residents are excluded from participation in the new economic opportunities (Freudenberg, 1978; Baring-Gould and Bennett, 1976).

11. Community Age Distribution - Younger populations tend to be more adaptable than older populations. Towns with older or aging populations will tend to maintain traditional mechanisms in responding to the demands of rapid growth. Towns with younger populations may respond more innovatively to change induced by rapid energy development.

12. Educational and Skill Levels - Better educated and more skilled persons tend to adapt to change more readily than less educated, less skilled persons. The economy of a town and its present occupational structure encourage certain skills which may or may not be useful to industrial employers. In addition, if the community associates lower skill levels and less education with marginality, individuals with these characteristics will more likely require and demand human and social services which in turn put stresses on social and recreational services provided in the community.

13. Child-rearing practices - Small towns tend to have strict norms associated with child-rearing practices and informal mechanisms of social sanctioning which encourage parental responsibility and youth conformity. Freudenberg recently noted that the

informal community mechanisms which support child socialization tend to break down under conditions of rapid energy development. Without strict supervision afforded by these mechanisms, teenagers in particular tend to deviate more openly from community norms (Freudenberg, 1978).

14. Community conflict resolution methods - Every community tends to develop its own methods of conflict resolution over time. This pattern is discernible and has important effects on a community's ability to manage rapid population growth or to respond to growth created by widely disapproved-of development. This factor is closely related to cultural heterogeneity (Coleman, no date).

15. Community mental health - Different communities may have different types of personal conflicts or problems which are predominant in that community. Cordova and Seward appear to have somewhat distinct mental health profiles which may be related to their cultural mix and to levels of expected conformity as well as to the predominant economic activity in each town.

Information collected relating to each category

- Community isolation - Access to transportation modes, traffic frequency, field observation.
- Coastal location - Descriptions and field observation.
- Wilderness setting - Descriptions and field observation.
- Cultural heterogeneity - Community fieldwork, Census reports, cultural history of each town, talks with Native village and regional corporations and associations and related statistics.
- Community size - Census reports, community and OCS Studies program documents.
- Cohesiveness - Community fieldwork, police and court statistics, Municipal and city council leadership over time, newspaper analysis.
- Openness of communication channels -Municipal and city council leadership over time, community discussions, newspaper analysis.
- Degree of political integration with higher levels of government - Discussions with officials in State government, votes since statehood by community, correspondence with Alaska Congressional delegation, community fieldwork.
- Degree of economic integration with regional and state economy - OCS Studies program documents, community fieldwork, talks with State officials, Alaska Department of Labor statistics and Census reports.
- Level of local unemployment - Alaska OCS Studies program documents, Alaska Department of Labor statistics.
- Community age distribution - Census and survey statistics, OCS Studies Program documents.
- Educational and skill levels - Census and survey statistics and OCS Studies Program documents.
- Child-rearing practices - Community fieldwork and newspaper analysis.
- Community conflict resolution methods - Community fieldwork, police and court statistics, newspaper analysis.
- Community mental health - Community mental health statistics, community discussions with mental health professionals, talks with children, adults and educators regarding racial conflict.

REGIONAL CONTEXT

The atmosphere of anticipation and expectation associated with Lease Sale 39 and the associated population growth, and changes which occurred during exploratory off-shore drilling in the Northern Gulf of Alaska are no longer as evident in Cordova-Eyak and Seward as in previous years. Their leadership has turned its attention to fisheries development, or is planning or anticipating other alternatives to the rapid energy development they had hoped for or fought against. Their people are still responding to the changes which have so recently been introduced both by OCS exploration and by recent federal land decisions.

Cordova-Eyak and Seward are surrounded by some of the world's most spectacular coastal fjord environments. Their Native inhabitants, in some cases descendants of residents who lived here thousands of years ago, have in many ways set the tone for more recent migrants to towns along Alaska's Gulf Coast. Yet both of these towns are now predominantly white communities; a trend which started with Russian exploration and exploitation of Alaska's resources and has continued to this day.

The Chugach mountain range and Chugach National Forest define this spectacular coastline from the Copper River Delta north to the shores of Cook Inlet. Recently declared National Monuments and other potential federal wilderness designations in the area add uncertainty to the land surrounding these towns, creating conflicts, anxieties and uncertainties in a formerly secure preserve.

Cordova-Eyak and Seward, like other towns in Southcentral Alaska, now orient themselves to some extent around Anchorage; pulled in by its size and economy, yet resentful of its political and economic dominance and afraid of its complexity and "urbanness". The people in these towns still cherish a rural tradition and a relaxed, open style of life and prefer it over the rushed, hurried pace they see exemplified by Anchorage. Especially for the older residents who remember the connection with the Alaska Steamship Line and coastal traffic before the 1964 earthquake, the subsequent rebuilding of Anchorage and the development of her port at the expense of formerly active commercial harbors along the Coast are a cause for sadness.

Cultural ties to Seattle and to a lesser extent, Southeast Alaska, are still strong, pulled by the attraction of retirement and former friends and family who have moved to the Seattle area, pushed by the influx of Seattle-based fishermen and cannery workers who migrate north each year during the fishing season.

Chugach Region, defined by the terms of the Alaska Native Claims Settlement Act of 1971, includes the land and villages of Port Graham and English Bay on the shores of Cook Inlet and the town of Cordova-Eyak and Icy Bay and Icy Cape (potential OCS sites) at its southern extremity. The Region as a whole has a long yet tragic history of white contact and exploitation starting with the Russian fur trading tradition and sea otter hunting of the 1780's, continuing with the salmon canning industry which began in the 1890's, and more recently the railroad and

copper mining boom periods of Seward and Cordova's early growth at the turn of the century. The region has also experienced the humanizing influences of the Russian Orthodox Church and the ties, through' it, to a Russian-Aleut culture stretching out the Aleutian chain to Kodiak on down to Cordova - Eya k. Migrations from Chenega and Nuchek, in particular, and the establishment of the church center from Nuchek in Eyak in 1925 have strengthened the Russian Orthodox tradition there adding incentives for visiting and settlement of people close by from Tatitlek, Chenega or Anchorage.

As Nancy Davis has noted, in some senses the old village and tribal differences which contributed to the separation and isolation of village and town Native residents of the Region before have, with the movement toward and implementation of ANCSA, given rise to the potentiality and growing sense of a "new tribe" in the region which embraces the Aleut, Chugach Eskimo and Eyak Indian traditions of the past. Identification with a lifestyle that is coastal and Aleut-Russian in sentiment coupled with church attendance and traditions is part of this growing loyalty. Concern for Chugach investments and rowing organizational efforts to combat the ravages of the past in emotional and physical health in expanding economic, political, and social opportunities through North Pacific Rim, Inc. and local programs and organizations are also common concerns.

On two sides of these towns, Valdez and Kodiak loom as larger, more prosperous communities with which the smaller and sometimes more tradition-

bound towns of Cordova and Seward compare themselves, their economies, and their futures. The sense of friendly rivalry that characterized " Valdez-Cordova relationships in the past has been strained by the prominence and wealth of Valdez as well as by fears associated with oil pollution in the Sound or along oil tanker traffic routes.

Kodiak's prosperous fishing fleet and energetic social system inspire some local fishing efforts in Cordova. Friendships and a shared fishing tradition with its accompanying formal and informal relationships tie Cordova and Kodiak, and to a lesser extent Seward together in state politics, on fisheries boards and on fish and game regulation issues.

The movement of Jesse Lee Home from Unalaska to Seward in 1925 ties many of this home's former residents still living in Seward to an earlier Aleutian residence. Other residents of Seward have also migrated from the Aleutians more recently and these ties to the chain are still maintained through family visiting.

Seward's leaders look to the example of Valdez with whom Seward contended for the site of the pipeline terminus and the Alpetco refinery site. Talk of Valdez laced many conversations we had with Seward residents from all walks of life.

OVERVIEW OF CORDOVA-EYAK

Cordova-Eyak is a coastal fishing community located close to the bird-rich delta of the Copper River on one side and the edge of majestic

glacier-filled Prince William Sound on the other. It is a community caught by the anticipations and expectations of rapid change and alteration of existing lifestyles resulting from proposed offshore oil development and by its proximity to Point Gravina, once considered as a likely site for the terminus of an all-Alaska Gas line. Now in late 1978, these expectations, anxieties and half-filled plans which have consumed much of the energies of a population for the past four years stand in abeyance. Cordova-Eyak has been by-passed both as a terminus for an alternative gas pipeline route from the north and as a result of a redirection of off-shore leasing in the Northern Gulf of Alaska.

At the same time, the Wrangell-St. Elias National Monument, recently set aside as part of the withdrawals made by President Carter under the Antiquities Act, protects both northeast lands and salmon spawning streams south of Cordova-Eyak from the potential encroachment of industrial development. Environmental and fishing interests had been unable to prevent similar development on the Prince William Sound side facing Valdez.

Eyak Village, after two years of appeal concerning its village status, has won that recognition and recently seen about one-half of their village lands conveyed. With new corporate offices and a new sense of pride in ownership of ancestral lands Native people who have long had to endure an unequal system in which they were the poor and outcast, are now making plans for the use of these lands, amidst fears of unplanned development on the one hand and considerable disagreement and discussion about corporate decisions, on the other.

The aftermath of these plans, expectations and false hopes (the land conveyances and recent wilderness withdrawals) are still rippling through the community resulting in a heightening of tension. The community has been dangerously polarized. It has been an average fishing year except for crabbing, and utilities costs as well as taxes have gone up. The recent changes over which so many individuals and groups in Cordova have fought will take time to accept, and, although a lifestyle has been preserved, the scars of community division will take time to heal.

Fishing is not just a job in Cordova, it is a way of life. The people feel strongly and emotionally about the lifestyle they have and want to preserve, and are unsympathetic to attempts at changing that lifestyle. They enjoy their freedom and the ability to live as they choose, away from the routine and regimentation of urban society. And while they may not be able to agree on anything else (they joke about this lack of agreement), there is one issue which unites the town--the preservation of the fishing lifestyle.

An additional problem, not easily resolved, is a direct result of the high level of anticipation, expectation and fear associated with rapid energy development in or near Cordova. Spurred by fears and hopes of the addition of thousands of people to the population, a comprehensive plan and considerable local planning efforts over the past four years have focused on the inadequate sewer, water and electrical capacity of the town as well as availability of suitable land. Due in part to the short-term effects of changes due to anticipated development, utility costs in the area have increased substantially.

The school system has experienced a number of changes over the past four years, culminating in a new superintendent (the 3rd in almost as many years) and a huge debt which may have to be repaid to the State of Alaska. City Hall has undergone a rapid turnover since 1976 in city managers, harbor masters and utility managers as well as a move to a newly constructed City Hall building.

Changes in the leadership of Chugach Region, Inc., indicate a shift away from earlier Cordova leaders who are now associated with dashed hopes of potential OCS development and other problems. The Region realizes too the strongly held negative view of people in Cordova-Eyak concerning non-fisheries related development, while at the same time recognizing its own mandate as a profit-making Corporation.

These significant social changes come in the midst of seeming stability in the economy of Cordova-Eyak--a relatively unchanging portrait of fishing and fish processing complemented by government and Coast Guard employment and small-scale lumbering. An economic analysis alone would hide the enormous complexity of the social forces now operating to change Cordova on the one hand, and reacting against the changes, both anticipated and actual, on the other. While many of these changes began to occur before the OCS Lease Sale 39, by 1976 they had already begun to seriously effect the on-going organization of Cordova-Eyak and its major population groups. For this reason, much of our analysis will focus on events, changes and conditions from 1976 to the present.

OVERVIEW OF SEWARD

Seward is a small coastal community built on a glacial moraine at the head of a deep-water bay dubbed "Resurrection" by the Russian Lord Baranov. At one time Seward was a thriving city and center of the Alaska Central Railway and gateway to the Kenai Peninsula and the Interior via passenger ship, railroad, air and highway. With the growth of Anchorage and the devastation of her harbor and dock facilities in the Good Friday Earthquake, much of this traditional transportation activity has been diverted to Anchorage. Responding to these changes, Seward began to specialize within the southcentral Alaskan recreational system in sport fishing and boating activity, first in response to military demand and later a more general Anchorage-based group of tourists.

As the Kenai Borough has expanded under the direction of oil development and growth, Seward's place within this systemis also evolving. Council and City Manager direction over the recent past indicate an effort to attract OCS-related activities to Seward, along with other industrial and government employers who can assure more year-round employment for the town.

Throughout the changes which have occurred since World War II in and around Seward, Seward has continued to maintain a strong sense of its own unique identity and history, and a strong preference for slow steady growth. This goal is encouraged by the recent announcement of Danish-Alaska cooperative plans to build a major shipyard in Seward. These

plans could assure Seward a prominent role in the emerging bottomfishing industry in Alaska and may encourage other related development as well.

Seward's strong unity of purpose and strong ties to its past, to its vision of an "All-America City" and to an organized, active community social life are as evident today as throughout its history. The sense of direction and purposeful political action in pursuit of community-wide goals is clearly evident over the recent past in the City's widespread efforts to attract industry to Seward. Because of this community-wide effort and the involvement of the whole community in its development, the analysis focuses on these efforts which began with recruitment of a new City Manager for Seward in early 1977.

II. THE COMMUNITY OF CORDOVA-EYAK

INTRODUCTION

This chapter includes a discussion of the environment, history and more recent events which significantly influence the ongoing social organization of Cordova-Eyak.

THE PHYSICAL SETTING

The Cordova townsite and residential development nestles in the steeply sloping foothills of Mount Eyak. On the west, it faces Orca (Killer Whale) Inlet and the boat harbor. On the south, Mt. Eccles provides a natural barrier as does Eyak Lake to the east. Boats traveling north from Southeast Alaska near Cordova pass the Malaspina and Bering Glaciers in the Chugach Range, the Copper River Delta with its thousands of nesting Canada Geese, trumpeter swan and over 200 other species of shore and water birds. Air travelers from Anchorage, 145 miles to the northwest of Cordova, can view an enormous variety of mountain ridges, angular glaciers dropping to the sea, dense spruce and western hemlock coastal forests below which are found thickets of blueberry, lingonberry and salmonberry, as well as ferns, thick mosses, sedges and lichens of the coastal rain forest. Visitors from the southwest pass Montague Island known for its dense concentrations of sea otter while along the shores of Prince William Sound thousands of Bald Eagles can be found. In April and Mayas many as 20 million water and shore birds migrate through the lush marshland of the Copper River Delta among them Canada Geese, Sandhill cranes, ducks and sandpipers. (Alaska Geographic: 2(3).

The spectacular beauty of Cordova's natural setting carries with it the savagery of fierce storms and icy waters, the heavy rain and dense fog of its coastal location and the perilous threat to life of sudden storms in an isolated location. Every year several fishermen are lost at sea and others die in small plane accidents due to heavy fog or poor visibility. Memories of the Good Friday earthquake in 1964 are still fresh. Cordovans treasure the beauty, bounty and uniqueness of their locale while, at the same time, appreciating the danger of their isolation.

HISTORICAL OVERVIEW "

Eyak

The village of Eyak dates back at least 3000 years to a time when the Eyak Indians, an Athabaskan Indian tribe, controlled the territory stretching south to Cape Martin and up as far as Point Gravina, north of present day Cordova. The Eyak people were never as numerous as other aboriginal groups who lived on Prince William Sound or further south along Alaska's southeast coastline. Their language has many of the same roots as Tlingit, showing some borrowing from their neighbors in the Yakutat area, though it is still considered part of the Athabaskan language group. From their strategic position on the mouth of the Copper River, a natural break in the Chugach Range,the Eyak became traders during the Russian domination of the Gulf Coast. Legends and stories tell of both wars and peaceful trade between the Eyak and the Tlingit who commanded the Yakutat area, the Ahtna of the Copper River area, and the Chugach Eskimo who had come to occupy much of the rest of Prince William Sound.

Early historical accounts of the immediate Eyak area indicate a population of between 100 and 200 Eyak between the dates of 1818 and 1890. By the late 1880's, however, two canneries were located in the Eyak-Cordova area, which probably encouraged migrations of peoples, primarily Aleuts, from other fisheries based communities like Kodiak and smaller communities along the Aleutian chain. In addition, there have been migrations from neighboring Chugach Eskimo villages such as Tatitlek over the years, and more recently from Chenega and the town of Valdez. When de Laguna and Birket-Smith wrote of the Eyak in 1933, their list of 38 Eyak people included only 19 "pure" Eyak, the rest having married Tlingit, Eskimo, Japanese or white spouses. This pattern of intermarriage and cultural blending has continued to the present.

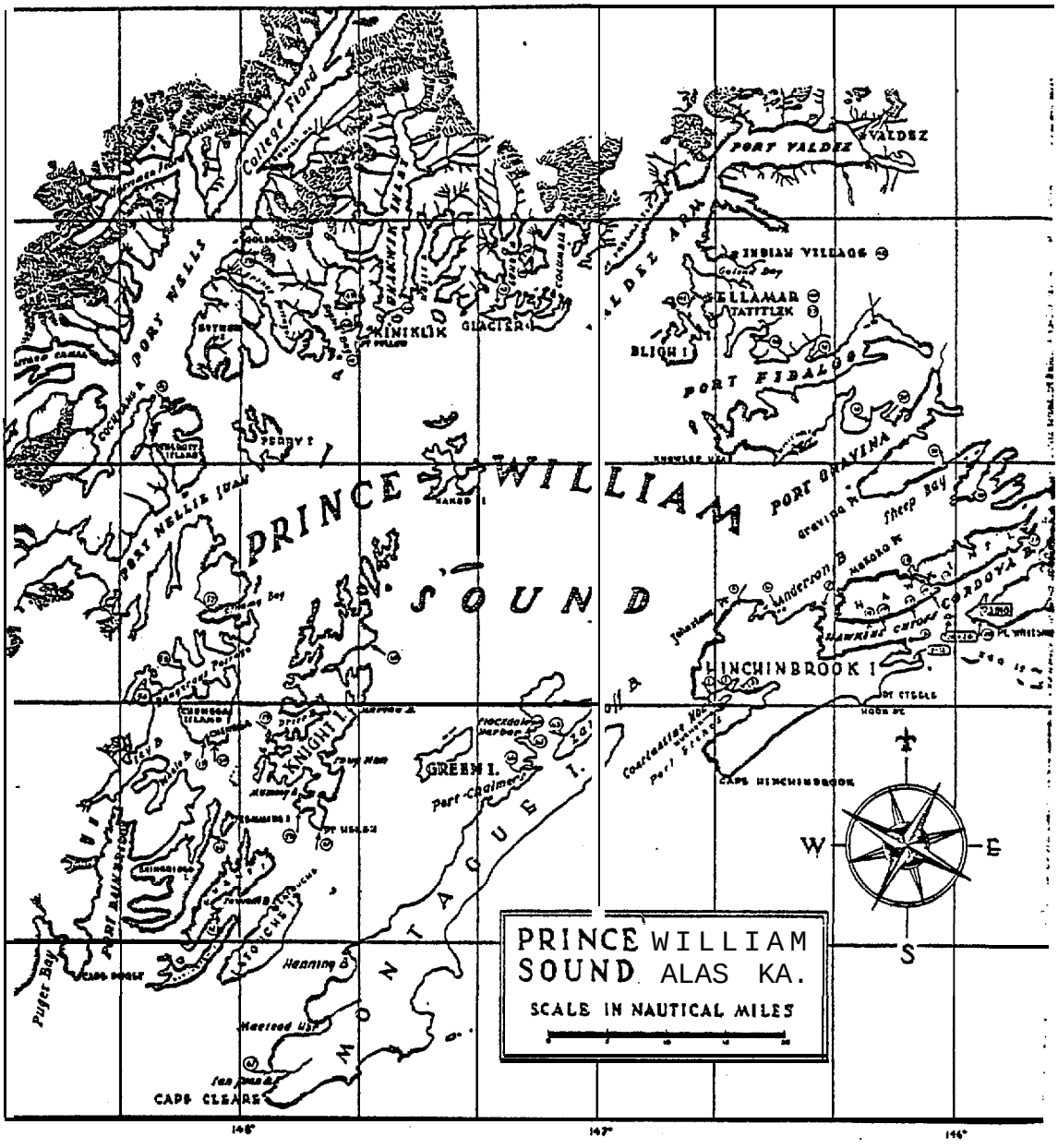
The Original Eyak were a hunting and gathering Indian people whose primary food supply was waterfowl, mountain goat, bear, and salmon. It appears that the Eyak, although originally Athabaskan Indian hunters and fishermen, slowly migrated south along the Copper River delta on either side of its mouth. This later coastal habitation brought them into contact with the Yakutat Tlingit from whom they also borrowed cognate words as well as the clan and moiety family system and other cultural practices. Their traditional houses, from accounts by Birket-Smith and de Laguna in 1933, resembled that of the Tlingit, and cultural implements included the Eagle and Raven crests representing separate matrilineal moieties. Like the Tlingit, women played a strong role in Eyak Society. Archaeological exploration of former Eyak villages indicate that this Indian group lived communally in Potlatch houses from which only key leaders or shamans

lived separately. In 1933, there were two known shamans; one in the Chitina area and one in Cordova-Eyak whose healing and spiritual powers were widely known and respected.

From their location at the mouth of the Copper River delta, the Eyak Indians engaged in trade and warfare with both the Chugach Eskimo who occupied the Prince William Sound area and the Yakutat Tlingit, as well as with the Ahtna Indians of the Copper River highlands. Their position as traders and their dwindling numbers may have encouraged a somewhat more aggressive stance toward outside groups. Even today, a cultural practice in Old Town-Eyak involves the celebration of "Eyuk" in which "the little bad spirits go around and do bad things. " (Testimony by Mrs. A. Nichols, U.S. Forest Service vs. the Village of Eyak: 13). On the other hand, their small numbers also encouraged intermarriage and cultural blending of traditions and practices with neighboring Eskimo and Aleut groups as well as with whites who came into the area to live.

The coming of the canneries at the turn of the century and the copper mining and railroad era further eroded the Eyak's territorial claim and reduced their numbers. Although the oldest Eyak village in the territory, Alaganik, was abandoned in 1893 after a severe epidemic and the residents moved to the Cordova-Eyak area, the number of Eyak in Cordova-Eyak still declined. According to Dr. Michael Krauss , an Eyak language specialist, the Eyak people were not accepted as cannery workers by the early canneries who imported white and Chinese workers. Other accounts indicate that they were excluded too from most of the railroad construction jobs. By

MAP ONE : PRINCE WILLIAM SOUND, ALASKA



SOURCE: Frederica de Laguna, Chugach Prehistory: The Archeology of Prince William Sound, Alaska, Seattle: University of Washington Press, 1956.

1910 the Eyak population had been reduced to approximately 50 and from 1910 to 1930 the predominant Native culture group in Cordova-Eyak was Aleut (U.S. Forest Service vs. the Village of Eyak, VE74-81: 12).

Chugach Eskimo

The other aboriginal resident group in the Cordova-Eyak area are the Chugach Eskimo. These Sugcestun speaking people migrated over the Alaska Peninsula about 1300 A.D. and came to settle in the Prince William Sound area. The word Eyak is a Chugach Eskimo word testifying to considerable early contact between Chugach Eskimo and Eyak people.

The Chugach Eskimo, unlike their Indian neighbors, were sea mammal hunters and fishermen. Their social organization was centered around villages which certain families came to occupy. While the Chugach (who call themselves cuatit) lived in a number of different sites on the islands of Prince William Sound primarily, there were at least eight "tribes" or village groups who occupied areas of the Sound. Two of these tribes exist today--Tatitlek ("windy place") and Chenega.

Two other Chugach villages were more recently abandoned and are still remembered as important villages: Nuchek on Port Etches, Hinchinbrook Island; and Kiniklik, in northwestern Prince William Sound near Unakwik Inlet close to Columbia Glacier. These two villages were the principal villages of the Nuchek people and the Kiniklik people. Palugvik, the principal village of the Shallow Water people, on Hawkins Island was

declared a National Historic landmark in 1963 (Johannsen, 1975, P.48). Other major Chugach Eskimo tribes occupied Sheep Bay, Gravina Bay and Montague Island.

According to Birket-Smith, the territory of the Chugach Eskimo at one time extended into Kachemak Bay and Cook Inlet on the west stretching down the coast as far as Kayak Island. (See Map One.) de Laguna reports that the eight tribes of the Chugach Eskimo, each centered around a principal village, "shared the same culture, spoke the same language, entertained each other at feasts, but were politically independent. Each group appears to have had its own chief or leader and its principal village." (de Laguna, 1956, P.11)

Cordova-Eyak's love of "politics" is perhaps related to the early political independence of the cuatit, many descendants of whom still reside in Cordova-Eyak. The community of Cordova-Eyak, has over a long history, provided a home for many of the migrants from other villages in Prince William Sound who, for various reasons, had to abandon their earlier village site. As Nancy Davis has noted, these migrations and assimilations into a growing "new tribe" are important not only to Cordova-Eyak but to the Chugach Region as well (Davis, no date, P.16).

The Chugach were visited first by Vitus Bering who, in 1741, discovered Eskimo hunting camps on Kayak Island and Wingham Island. Captain James Cook, however, was the first to meet the Chugach and his accounts, after his summer visit in 1778, encouraged a steady stream of explorers. Captain

Cook named the Sound after one of George III's sons. Many of the other names in the Sound reflect the Spanish, Russian and English explorers of this period, among them Valdez, Fidalgo, Gravia, Port Etches and Malespina.

In 1793, a Russian trading post was established at Nuchek on Hinchinbrook Island after a considerable battle with the Chugach of the area. From there the Russians came to dominate the Sound from their post at Nuchek, which became a center for the sea otter and seal hunting trade of the Russian period. Nuchek also became an important Russian Orthodox church center as well. It is reported, for example, that in 1856a Russian priest from the Kenai Mission baptized 46 babies and married 13 couples from the area, and the church at Nuchek was reported to have 310 communicants (Davis, no date, P.7). The church relics and the last people of Nuchek to have remained there moved to Cordova between 1925 and 1930, on the death of Chief Chimovitski and on fear of epidemic (de Laguna, 1956, P.12-14).

The Russian domination of Nuchek was followed by rivalry between the Alaska Commercial Company and the Western Fur and Trade Company, who competed for the limited trade. Abercrombie reports that already by the time of American occupation of the area, the Chugach were dependent upon the credit system for many of their daily needs, a pattern which was to continue with the institution of the cannery system (Davis, no date, P.7).

Estimates of the population of the Chugach Eskimo reflect the decline of this people after contact with the white man. In contrast to their

Kodiak Island neighbors who numbered 3430, it appears that by 1818, according to church registers, there were only 360 Chugach Eskimo in Prince William Sound. The Census of 1890 reports 433 Chugach which, according to Birket-Smith, was probably too high. By the 1930's when Birket-Smith and de Laguna conducted their fieldwork, Birket-Smith estimated there remained only about 200 Eskimo in Prince William Sound, 90 of whom lived in Chenega, another 70 in Tatitlek, and fewer still in the town of Valdez (Birket-Smith, 1953, P.22).

On the other hand, the strength and determination of these early inhabitants of Prince William Sound is perhaps best symbolized today by the village of Chenega, which although destroyed by the 1964 Good Friday Earthquake, continues to move toward eventual resettlement on Evans Island in the Sound (Anchorage Times, March 25, 1979).

Cordova

The Cordova townsite dates back to the copper mining era in which it was founded, when it became the center of construction and later the port for shipment of copper from the Kennecott copper mines north of Cordova in the Copper River Valley. Cordova was founded in 1906 within one year of Theodore Roosevelt's proclamation declaring the land around it Chugach National Forest. At that time, a small fishing village (Eyak) which had been the original staging area for construction of the Copper River Railway, was considered as a possible location. Because of the shortage of suitable land, the Cordova townsite was located on the old Donahue homestead north of Eyak. In June of 1905, lots went on sale and according

to The Copper Spike, a local history of the copper mining era, the town of Cordova mushroomed into a full-fledged town by fall.

TABLE II.1: POPULATION OF CORDOVA-EYAK AND CORDOVA-McCARTHY CENSUS DIVISION, 1910 to 1978

	1910	1920	1930	1940	1950	1960	1970	1978
Cordova	1152	955	980	938	1165	1128	1164	2780
Cordova-McCarthy Census Division	--	--	--	--	1536	1759	1857	--

Source: U.S. Bureau of the Census, 1970, Number of Inhabitants; Alaska; 1978 population is Cordova Census total certified by the Alaska Department of Community and Regional Affairs.

Some of the settlers of Eyak village were to continue their residence there while others moved to the new Cordova townsite up the hill.

While the early settlers of Cordova constructed their town rapidly, their interest and that of the outside world focused on the stretch of railroad connecting Cordova's port to the rich copper fields to the north. From the railroad's completion in 1910 to the closure of the Kennecott mines in 1939, Kennecott delivered more than $175 million of copper ore south on the Copper River and Northwestern Railroad to Cordova for shipment and processing south (Alaska Consultants, 1978, P.9).

The first property owners of Cordova were George Cheever Hazelet, A.J. Adams, John Goodell, Thomas J. Donohoe, John J. Ostrander and George Easterly. They sold halfof their interest in the original Donahoe

homestead to Michael J. Heney and Associates, owner and developer of the Copper River and Northwestern Company. Heney, “the Irish Prince,” had established a headquarters for construction of the railroad at Eyak, having purchased the Alaska Packers Association cannery buildings for the purpose. In those early days of railroad construction and copper mining, the frontier prevailed and hard drinking, "snoose chewing”, and tall tales were favorite pastimes at The Red Dragon, a favorite meeting place. This meeting hall and Sunday church arose from a lot donated to the Episcopal Church, the oldest church in Cordova (L. Jansen, 1975, P.57-58).

Details of the social life of early Cordova are sketchy. A photograph of early leaders in Cordova gives evidence that in addition to several railroad superintendents and engineers connected with the railroad construction effort Cordova also could boast a surgeon and a local representative of the Alaska Steamship Company. Like other mining towns in Alaska during the period, Cordova’s population was predominantly male--a hardy construction workforce who came by steamship from Seattle then moved on to other construction jobs or returned to the Seattle port. Strength and determination were prime virtues, as were hard work and willingness to take risks. The demands of railroad and bridge construction in such harsh climatic circumstances demanded these qualities. But in contrast to the tall tales, hard work and hard drinking ways of early Cordova settlers, this frontier town was also known as “the brand-new capital city of the Guggenheim.” A social elite was to dominate the town’s affairs, and that group, represented in part at least by the early property owners of Cordova, elected George Hazelet mayor in July, 1909 when the city was

incorporated (L. Jansen, 1975, P.61).

While an estimated $40 million was needed to construct the Copper River and Northwestern Railroad, the expense of copper mining and a drop in world copper prices sounded the death knell to a whole era in the late 1930's. By 1939, the Railroad had closed and so too had the Kennecott mines. Further south in Katalla, coal and oil resources which had been developed during the period also became uneconomic and stopped abruptly.

From 1940 on, Cordova again looked to the sea for its sustenance, as both long time residents and newcomers became more and more involved in the development and growth of the local salmon fishery, the diversification into the tanner crab, halibut and herring-roe fisheries and the development of an indigenous locally controlled aquiculture program.

The housing stock of present day Cordova reflects the history following 1939. Almost 45 percent of the residential structures in Cordova in 1975 were built before 1940 during the railroad and copper mining era (Cordova Comprehensive Plan, 1976). Commercial and other downtown property uses have unfortunately been the victims of at least two major fires--one in 1963, which destroyed 13 buildings and 80 percent of the businesses, another in 1968, which destroyed the Dock, Standard Oil and Parks Canneries, as well as the Alaska Steamship docksite.

The post-railroad days have meant hard times for many in Cordova who were sustained primarily by the good fishing years and who suffered during

bad years. While the population count (Table II.1) reflects a relatively stable population from 1940 to 1970 it undoubtedly involves a considerable fluctuation with the seasons since Cordova fisheries, until recently, have been primarily reliant on the summer salmon runs. The Historical Society has two buttons which create a bit of this imagery--a white and red "Ragtime" button and a black and white "Hard Luck" button.

Good Friday Earthquake

Like her neighbors in Southcentral Alaska, Cordova was also affected by the 1964 Good Friday Earthquake, and her transportation system and hopes for the Copper River Highway extending out of Cordova and linking Cordova to other Southcentral communities seemed to die with one blow. The "Million Dollar Bridge", the pride of Cordova and a link to her copper mining past, was seriously damaged in the Good Friday Earthquake creating serious obstacles to the economic completion of the originally planned highway. In addition to this destruction, the Good Friday Earthquake also created a six foot uplift in the Cordova harbor area creating obstacles to expansion as well as destroying valuable clam beds and seriously affecting salmon spawning streams.

Pipeline Terminus Suit

Cordovans overwhelmingly supported statehood in 1959, but when the development which came in its wake began to threaten this fisheries based community, the Cordova District Fisheries Union (CDFU) mounted a counter attack. Supported by other suits questioning the permits and right of way provisions necessary to allow construction of the trans-Alaska Pipeline,

the CDFU in collaboration with the Wilderness Society and other environmental organizations appealed an earlier U.S. District Court order in favor of the Department of Interior, the Secretary of Agriculture, Alyeska Pipeline Service Company and the State of Alaska. This appeal questioned the rightof these various groups to issue right of way permits in violation of the width requirements set by Congress for pipeline corridors. It also questioned the administrative prerogative of the Department of Agriculture in allowing Valdez tank farm special land use permits within a National Forest and the adequacy of the Environmental Impact Statement which, they argued, failed to take sufficient account of the alternative Canadian pipeline route. These and other suits mounted against pipeline construction, while ultimately unsuccessful, did assure the CDFU a place of importance in subsequent decision making regarding Alaska Coastal Zone Management policy and the chairman of the CDFU the only Alaska seat on the national Coastal Zone Management Advisory Committee.

In their concluding remarks, the court stated: ‘

> “Great cases are called great,” Mr. Justice Holmes said 70 years ago, “not by reason of their real importance in shaping the law of the future, but because of some accident of immediate overwhelming interest.” The same may be said about the present litigation over the Alaska pipeline. These cases are indeed “great” because of the obvious magnitude and current importance of the interest at stake: billions of gallons of oil at a time when the nation faces an energy crisis of serious proportions; hundreds of millions of dollars in revenue for the State of Alaska at a time when financial support for important social programs is badly needed; industrial development and pollution of

> one of the last major unblemished wilderness areas in the world, at a time when we are all becoming increasingly aware of the delicate balance between man and his natural environment. (Federal Court Reporter, Wilderness Society vs. Morton, 1973: 891)

Chugach Region

About the time that the CDFU was fighting to prevent the location of the trans-Alaska Pipeline Terminus close to their prime pink salmon spawning grounds, a few Native leaders in Cordova had begun to become more involved in the already active statewide movement to secure just claims to originally held Alaska Native lands. Although not the central force behind the movement for Native Claims, Cordova Native leaders did become increasingly involved in meetings and organizational efforts to secure land claims starting with initial contacts with the Ahtna and the Tlingit, their closest neighbors, and later with the developing Alaska Federation of Natives. In 1966, a group of Cordova Native men and women incorporated the original Chugach Native Association and sent one of the members, Cecil Barnes, officially to represent Chugach Region in the growing organization of Alaska Native Groups.

As a result of their small population and the small number of villages remaining in the region, Chugach Natives, Inc. engaged in an uphill fight for years in helping establish the legitimate claims of three villages within the Prince William Sound area to entitlement under the Claims Settlement. The village of Chenega, destroyed completely by the Good Friday Earthquake of 1964, was still a viable village in the minds of its earlier residents who now primarily resided in Cordova, Anchorage and

Tatitlek, yet maintained their village and church identities and a strong commitment to return to their original village site. In 1974 this village was granted status under the Claims Act and entitlement to over 148,260 hectares (60,000 acres) of land primarily within Prince William Sound near the original village site. Plans by Chenega to relocate have centered on Crab Bay on Evans Island in Prince William Sound, some 80 miles south of the original site and better protected from future storms. With this recognition and entitlement, Chenega Corporation is now pursuing plans to establish a co-op store, fuel depot and floating cannery at Crab Bay with the assistance of North Pacific Rim, Chugach Region's non-profit corporation. They also maintain a charter boat service out of Whittier and Seward (CNI 1976 Annual Report).

In 1976, the U.S. Congress granted the village of Tatitlek 284,659 hectares (115,200 acres) of land in the area previously designated for D-2 or national interest lands, under the first round of village selections. Another 49,420 hectares (20,000 acres) is anticipated under second round village selections. As the oldest remaining village on Prince William Sound, Tatitlek's growth had fluctuated over the years due to mining on Ellamar at the turn of the century and a growth surge during relocation of Chenega refugees there from 1964-65 to the early 1970's. The relatively new school, new satellite TV reception, telephone service and an ongoing fishing tradition have all served to attract villagers. In 1977, Davis reported that a new Russian Orthodox Church is located in Tatitlek and seven steam baths are regularly used as testimony to the viability of this oldest Aleut village. Plans for an airport, a continuing fishing tradition

and a conservative approach to investment appear primary concerns for the Tatitlek Corporation today.

In Cordova, the settlement of Native Claims with passage ofANSCA in December of 1971 was followed shortly by efforts to annex the "Old Town" Eyak area. After a long dispute which ended in the Alaska Legislature in 1972, the area was incorporated over strong Eyak objections. Partly in recognition of the strong feelings of community held in Eyak, their claim to village status under ANSCA was successful. In original hearings and an appeal over annexation in 1974, Eyak was pitted against the U.S. Forest Service whose attorneys maintained that Eyak did not qualify under terms of the act. The lengthy testimony in support of Eyak's status showed not only the strong commitment of Cordova Native people to a sense of joint community, but also a history of segregation and prejudice which they had endured over the years and which inhibited their earlier recognition as a separate village.

In another action in 1976, the Forest Service became the defendant in a suit by Eyak Corporation over prior consultation in sale or removal of gravel from Eyak designated lands. At issue was the price of gravel removed, among other concerns. This issue was finally settled amicably in U.S. Circuit Court with procedures for consultation established and Eyak written consent assured prior to any gravel sale during the continuing freeze on Eyak selections (U.S. Civil Action Number A76-103).

Also during this period, Chugach Natives, Inc. fought and won a boundary

dispute with Sealaska, Inc., establishing the 141st Meridian as the southern boundary of Chugach Natives, Inc. With this boundary established, plans to develop Icy Bay in anticipation of oil development proceeded resulting in contracts with Phillips Petroleum for exploration, with Bomhoff Associates of Anchorage for development planning, and with Anchorage Helicopters for support services for off-shore drilling rigs. In addition, Chugach Region showed interest in lands in the Yakataga area, because of their OCS potential (1975 Annual Report, Chugach Natives, Inc.).

In contrast to the relative speed of village corporations in the Chugach Region in settlementof land entitlements and (in the case of Tatitlek and Eyak) recent land conveyances, Chugach Natives., Inc. is still involved in negotiations concerning their land entitlements. Their contention, supported by the Federal-State Land Use Planning Commission, is that the original Chugach Regional land entitlement of 350,000 acres would have to come from "deficiency lands" because of prior State selections, or would have to come from inside the boundaries of Chugach National Forest. Chugach Region also maintains that over 60 percent of these deficiency lands consist of ice and snow, inconsistent with a coastal people's original land claim, and are therefore unacceptable as final settlement. In 1975, Chugach Natives, Inc. filed litigation against the Secretary of the Interior, finally settled out of court in January 1977, leaving unresolved one final issue pertaining to second round land selections within Chugach National Forest. Based on the precedent setting nature of Chugach Natives,Inc.'s claim against lands within Chugach

National Forest, the U.S. Forest Service completed an Environmental Impact Statement in July, 1978, setting out the implications of CNI's proposed land exchange within the Forest. The Region's case is still unsettled pending its efforts to have a one year study of the situation included in Alaska National Interest lands legislation now before the Congress. (C. Probes, Chugach Natives, Inc.; Draft Environmental Impact Statement, U.S. Forest Service, July, 1978.)

Perhaps the most significant aspect of current lands conflicts is that the long struggle for just settlement Of Native claims to lands in the Chugach Region including Cordova-Eyak dramatically reverses the long standing encroachment of white settlers and frontiersmen on Native lands which have, over time, reduced the original population of this area to a relatively small minority of its present inhabitants. Only English Bay, Port Graham and Tatitlek remain as witness to the earlier preeminence of the Aleut, Eskimo and Eyak residents and settlements of the region. With white predominance, Native lifestyles, health and basic survival had been seriously threatened.

The changes brought on by significant alterations in social, political, and economic relationships under ANSCA in a relatively short period of time are hard to predict, both for the short and long term future of Cordova-Eyak and its present and future residents. More will be said of these changes and their implications in Chapter Four.

A bit of the flavor of the changes now being experienced can be seen in

the recent Valdez boom period of 1974-75 when a number of unemployed Cordovans migrated to Valdez to work construction there living in the small boat harbor and talking nostalgically of the freedoms and friendliness of Cordova they missed. During this period a Cordova taxi owner bought the Valdez taxi franchise and the Cordova newspaper established a branch paper in Valdez. While many in Cordova looked on in horror at the developing industrialism next door (L. Jansen) poorer members of the population, newly encouraged by the increasing opportunities open to them, flocked to the boom. The original competition of the two towns which had continued long after their initial settlement and development during the Kennecott mining era, now slowly became an increasing polarization between competing ideologies and lifestyles--one based on an urban-industrial model, the other on a fishing and subsistence village model.

In an interesting twist of historical irony, George Hazelet's family was again involved in land acquisitions in Valdez--the family of the first Mayor of Cordova was building condominiums in Valdez in the late 1970's while even earlier Eyak and Chugach descendants, with the help of their regional corporation, the Alaska Federation of Natives and Alyeska Native hire provisions, landed high paying pipeline jobs (Baring-Gould and Bennett, 1975).

While the polarization of Valdez and Cordova continued, a bit of the Gold Rush flavor of the region was being maintained by her Native inhabitants, who, through their Regional Corporation won pipeline oil spill contingency

and other terminal related construction contracts, and have more recently invested in the Alpetco refinery to be built in Valdez.

SUMMARY

The community of Cordova-Eyak sits nestled among steeply sloping mountain peaks at the center of two richly varied ecological zones. On the one side, Prince William Sound's glacial fjords and abundant wildlife invite residents and visitors. On the other, the Copper River Delta is a rich habitat for migratory geese, sandhill cranes, ducks and other waterfowl. Bear, moose, mountain sheep and goat are among the abundant wildlife to be found northeast of the delta in the newly-designated Wrangells-St. Elias Monument lands.

The community was settled initially by the Eyak and Chugach Eskimo people whose descendants continue to live in the area. The original Eyak were an Athabaskan Indian tribe who hunted bear, mountain goat and waterfowl and fished for salmon. The Chugach Eskimo were sea mammal hunters who settled in Prince William Sound after migrating south across the Alaska Peninsula. Several important Eyak and Chugach Eskimo villages were abandoned after Russian exploration and exploitation of the local sea otter trade. Descendants of these villagers and a prominent Russian Orthodox Church originally located in the Russian trading capital, Nuchek, now find their home in Cordova-Eyak.

The town of Cordova was founded as the center for construction of the railroad leading north to the Kennicott Copper Mines. It was founded

in 1906 and prospered until the closing of the mines in the late 1930's. With the abrupt drop in world prices for copper, the mine became uneconomic and stopped production. From these times to the present, Cordova's chief economic activity has been fishing.

Cordova's fishing industry has sustained the town since the mines closed, but the damage created by the Good Friday earthquake of 1964 to both clam beds and salmon streams has been a cause for alarm. More recently, the Cordova District Fisheries Union unsuccessfully fought the permits necessary for construction of a terminal facility in Valdez, as port for the trans-Alaska Pipeline. Other actions in defense of the fishery indicate the emotional intensity of feelings about maintaining a fishing lifestyle in Cordova.

Chugach Natives, Inc., the profit-making corporation representing the Chugach Region has also experienced a number of years of tough negotiations concerning entitlements under the Alaska Native Claims Settlement Act. Chenega, Tatitlek and Eyak have all been recognized as villages under ANSCA and have received title to some of their lands. The Region's land entitlements are still the subject of controversy and conflict, with resolution postponed until settlement of National Interest Lands legislation now before Congress.

III. THE SOCIAL STRUCTURE OF CORDOVA-EYAK

INTRODUCTION

This chapter discusses population and housing characteristics, predominant lifestyles, and the social and political organization of Cordova-Eyak. It attempts to view the community from the perspective of its economy and political system as well as its more purely "social" organizations--i .e., how the community organizes itself to accomplish its regular goals of economic, political, and social functioning. It is also concerned with Cordova-Eyak's value system; how its residents feel about the community and what institutions and organizations support goals of the whole community.

POPULATION AND HOUSING CHARACTERISTICS

Cordova has had a relatively stable population since the closing of the Kennecott mine and the decline of port activity associated with shipment of copper ore. According to Census reports, the population has hovered between 1000 and 2000 for most of the years since 1940 as was shown in Chapter 2. Unofficially, the population has probably fluctuated more widely with the summer population swelling to as much as 3000 at peak salmon season and dropping off to below 2000 in winter. The City's census for state revenue sharing purposes, taken in July 1978, indicates a population of 2780 inside the City Limits and another 440 outside for a total of 3220 area wide which indicates considerable growth since 1970.

According to the last official U.S. Census in 1970, there were 1164 people

living in the Cordova city limits and another 349 in Meakerville (Eyak). (Table **III .1)** It should be noted that the Census revised the total Cordova population for its revised total population count but did not change compilations of detailed characteristics, so subsequent tables and statistics reflect the unrevised total for Cordova of 1110. While the Cordova population in 1950 was 1165 and in 1960 it was 1128 showing relatively little change in 1970 by comparison, the Meakerville (Eyak) population has been growing particularly since 1960. Meakerville (Eyak) population was only 41 in 1950 and 48 in 1960 but had increased to 349 by 1970. Combining both of these populations for an area wide total from 1950 through 1970, we see that the Cordova-Eyak population was 1206 in 1950, 1176 in 1960, and 1513 in 1970. (Table 111.2)

Housing in the Cordova-Eyak area is now a mixture of single family residences, trailers and apartment units spread over the sloping landscape. Because of the shortage of land suitable for building in the Cordova city limits, much of the most recent new home construction has taken place in the areas outside city limit boundaries. There has been some new construction in the Vina Young subdivision and along Whitshed Road, but the largest increase in housing units has been from addition of mobile homes in courts in the Eyak area. In 1975, Alaska Consultants counted a total of 585 housing units in the City of Cordova, 51 percent of which were single family homes, 29 percent multi-family and 21 percent mobile homes. If the Eyak village area were included, this percentage distribution would show a more even distribution between single family, multi-family and mobile housing units.

TABLE III.1: CORDOVA-MEAKERVILLE 1970 POPULATION BY RACE AND SEX

	CORDOVA			MEAKERVILLE (EYAK)		
	Male	Female	Total	Male	Female	Total
White	537	431	968	143	112	255
Negro	2	0	2	0	0	0
Indian	10	13	23	9	11	20
Aleut	70	62	132	40	30	70
Eskimo	3	4	7	0	0	0
Other	14	18	32	1	3	4
Total	636	528	1164	193	156	349

Source: I.S.E.R. Age and Race by Sex Characteristics of Alaska's Village Population, Review of Business and Economic Conditions, September 1973.

TABLE 111.2: AREAWIDE POPULATION OF CORDOVA-EYAK, 1950, 1960, 1970

1950	1206
1960	1176
1970	1513

Source: Compiled from U.S. Census Reports. See Bibliography

Housing in Cordova-Eyak is now more consistent with the landscape, the seasons, and the pace and lifestyle of a fishing village. Its dispersion over the area and the increase in mobile homes add to a flavor of egalitarianism and unity with the environment which are highly prized by most in Cordova. Yet the appearance of the town is still an issue of contention in a recent Cordova area survey. Even though a more relaxed, less structured community design is more in keeping with the lifestyles lived in Cordova, many older Cordovans in particular still favor the compactness of the original boomtown (J. Payne, 1978).

SOCIAL ORGANIZATION AND PREDOMINANT LIFESTYLE ,

In spite of Cordova's small size, its social organization is quite complex and the prevailing lifestyles are still dominated by strong ties to the land and sea, to a fishing economy, and to hunting and fishing for personal consumption and use. The long years of social isolation and the dependence on fish and game resources have produced a hardy people who value their freedom highly and resent intrusion from "outsiders" almost as much as they despise the tight fishing regulation to which they have had to adapt in recent years. Because of the ebb and flow of the fishing seasons and the reliance on the area's resources by so many, a discussion of the social organization and lifestyles of Cordova-Eyak residents must first begin with a discussion of Cordova-Eyak's livelihood--both its monetary and non-monetary economies.

Subsistence Activities

A recent estimate by the U.S. Park Service indicates that the Cordova

area has approximately 2500 people either actively engaged in subsistence activities or dependent upon others for the sharing of local fish and game (Nelson, 1977, P.6). While fishing and fish processing engage a significant proportion of the population of Cordova-Eyak, the ties to the land and sea through subsistence or sport fishing, hunting, food gathering and related activities are shared by all in this area to some degree. While it is difficult to estimate the actual dependence upon a non-cash economy, it is clear that virtually all of the residents of Cordova rely on subsistence activities for both emotional and physical sustenance. The quantity of game and fish consumed, while measurable, should not obscure the heavy emotional dependence upon a subsistence lifestyle for much of the pleasures of living in this remote area.

As a basic food, salmon is by far the most important food resource in Cordova-Eyak. Another Park Service report indicates that almost all of the salmon caught locally are caught presently with commercial gear and only four subsistence fishing permits were issued in 1977. Salmon fishing in Eyak River, in Orca Inlet and further into the fjords of Prince William Sound is also a favorite recreational activity for both Cordova-Eyak and non-local fishermen. Fishing with sport gear, too, provides considerable fish for home use and preserving. Like most of Alaska's coast, salmon has sustained the people of Cordova-Eyak for generations, and there is a strong attachment to it as a food, for both daily use and for feasts. Salmon are smoked, canned, pickled, salted or frozen by many families in the area. There are a number of local home smokehouses, as well as commercial smoking facilities. Many Native families

hard smoke salmon for winter use (McNeary, 1978).

Halibut and other bottomfish are also prized and are often caught with set lines or sports gear in Orca Inlet and Prince William Sound and frozen for future use. Dolly Varden, cut-throat trout and whitefish are also popular fresh water sport fish caught in summer. Here again, informants complained of recent regulation of fish wastes close to local canneries that had once encouraged migration, particularly of bottomfish, into the harbor where they could be caught with set nets from a small skiff. With tighter water pollution regulations has come the decline of these fish migrations, and with it, limited close-in fishing for home use (R.J. Kopchak).

Another summer fishing activity for home use is Dungeness crab harvesting in Orca Inlet waters. While most private boats can accommodate these smaller pots, the larger Tanner and King Crab pots usually require a winch limiting them to commercial fishing vessels primarily.

In fall, residents of Cordova-Eyak sign up for the few permits necessary for the taking of moose--an animal recently introduced into the Cordova area and closely protected by local game management. In 1976, while 608 Cordovans applied for moose permits, only 59 moose were taken. Not surprisingly, there is considerable frustration locally with a moose permit system. Native informants especially resented this erosion of subsistence privileges.

From October to December, deer season attracts considerable hunting interest. In 1976, over 250 hunters took a total of 631 deer mostly from islands in Prince William Sound. The hunt for mountain goat, bear and small game also takes place at this time or earlier in summer, but is not as substantial a basic food as either deer or waterfowl. Sea lions and seals are still a source of food for Native residents of Cordova, especially the Chugach Eskimo for which this is traditional, but the market for seal and sea lion pelts has dropped sharply in recent years perhaps discouraging their harvest.

In January and February when home salmon stocks are beginning to dip, fishing for Eulachon (Hooligan) becomes more popular along the sloughs of the Copper River Delta. These small fish can be dip-netted from a skiff or while fishing in hip boots near shore and are eaten smoked, salted or frozen.

Also popular in spring is clam digging with razor clams, butter and littleneck clams all highly prized. While Cordova was once referred to as the "razor clam capital of the world" some of its prime clam beds were destroyed during the 1964 Earthquake and Tsunami and have been slow to rebuild. A local saying has it that "When the tide goes out, the table is set." Clam chowders, fried and steamed clams are all favorite foods and clams, cockels and herring eggs on beach grasses or seaweeds are all Native favorties.

Seal are taken year round by a few highly skilled Native hunters who are

allowed this privilege under provisions of the Federal Marine Mammal Protection Act. Seal oil, a traditional Native food, is used both for a dipping for dry fish and is added to the pot for boiled fish. The meat, especially the liver, is highly prized while the rest of the meat is often frozen for stews and soups.

Brown and black bear are taken by a few hunters in spring though the take for home food use is light when compared with trophy hunting pressures. This again is a traditional Eyak delicacy, especially bear liver.

Winter time finds an estimated 30 trappers in the' Cordova-Eyak area engaged in beaver, martin, mink, weasel and land otter trapping for both pelt sale and food consumption with some local trapping of muskrat, wolverine and lynx. While the market for pelts has declined in recent years, it is estimated that a good trapper can still make about $5,000 in winter to supplement summer fishing income. Regulation of the newly Wrangell-St. Elias National Monument may curtail present trapping levels.

Next to salmon and deer, the most locally abundant and most widely hunted food resource is waterfowl (primarily ducks and geese) hunted in fall along the Copper River. It is estimated that between 2500 and 6500 ducks are shot in the Cordova area each year providing a fairly substantial part of many families' diet. Commenting on the relative balance between the ecosystems surrounding the Cordova area, a U.S. Park Service report summarizes:

> Cordova lies between two major physiographic regions: Prince William Sound and the Copper River Delta. These two regions have very different topography and egology, and to a great degree the resources of each region complement the other. Thus, Prince William Sound is the primary area for deer, for sea mammals, for marine invertebrates, and for trolling and seining for salmon. The Copper Delta is the primary area for moose, for waterfowl, for fresh water sport fishing, for small game, and for beaver. In aboriginal times, this ecological difference was reflected in the presence of distinct ethnic groups in each area (Eyak in the Delta and Chugach in the Sound). Today, most Cordovans use both areas, but for very different activities. Within each area, the distribution of resources is determined largely by topography. Exploitation of the resources is determined by transportation, as well as by cultural tradition and the technology of resource use. (McNeary, 1978)

The Fishing Seasons

Frcm April onward, Cordovans and fishermen from the Seattle and Portland areas who fish Cordova waters begin their preparations for a season's fishing. According to Bob Blake of the CDFU, salmon fishing begins in mid-May with gillnetting in the Copper River area followed shortly by the Bering River salmon season. King salmon run through May and June while red salmon run from mid-May through mid-August and Coho season stretches from August through September. Fishing in the Prince William Sound opens for gillnetting red salmon in the Coghill and Unawik Districts in mid-June, set net fishing in the Eshamy District takes place in the western portion of the Sound and the more abundant but less valuable pink and chum salmon season in the Sound runs from early July to mid-August.

While Salmon is the mainstay of Cordova-Eyak's economy, other fisheries

are also becoming important. The halibut season opens in early May and continues into September. Early spring finds a few fishermen engaged in developing the herring roe fishery from which sac roe and roe for kelp are taken primarily for the Japanese market. Tanner, Dungeness, and King crab are also becoming profitable and important fisheries in Cordova. The tanner crab season in particular, which starts in mid-November and ends in early May, holds considerable promise for year-round employment. Shrimp and razor clams are caught primarily for local consumption, as are herring for bait. Most of the salmon caught for home consumption are caught commercially and many commercial boats also include crab and shrimp pots in their gear for home use.

The Cannery System

Although there are six major fish processors and a few small family owned canning firms operating in Cordova, only three major firms were processing in 1978. Alaska Consultants estimates that these firms provide work for the equivalent of 260 full time cannery workers working throughout the year. Each cannery tends to attract a combination of residents and migrants from outside the community, some of whom return yearly for summer employment.

The three major canneries operating in Cordova in 1978 were all at least partially Japanese owned, according to recent news stories. In 1966, Nichiro Gyogyo Kaisha, Ltd. and Mitsubishi Shojiku formed a consortium with New England Fish Company creating Orca Pacific Packing Company in Cordova. Another locally owned cannery, Morpac, Inc., is now controlled

by a joint venture of Nippon Suisan Kaisha, Ltd. and Mitsui and Company, Ltd. A major Japanese trading company, Marubeni Corp., and Marubeni America Corporation own partial interest in North Pacific Processors and St. Elias Ocean Products as well as stock in Cordova Bay Fisheries through its interest in Kodiak King Crab, Inc. Through these and other investments in Alaska, Marubeni interlines with 18 plants in Alaska owning stock in four companies which directly operate eight canneries. Inter-ownership has Iong been a pattern in the fish processing industry but the extent of Japanese ownership and the speed of recent Japanese investments has caused considerable concern and controversy all over Alaska. It appears that for Cordova, however, there are several benefits from this Japanese investment. It has encouraged greater effort in the Tanner crab fishery--a winter fishery. It has also expanded the market for herring roe and salmon roe which were formerly waste products of most Cordova plants. In addition, it may encourage more air shipments of fish from Bristol Bay or other productive fisheries such as occured in the summer of 1978 when plant capacity could not meet the flow of fish--again adding to local employment in off salmon years. (W. P. Dougherty, Alaska Advocate, December 7-13, 1978, and Per O. Heggelund, Alaska Seas and Coasts, February 1978.)

Some people suggest that Japanese investment and control of Alaska canneries may retard the development of on shore bottom fishing capacity; a fear perhaps more pronounced in Kodiak near the rich bottomfishing grounds of the Bering Sea. b/bile a number of Cordova area fishermen are interested and involved in the development of a local bottom fishery

(Morpac, Inc. and St. Elais Seafoods just signed up for a 90 day bottom-fishing demonstration in Prince William Sound), the major local fishery resources still appear to be salmon, crab and herring. Halibut and smaller amounts of clams and shrimp are also processed. Boats required for entrance into bottomfishing tend to be larger than those owned locally, and the productivity of the salmon resource tends to discourage Cordova fishing efforts. According to one superintendent, local processors are reluctant to add bottomfishing lines until local fishing efforts are sufficient to warrant local bottomfish processing. This sentiment is echoed in Juneau as well as by members of Governor Hammond's bottomfishing task force. (Alaska Journal of Commerce, March 26, 1979.) In early 1979, Chugach Natives, Inc. acquired the Orca Cannery, their first cannery acquisition. Leadership of the region is also interested in the expanding bottomfish industry.

The cannery credit system, based on vouchers obtained locally that are tied to fish catches or to other cannery dominated work, often creates individual indebtedness that is difficult to overcome. Locals seem to accept the notion that fishermen and cannery workers are "easy come, easy go" with their money and that you cannot depend on them to save for the future. Similar attitudes are held with regard to the Native population in general. Business owners mentioned that fishing interests were opposed to non-fishing related industry in town because it would create delays in filling their orders during peak demand times. Yet other in-formants mentioned that many of the non-local fishermen belong to local food co-ops and/or buy much of their supplies in Seattle before they come

north for the fishing season.

Among the Eyak, frustration and bitterness with the cannery system and its history of discrimination against the Eyak and other Native groups is strongly felt. In testimony before the Native Claims Appeal Board on Eyak's village designation, mention was made of the decline of the Eyak and its association due to cannery hiring practices which favored the Chinese over local Eyak workers. Their decline in numbers and present virtual extinction are an obvious cause for bitterness. (U.S. Forest. Servicers. Village of Eyak, Recommended Decision and related summary of testimony, ANCAB #VE 74-89: 12.) Jefferson Moser's report on The Salmon and Salmon Fisheries of Alaska published in 1899, supports this recent testimony (Moser, 1899, P. 129-133). While current incentives to hire local cannery workers have increased with more of a fishing year, promotional opportunities and/or training programs appear minimal at best. The cannery system practice appears to have changed little over the years. This lack of change in technology and practice perhaps encourages the continuation of old attitudes about the capacity of Native workers to perform skilled work. After experience with pipeline training programs and the high wages of pipeline related work, these old attitudes and practices are particularly frustrating.

The Fishing Community

The local affiliate of United Fishermen of Alaska, the Cordova District Fisheries Union, is an active, energetic group well respected across the state for negotiating skills and innovation in its efforts to develop a

local aquiculture program. The local head of this union is called "Mr. Cordovan by Fish and Game representatives in Juneau. The Cordova Aquatic Marketing Association, by setting the price for salmon at the beginning of salmon season, acts as the first line of defense in fishing negotiations state wide and has gained respect for this role. Since the early 1970's, the Cordova fishermen's efforts in aquiculture and in fighting against the threat of oil pollution in suits against the trans-Alaska pipeline terminus in Valdez began a process of involvement in the development of coastal zone management goals and guidelines first on Alaska's coastal policy council and then on the national advisory committee. The fact that fishermen hold seats on the advisory board to the North Pacific Fisheries Council and on Alaska's Fisheries Development Corporation as well as a majority of local City Council seats, all indicate active involvement in a wide variety of activities aimed at protecting and enhancing local fisheries resources. With the encouragement of the present state administration, these efforts have rekindled hopes in an expanded fishing year and return to former salmon fishing levels not seen in Cordova since before the 1964 Earthquake.

In 1974, the Prince William Sound Aquiculture Corporation (PWSAC) was founded with the help of the City of Cordova, the City of Valdez, local Native Corporations and seed money for a loan from Chugach Region, Inc. Members of the CDFU assessed themselves $.02 per fish and were matched dollar for dollar by local processors. To date PWSAC has spent an estimated $3 million on salmon enhancement efforts, mostly in locally generated funds. The Corporation acquired the old San Juan cannery site in Southwest

Prince William Sound and has seen its initial returns of pink salmon in 1977 exceed survival estimates. It has now added stocks of chum salmon fry to earlier pink salmon stocks, and plans extension into another hatchery site at Esther Lake and two other sites in the future.

The local enthusiasm for this effort is hard to underestimate. Alaskans along the coast have long favored their fisheries above all else, as a number of surveys in local communities along the Gulf amply demonstrate. (Alaska Public Forum, 1977, 1978; Anchorage Urban Observatory, 1977; Bennett, 1977) The pride in a locally successful program of salmon enhancement is therefore both emotional and strong. From local conversations, one can easily see that this local effort is itself an active social movement within the town of Cordova-Eyak and within the Chugach Region. The success of PWSAC also encourages the direction of individual and group energies into keeping up with their efforts.

Public Opinion

The sense of direction provided by local fisheries representatives, both on and off Council and other governing bodies, has helped to create a climate of opinion in Cordova that is openly antagonistic to non-fisheries based developmentsat the present time. A proposal in early 1978 to encourage the construction of a state prison facility was defeated because of opposition. Eyak Corporation's efforts to develop local timber resources are hampered by internal opposition. A locally generated survey of opinion, taken over the 1977-78 school year, showed strong support for only three

development activities: expansion of the Coast Guard (which could be used to rescue stranded fishermen along the Copper River Delta), bottomfishing, and canneries. (Payne, 1978, P.60) The town was evenly divided between those favoring moderate growth over the next 5 to 10 years and those favoring no growth of population. An overwhelming 71 percent favored the statement "I am equally concerned with job opportunities and preserving the environment." (Payne, 1978, P.61)

Political Organization

The sense of balance implied by this statement is expressed in many ways in the community of Cordova-Eyak. It has its counterpart in the two ecological zones on either side of the community. It also appears to be reflected in both local elections and in the climate of public opinion. From talking with residents and visitors, it appears that a local style of community response has developed in Cordova-Eyak which balances conflict and conflict avoidance, innovation and complacency. During conflict intensive periods (like 1976-78) leaders tend to become more and more combative and/or innovative until they push the community to its maximum level of adaptability. Then throughout the community, more soft spoken and accommodative leaders emerge and their styles and methods of conflict avoidance begin to prevail (G. Holthaus). For example, the early addition of youth services and mental health services to community social structure required considerable effort and innovation by a few energetic leaders. As this process proceeded, however, early leaders were replaced by individuals more suited to an institutionalized program and its bureaucratic demands.

Another example is suggested by the increasing strength of local fishermen on various governing boards. In the summer of 1978, after years of frustration with their exclusion from Council meetings in summer fishing season, Council meetings were rearranged to weekend schedules to accommodate fishermen working during the week.

A third example indicates that strongly held opinions or leadership of a local faction are generally accompanied by an election of a "balanced" position to this view in City Council elections (E. Harris).

Other Pressure Groups

The local Chamber of Commerce, unlike Chambers found in other Alaska coastal towns, is small and more often attended by local government and media workers than by business owners. This is perhaps a reflection of the strong opposition to non-fisheries related development, and possibly also the disillusionment with lack of funding for the Copper River Highway. In talking with local businessmen, one senses a feeling of futility in supporting an active Chamber of Commerce after recent defeats of funding for the Highway, ferry service and oil and gas development. One former state official aptly captured this feeling when he stated that Cordova has long felt like the "orphan" of State government--dependent upon state transportation, harbor and fish and game regulation for its livelihood and continuance, yet hampered in its ability to bargain by a climate and economy that are energy demanding and time consuming (K. Waring). An old time resident put it somewhat differently when he stated that "most post-statehood votes (in Cordova) have been protest votes. ..our weighted vote

doesn't count for much." (H. Henrichs) The Chamber's recent support of the Forest Service initiated opposition to a land exchange by Chugach Region, Inc. has produced considerable controversy locally despite the fact that the number of votes cast in support of the Chamber position was small.

City government employees and old time residents form another local pressure group providing continuity of leadership for the older residents of town, but, at the same time, often unable to muster the votes on Council to re-direct decisions in directions opposed by the fishing and environmentally concerned groups. Recent concern with high taxes, the changing utility management program and town improvement issues are mentioned by this group; however, there is also awareness that without the support of fishermen and cannery operators these improvements and changes in tax structure will not take place.

An increasingly active and energetic group of social service, hospital, mental health, and youth oriented service workers and leaders have been organizing programs in these areas in Cordova in recent years providing an integrated network of services for individuals and families in Cordova and, in the process, providing programs which were virtually unknown in the community before 1970 (R.J. Kopchak). Although some of the youthful enthusiasm of these workers is carefully guarded and scrutinized by old timers in town, there is cautious support for expansion of youth, mental health and medical services, and recognition of these needs in the community.

Members of this group have become active in School and City Council activities, thus broadening the perspective of these groups and adding a voice for younger members of the community as well as support for Native social, health and school concerns. Efforts by local police and Native leaders to provide alternatives to youth crime in the Cordova area were early efforts which have continued with the addition of the Eyak Youth Center, day care programs in a local church, mental health and alcoholism services provided at the local hospital and, more recently, services for Senior Citizens. A mental health-social services provider group coordinates and supervises on going services and programs. Like the Cordova District Fisheries Union and the Prince William Sound Aquiculture Corporation, this group bridges the gap between Native and non-Native members of the community, recently strained by Native changing status under ANCSA.

Native Organization

Cordova-Eyak is the headquarters of two Native profit making corporations formed under the provisions of the Native Claims Settlement Act. These Corporations are Eyak Corporation, with a membership of 325, and Tatitlek Corporation, with 216 members, about 60 of whom live year round in Tatitlek, the majority of the rest living in Cordova. If "at-large" members of Chugach Region, Inc. are added to the populations of Corporations who are presently headquartered in Cordova, there are at least 500 residents of Cordova-Eyak who participate under the provisions of ANSCA.

As the largest Native Corporation in Cordova-Eyak, the Eyak Corporation

carries considerable weight locally, and with its recently allotted lands (155,673 hectares or 63,000 acres), it will definitely play a major role in the development of Cordova in the future. At the present time, Eyak Corporation is undergoing growth as a Corporation representing several interrelated families, interests and concerns. The demands of ANSCA require that the Corporation be profit making, yet most of the members are used to a fishing lifestyle, rather than one which encourages corporate profit making.

Members of Eyak Corporation tend to split on the issue of development locally with strong pressures pulling in both opposing directions. There are also factions within the Corporation favoring a more separatist village of "back to the land" philosophy while others are encouraging more accommodative relationships with local Cordovans. The old pattern of segregation implied by old town residence and the "Indian School" and continuing informal segregation patterns in the schools provokes angry resentment on the part of many Native members of the community and is the source of deep resentment. The sense of loss in language and cultural heritage is deeply felt and painfully recalled. While the conveyance of lands opens the door to new hope and potential prosperity to come, it also opens a flood gate of old resentments and anxieties locked behind the appearance of docility and accommodation for generations. As one leader stated in the hearings associated with Eyak village's eligibility under ANSCA, " . ..back in those days, first of all, it wasn't popular to be a native. . . since even in Cordova at the Lathrop Street Theater for many years, we experienced segregation in... the theaters, where we had special places to

sit . ..So we're talking about two different eras almost. ..as to what... might happen some years ago and then. ..recent times." (U.S. Forest Service vs. the Village of Eyak, Testimony by C. Barnes, VE No. 74-81, Volume 2: 108-109)

As is true in other minority-majority social orders, political representation of a "Native" voice is recognized by most Cordova-Eyak residents as a current deficiency at the local level. When viewed from the perspective of full year residence, the Native community probably represents at least 25 percent of the population and probably more in winter. The former apathy of many Eyak residents has, with settlement of Native claims, led to much more active concern with local political issues but without benefit of an elected member on Council who could represent Native interests. As both white and Native Cordova-Eyak residents become more comfortable with the legitimacy of Native interests within the Cordova political arena, it is likely that election of a Council representative will fill this void.

While Corporate activities have dominated the headlines and been the focus for much discussion and debate both within Cordova-Eyak's Native population and the community as a whole, other organizations have also begun to grow, to become organized, and to become more effective in meeting the various needs of the Native population not formerly met by community-wide organizations. Eyak now has an Indian Reorganization Act (IRA) Council which has been active over the last few years. This village council formed under provisions of the Indian Self-Determination Act of 1975

consists of a president and five elected members. Present activities include ownership and management of the office headquarters of Eyak Corporation, Bidarki Corporation, the Council's non profit affiliate, and provision of office space for a community health aide who is part of North Pacific Rim's Health Department program. Other local government activities include administration of block grant and other government aid programs and participation in region-wide village government conferences sponsored by North Pacific Rim.

Bidarki Corporation, the IRA Council's non profit affiliate, sponsors the Eyak Youth Center which has extensive programs for young people in the community including recreational, social and cultural activities. The newly elected IRA Council President is undergoing training as a paralegal trainee with sponsorship from North Pacific Rim. The village health aide, another North Pacific Rim employee, provides medical services to residents of Cordova-Eyak and plays a supportive role concerning the medical needs of Eyak residents and provision for these needs at the local and regional level.

With the conveyance of some of their lands, Corporations and Councils within the Region are beginning to plan for expansion of housing starting with a housing assessment of village needs by North Pacific Rim. Regional and community planning are major priorities of both the Region and North Pacific Rim.

Tatitlek Corporation, the profit making Corporation of Tatitlek Village,

also maintains offices in Cordova-Eyak. Its IRA village council is headquartered in Tatitlek. Over the years, Tatitlek and Cordova-Eyak have maintained close ties through family visiting, a common fishing tradition, and many other contacts and associations. Tatitlek children use the Cordova-Eyak swimming pool, for example. Chenega Corporation at one time maintained offices in Cordova but more recently has maintained them in Anchorage. Many Tatitlek and Chenega people still reside in the Cordova-Eyak area and have maintained strong ties to the Orthodox Church in Eyak since it was relocated from Nuchek about 1925. Their Corporations have also contributed to Prince William Sound Aquiculture Corporation, along with Chugach Natives, Inc., Eyak Corporation and City governments in the Sound.

In 1977, North Pacific Rim Corporation took a step toward greater self determination by electing its own Board of Directors chosen from within the villages of the Region to represent a village level voice in the policy concerning programs aimed at enhancing village life. Programs in Cordova-Eyak include provision of a community health aide, a paralegal traineeship, funds for playground and other equipmentat Eyak Youth Center, a local day care program, and plans for housing development under H.U.D. sponsorship. The focus of these and other social service programs is toward community enhancement and improvement of the well being of the whole community--a focus which helps offset fears associated with the exclusiveness of Corporate activities.

During 1976-77, Chugach Region was involved in a number of feasibility

studies and joint ventures anticipating additional development of offshore oil in the Northern Gulf of Alaska, primarily with an eye toward Icy Bay as a potential OCS service base. Contracts with Phillips Petroleum, for example, involved exploration and evaluation of oil potential off Icy Bay. Contracts with Anchorage Helicopters for oil rig support services and with Bomhoff Associates for feasibility studies were undertaken by Chugach Development Corporation, a wholly owned subsidiary of Chugach Natives, Inc. (Chugach Natives, Inc., 1975, 1976, 1977). The Region's recent acquisition of the Orca Cannery in Cordova-Eyak and their continuing interest in potential bottomfishing development in the region indicate strong support for fisheries related development in Cordova-Eyak and in other towns and villages of the region.

According to CNI's newsletter of October, 1978, the Corporation now employs nine staff members. Recent acquisitions in Anchorage include expanded offices housing both CNI and North Pacific Rim, Chugach Development Corporation and Chenega Corporation. The Corporation, through Chugach Development Corporation, also owns majority stock in the Sunshine Plaza Mall, a newly constructed shopping mall in downtown Anchorage.

Other Social Groupings

Local discussions indicate that Cordova-Eyak has a number of small groupings of families and individuals who tend to live or work close together and interact with each other socially and agree politically, yet still maintain fierce independence of position on the numerous political issues which swirl through the community continually. The recent changes

accompanying the settlement of Native Claims and failures of oil and gas development hopes carry with them the potential for fragmenting further the social bonds that have developed over time. As younger cannery and fishing crews enter the community with strong environmental positions and as young people return from college or years away from town, the potential for youth-old timer conflict is magnified. One place where these conflicts fade is in the local bars and restaurants where different groups of local residents congregate to socialize, discuss important events of their day and generally pass the time. Frequented primarily hymen, the major bars attract mostly old time drinkers in one, a mixture of younger drug users and drinkers in another, and a quieter, more middle class and family oriented crowd in three local bar-restaurants.

The organized groups in Cordova-Eyak include active Masonic organizations, the Elks and Moose Lodges and ten local churches: Roman Catholic, Episcopal, Baptist, Russian Orthodox, Assembly of God, Church of Gospel Ministry, Lutheran, The Little Chapel, the Church of Christ and a Mormon group. Each of these organizations and churches has its complement of members and activities. The Elks and Moose in particular sponsor a number of community wide activities each year which encourage participation by wider segments of the town's population. Eyak Youth Center sponsors a number of community events in summer and there are a number of sport clubs including a Bicycle Club, Jogging Club, Folk Dance Club and Cub and Girl Scout programs locally, as well as baseball activities in summer and basketball in winter. There is also a relatively active University extension program in winter which attracts a wide range of both Instructors

and students ranging over a surprisingly broad area of intellectual and practical concerns. Courses in art history, Alaska history, painting, crafts and gardening are a few recent examples. The Alaska Humanities Forum also sponsors a number of local programs in Cordova-Eyak.

Federal and State fish and game managers, school teachers, a group of more environmentally concerned fishermen and business owners appear to maintain somewhat separate social circles. Seasonal cannery workers, both non-local "hippies" and Filipino workers from a Seattle based Union, also stand somewhat apart from the local population.

In addition to social stratification based on friendship, family or work association, and that based on organizational membership, Cordova-Eyak also has a tradition of socially prominant parties given by local residents to which invitations are highly prized. At the present time two of Cordova's most successful fishermen and their wives are considered to have the most prestigious parties. Another sign of the prestige given fishing locally is the recent resignation of the local newspaper editor who mentioned on resigning that after a winter in Hawaii he planned to return to Cordova to commercial fish (Cordova Times, November 30, 1978).

THE POLITICAL SYSTEM

People who have lived in Cordova-Eyak all mention the love of "politics" and the active involvement of local residents in the political process. Local residents joke about February as the month to "roast officials" and speculate as to which official will "get it" this year. This politicization

of every decision has both its positive and negative aspects. On the positive side, few in Cordova-Eyak need feel "left out" of activities if they choose to become involved. If one is not formally elected or appointed to office, there is still room to voice opinion at Council meetings or within the context of one of the many politically oriented factions or interest groups that exist in Cordova-Eyak. On the negative side, the level of critcism and "back-biting" appears to have become so severe that it is currently reducing the town's ability to function effectively. Talks with local managers and officials indicate a high level of criticism locally which often tends to undermine their day to day effectiveness.

Most Cordovans seem to recognize a powerful fishing-cannery group that is itself stratified into successful fishermen and cannery superintendents on the one hand, and less successful fishermen and cannery workers on the other. Native fishermen and cannery workers can be found in both groups. The more marginal fishermen and cannery workers are more apt to sell their permits or move away from the community in bad years while the more successful may winter in Hawaii or other sunny locations if fishing season is especially profitable. Recent seasons and incomes have encouraged winter relocations. Teachers, business owners and their employees, a relatively large retired population, social and medical service workers, the Coast Guard contingent, and a few other professionals tied to the fishery make up the year round residents of Cordova-Eyak. As families or as individuals, all but the most marginal community members actively participate in the yearly round of subsistence and sport activities which

provide supplemental or substantial additions to home freezers and cupboards.

City Council has representatives of all of these groups, save the Native population; although a former City Councilman is now on Chugach Region's Board of Directors. While Council reflects the diversity of interests in town, its members, like the population as a whole, live heavily dependent upon the resources surrounding Cordova-Eyak. This lifestyle encourages not only political activism, but a strong willingness to be idiosyncratic, to pursue an independent, individualistic pattern of living. At the same time, many in Cordova complain of the general level of apathy among the residents. Yet in spite of idiosyncrasy and "independence" on the one hand and apathy on the other, when faced with antagonistic influences which might threaten this generally held lifestyle, the consensus builds until opposing development is fought off--often through a long process of criticism, heavy gossiping and active confrontation at Council meetings or other community forums, or, if necessary, in the Courts.

In winter, the less powerful, more generally apathetic members of the community become more active in the gossiping and criticism process which tends to politicize most major decisions in town and creates a climate in which managers and officials find it difficult to survive more than a few years tenure. Not only has there been a relatively regular turnover in Municipal management in Cordova in recent years, but the utilities have seen a number of changes, as have church and hospital administrations. This process, although perhaps encouraging a rather strongminded survival

instinct among those administrators who survive the criticism, probably also encourages more rapid turnover, since individuals who are politically involved become increasingly "burned out" by the constant level of activity required. This process of community political involvement is not unique to Cordova-Eyak, but is probably much more widespread along Alaska's coast especially in communities cut off from major transportation routes.

From another vantage point, the gossiping and criticism process often expressed in Cordova-Eyak is a means by which the community maintains a collective political decision process. As one informant suggested, a "tight rein" on officials and an attitude of mild to open skepticism of "professional advice" keeps the dominant and practical concerns of Cordova-Eyak in the forefront and prevents overly ambitious leadership from transforming the community into something the majority would dislike. By relegating the role of City Manager and other key positions which in more urban places usually involve considerable authority, to one in which the community's concerns are served first and foremost, the Council and (through it) the community majority maintains maximum control over the decision making process. The Hospital Administration, School Administration and City Utilities are all subject to strong city control in which decisions by administrators are the subject of considerable scrutiny locally.

INTEGRATIVE FORCES

In about 1974, a local hospital administrator and other community leaders began the process of consolidating social, medical and youth services under

one roof. The Cordova Hospital built in 1955, had extra space in the unused bomb shelter below the main floor, and there was a recognized need in the community for alcoholism counseling, mental health services and related improvements in services. In 1976, Cordova was funded under the newly created Health Underserved Rural Areas program for a demonstration project. This project brought together public health nursing, alcoholism counseling, mental health, emergency medical services, and visiting specialists under one Hospital Board, with offices in the Cordova Community Hospital. Since that time, Eyak Youth Services has obtained the old City Hall building under loan from the City of Cordova and is providing youth programs and recreational opportunities to Cordova-Eyak youth. A local church is providing day care services, and school counselors are becoming more involved in a health care-social services provider group.

While the staff of these services is of professionally high standards, there appears to be relatively high turnover in both social services and hospital administrations--not unusual in small, isolated Alaska communities. The local churches in Cordova-Eyak have also all had a change of leadership in the last 4-5 years or less. It appears that there is still strong support for family responsibility in social and recreational areas of activity, yet, at the same time, recognition that the heavy rain and snowfall of Cordova-Eyak's climate create pressures that require more expenditure of funds in mental health and alcoholism counseling in particular as well as programs for young people to occupy their time and create positive alternatives to delinquent behaviors (Saylor and Tilgner, 1977).

In addition to these services and programs aimed at supporting and enhancing the quality of life of resident families and individuals in Cordova, there are a few community-wide programs or rituals that serve as integrative forces in the community and around which the community rallies. In 1961, the local bush pilot and community figure Merle (Mudhole) Smith and other local leaders organized the first "Iceworm" Festival; now a yearly winter celebration that includes cannery tours, races and sport events, a Chugach Native potlatch, a school play and related activities. Basketball and other sports events at the High School are important sources of community pride in winter. Funerals, weddings and births provide friends and family with an opportunity to share in common traditions. And the local newspaper has long highlighted local history and reminiscences which promote community integration. Yet by far the greatest integrative force is the environment itself and ties to it through fishing, hunting and related activities.

SUMMARY

Cordova-Eyak's population has been growing since 1950, when the U.S. Census counted 1206 residents. In 1978, mid-year population counted was 3220 for the area including both Cordova and Eyak. Cordova-Eyak's lifestyle revolves around fishing, hunting and subsistence food gathering both in summer and winter. There is a wide range of foods obtained through subsistence by both Native and non-Native residents of the community. These pursuits critically define individual and family ties to the land and sustain both food and emotional needs of residents.

Commercial fishing begins in mid-May with gillnetting in the Copper River area, followed shortly by the Bering River salmon season. King, red, coho pink and chum salmon seasons stretch through August. Halibut season opens in early May and continues through September. Herring, Tanner, Dungeness and King crab are also caught here. The Tanner crab season, from mid-November to early May, promises a more year-round fishery to local residents.

Most of Cordova-Eyak's canneries are now controlled by Japanese firms, a trend which has become more prominent in the last 10-15 years. Chugach Natives, Inc. has also recently acquired a local cannery, its first cannery acquisition. These purchases may encourage some expansion into crab fishing, but it appears that Cordova-Eyak will still continue to be primarily a salmon fishing area.

Cordova-Eyak's social system is structured around its predominant economic activity--fishing. The local Union and Acquaculture Corporation are strong centers of community sentiment, political organization and energetic leadership.

Native and social service organizations, old-time residents, Federal and state government officials and teachers, business owners and workers each are somewhat distinct groupings. Family, work and residential ties appear stronger than organizational affiliations, save those to the local fisheries Union and Aquiculture Corporation. Cordova-Eyak is still a “fish camp” to many of its residents because of the highly seasonal

nature of the salmon fishery. While Cordova-Eyak residents pride themselves in their individuality and tolerate a high degree of idiosyncrasy locally, community sentiments in favor of a fisheries-based community unite the town.

Community-based decision making and a "love of politics" involve community members in a number of controversies, particularly in winter. It is then that local officials come under closer scrutiny. But disagreement and conflict end when the predominant fisheries lifestyle is threatened. Increasing Native and community social service efforts over the last 5-6 years have attempted to offset some of the pressures of a frontier environment and economy, particularly in services for youth. Community organizations, and churches, and the celebration of holidays also help to integrate the community. But ties to the land and its resources are the major forces operating to tie individuals and families to their environment and through it, to each other through the practice of common food-gathering activities.

Iv. SOCIAL CONFLICT AND SOCIAL CHANGE IN CORDOVA-EYAK

INTRODUCTION

Rapid development associated with outer continental shelf exploration and/or the gas terminal at Gravina Point west of Cordova-Eyak have been ideas that lived in Cordova-Eyak for a while in the 1970's then died with the changing plans, the redirection of lease sale tracts further south along the coast, and alternative gas pipeline proposals favoring an inland Canadian route. The present research was conducted at the end of these hopes while the frustration level was extremely high and when everyone in Cordova-Eyak was angry, upset or frustrated with prospects for the future of their community without the hoped for oil and gas development; or angry and frustrated at the diversion of energy, time and attention away from other more profitable or likely long term futures.

Perhaps the polarization of attitudes in favor of environmental and fishing concerns to the exclusion of other alternatives is part of this atmosphere. Certainly the land freeze associated with stalled conveyances to Chugach Region and Eyak Corporation, Tatitlek Corporation and Chenega Corporation has caused considerable anxiety, frustration and schism between Native and white residents in town.

Itseems appropriate at the outset of this chapter to ask whether the concept of CEIP funding should be altered to account for communities bypassed by rapid energy development. In this case, an overwhelmingly fisheries based community was forced into planning for an eventual population increase in

excess of twice its current and historic size. This effort. involved considerable conflict, strain and antagonism between groups and individuals locally and the diversion of considerable resources on the part of local fishermen and others in fighting against the changes--funds which could have been used to enhance the fisheries or for other purposes. The town's attention was diverted from its most profitable economic pursuit and its people were asked to adapt in a short period of time to another rapid energy boom which they had historically experienced but from which they had then been summarily "dumped" with the closing of the Kennecott mines.

In this sense, CEIP funding is for the "winners" of rapid energy development only. It cannot be used to compensate the "losers" for their inconvenience, the conflict and strain created in their midst and the unfulfilled hopes they must swallow. And with Valdez next door prospering with a tax base supported by an oil terminal that Cordova fishermen opposed, the comparison is perhaps doubly disturbing.

ECONOMIC FORCES

An old timer and former postmaster from Cordova had the following reflections in the recent Eyak village hearing concerning the status of the village under ANCSA:

> Q. "In present day Cordova is native lifestyle very much different from the lifestyle of the non-native?
>
> A. In my opinion, the lifestyle thirty or forty years ago was considerably different primarily due to economics.

Q. Now, with regard to today, is it about the same as the non-Native lifestyle?

A. I expect today we're sort of pretty well amalgamated.

Q. Would you say then, that they have been assimilated into the community, to use that expression?

A. I'm not sure whether - which direction the assimilation was flown."

(H. Henrichs' testimony, U.S. Forest Service vs Eyak Village, July 16, 1974)

By this testimony our attention is directed to several related issues which will be discussed in this chapter. The fisheries have provided a livelihood for the community since the closing of the Kennecott mines and the ending of the associated boom period before 1940. Since 1940, there has been considerable segregation between Native and non-Native residents of the community including the fishery-cannery system and school segregation (until about 1955). Only recently has this been reduced with greater opportunities in Alaska, the ANSCA settlement and related developments, and the development of a more year-round fishery providing incentives to maintain a local cannery workforce. The economy of fishing and pursuit of considerable supplemental meat and fish through subsistence is now the predominant lifestyle in the community shared by both Native and non-Native and, in fact, perhaps more vocally preferred by some of the non-Natives of Cordova.

Change in the Fisheries

During the 1970's a number of significant changes occurred in fisheries regulation that have fundamentally altered patterns of fishing in the Cordova-Eyak area and have given renewed hope to local residents of a fishing year and of the recovery of the seriously depleted salmon

fishery eroded before statehood. (Cooley, 1963) Not only had the fish trap system seriously depleted salmon stocks throughout the state, but with the advent of the 1964 Earthquake, Prince William Sound salmon streams had been particularly hard hit and slow to recover.

The sense of foreboding about the future was significantly altered by passage of two laws: one by the Alaska Legislature (Limited Entry in 1973), another by the U.S. Congress (Fisheries Conservation and Management Act of 1976). Of the two, Limited Entry has had more profound effect in the Prince William Sound and Copper River delta fisheries by limiting entry into the various salmon fisheries to a maximum number of permit holders chosen on the basis of their dependence upon the fishery and on length of tenure in the fishery. The bill which finally passed encompassed all Alaska fisheries, authorized interim use permits as of January 1, 1974, recognized that a number of distressed fisheries exist in the State (including the Prince William Sound drift gill net fishery), established a timetable for determining the maximum number of entry permits for a fishery, and established fees for permits and regulations for the transfer of permits as well as a buy-back fund for compensating fishermen who exceed permitted levels in a given fishery. (Alaska Seas and Coasts, June 15, 1973.)

A measure of the change in fortune experienced by Cordova-Eyak fishermen since implementation of the Limited Entry Law is provided by Table IV.4 which shows estimated gross earningsof Cordova area fishermen from 1969 through 1976.

TABLE IV.1: ESTIMATED GROSS EARNINGS AND AVERAGE GROSS EARNINGS OF CORDOVA* FISHERMEN - 1969 to 1976

YEAR	GEAR OPERATORS	GROSS EARNINGS	AVERAGE GROSS EARNINGS
1969	330	$ 3,219	$9,753
1970	391	3,918,000	10,021
1971	3 6 1	4,225,000	11,703
1972	35-7	2,927,000	8,200
1973	429	7,869,000	18,342
1974	378	6,163,000	16,305
1975	354	6,629,000	18,726
1976	377	$11,677,000	$30,974

*Cordova - McCarthy Census Division

Source: Alaska Commercial Fisheries Entry Commission, Distribution of Income from Alaska Fisheries, July 1978 (Table 209, Alaska Sea Grant Fisheries Report)

Not only are earnings significantly greater in years since Limited Entry, but as Table IV.1 shows, the number of local fishermen who now hold permits has also risen from only 186 in 1969 to 572 in 1976--a tripling of Cordova area residents holding licenses in less than 10 years. (Unfortunately, the definition of "local fisherman" may encourage its use by non-local Cordovans. See Table IV.2)

TABLE IV.2: NUMBER OF CORDOVA RESIDENTS HOLDING A COMMERCIAL FISHERMAN'S LICENSE - 1969 to 1976

1969	186	1973	286
1970	205	1974	264
1971	216	1975	467
1972	211	1976	572

A Cordova resident is anyone who uses a Cordova address when applying for a license.

Source: Commercial Fisheries Entry Commission License File, Table 209a, Alaska Sea Grant Fisheries Report.

Cannery employment since the mid-1970's also shows healthy growth particularly during the winter months, with average employment levels of between 190 and 250 since 1973. (Alaska Sea Grant Draft Working Paper Number three: 654)

When combined with State encouragement and support for both the State's and the PWSAC's salmon enhancement efforts and new State loan programs encouraging acquisition of Commercial fishing gear (Alaska Seas and Coast, October 1977), the incentives to enter or remain n the fishery are growing steadily. And the rapidly increasing investment by Japanese firms in Cordova fish processing plants since the early 1970's spurred by the federal 200 Mile Limit law may encourage expansion of processing capability locally especially in the salmon, crab/clam and herring fisheries.

The Fisheries Conservation and Management Act (the 200 Mile Limit Law) has a number of other ramifications locally, two of which deserve special

mention. First, Cordova fishermen have long been actively involved in Alaska Fish and Game regulation at the grass roots level with local fisheries advisory boards, representation on the Alaska Fish and Game Board, and more recently active involvement in both the Alaska Legislature and Alaska and national Coastal Zone Management (CZM) policy boards. In meetings to discuss Coastal Zone Management guidelines for Alaska, many participants in Cordova mentioned their fears of non-involvement in the decision making process as prime concerns. (CZM Cordova meeting, 1977)

Since the Cordova area fishery is still predominantly a salmon fishery, the federal regulation implied past the 3 mile State management area more directly involves the growing Tanner crab fishery and newer fisheries for which there is still relatively minor enthusiasm locally. In early 1979, two Cordova processors signed agreements with the State of Alaska for a bottomfish development program for local fishermen, and a trip to Denmark by fishermen from all along Alaska's coast included one from Cordova. (Alaska Journal of Commerce, March 26, 1979)

Another Federal law which has affected fishing in the Cordova-Eyak area is the Marine Mammal Protection Act, enacted in 1972, which has caused considerable resentment and objection from white fishermen now barred from shooting seals and sea lions who are both salmon predators and fish net destroyers. Not surprisingly, many fishermen disregard this law locally to protect their gear while fishing. (Alaska Seas and Coasts, December 15, 1975)

For Eyak residents, the Limited Entry law in particular causes concern. The tradition of fishing, passed on from father to son, is threatened by the permit system which, in the case of a bad year of fishing, might force sale to pay for current expenses. The long years of poverty or near poverty make the benefits of such a sale hard to resist, yet the long term implication of permit sales by local families makes reentry by their sons and daughters difficult to finance. This fear was mentioned repeatedly in conversations locally. Recent State decisions eliminating the herring gill net fishery in Prince William Sound further discriminate against local fishermen without limited entry permits. (Cordova Times, January 18, 1979)

Oil and Gas Development

It is generally recognized that Cordova stands little chance of being seriously impacted by either outer continental shelf development or by gas development at Gravina Point. While major finds in the Yakutat shelf area are still possible under the impending lease sale, even development at Icy Bay which would encourage the hopes of Chugach Region, Inc. are seen as unlikely at this time. Yet anticipation of this leasing and exploration activity in 1974-77 did significantly alter the social and political climate in Cordova.

Planning for potential outer continental shelf oil development and gas pipeline development at Gravina Point was at its peak in the years 1974 through 1976, the same years that salmon enhancement programs in Prince William Sound began and Limited Entry and the 200 Mile Limit became 'law.

Spurred by concern with the inadequate local infrastructure permitting expansion of population in Cordova, Cordova's City Manager and Alaska's Department of Community and Regional Affairs sponsored the development of a new Comprehensive Plan to consider present and potential land uses in the area. This plan and the State's Gulf of Alaska OCS Handbook published later both pointed to the problem of land availability in Cordova-Eyak as the major obstacle to development of Cordova-Eyak as a service base for off-shore oil.

The Comprehensive Plan, reflecting thinking in the State at the time, projected the Cordova area's "most probable" population in 1985 to be 3,360 and by 1995 to be 4,500. (Cordova Comprehensive Plan, 1976: 82) These estimates and the implications of rapid development did not sit well with many in Cordova-Eyak. While editorials in early 1976 suggested that Cordova-Eyak begin to develop task forces or policy groups to discuss and plan for rapid population growth, meetings by the City Manager and representatives of the CDFU in Yakutat led to open opposition of OCS development along the coast as the CDFU and Yakutat joined the State's efforts to delay OCS leases (Cordova Times, March 11, 1976).

In May of 1977, the Alaska Coastal Management Program held meetings in Cordova to discuss Cordova opinion concerning the program and to provide public information concerning Coastal Zone Management guidelines, recent developments and opportunities in the planning process. The questions which surfaced at this meeting highlight concerns held locally about potential losses associated with planning for OCS development:

"What can a community that is planning for oil development do when the oil companies decide not to go there after all?"

"Cordova is using all the power it produces, ifwe build a large utility is that forgivable if the growth does not happen?"

"If we decide to enlarge our school in anticipation of energy related growth can we pay for it out of energy impact funding and have it forgiven if we are not much impacted by the growth we expect?"

"How much advance notice is the State requiring oil companies to give before they move in?"
(Northrim Associates, 1977)

By this time Cordova had seen a turnover in City Managers and would see another change in less than one year. Its harbormaster, school superintendent, hospital administrator, utility managers and city engineer all turned over at least once from 1976 to 1978. The City Clerk, Health Officer (M.D.), Librarian and Magistrate, Comptroller and Shop Foreman were the only municipal supervisors who survived 1976. All the key positions involved in a major shift toward a larger population turned over in 1976 or shortly thereafter, some continuing to turn over again in 1978 as well. (Alaska Municipal Officials Directory, 1970 through 1978)

In the fall of 1977 and spring of 1978, a local opinion survey answered by 624 local residents showed that changes had occurred over the period in attitudes and opinion about non-fisheries related growth. In contrast to more positive sentiments held in 1975 when another survey was conducted (Cordova Comprehensive Plan, 1976) in which 56 percent of the Cordova area population had said they felt oil and gas development "near" Cordova

would be a “good thing” for the community by 1977-78, 44 percent stated that development of a staging area for OCS development in or near Cordova should be discouraged and another 32 percent said it should only be moderately encouraged. Only 24 percent felt OCS development should be strongly encouraged in or near Cordova.

Also in the 1975 survey, a question relating to a gas liquification plant located near Cordova illicited a 53 percent “good” response. By 1977-78, 67 percent of the respondents maintained that "heavy manufacturing" should not be encouraged in the Cordova area and only 10 percent felt that it should be actively encouraged.

By the time of the 1977-78 survey the turnover in utilities and accompanying rate increases had created serious concerns in town with the high cost of living. In the most recent survey, 73 percent of the respondents mentioned that the cost of living was a serious problem and 71 percent stated that the cost of utilities was a serious problem. Dogs running loose (61 percent), alcohol use (56 percent), and the shortage of housing (53 percent) were the other issues considered serious by at least 50 percent of those responding.

City elections had also produced during this time a majority of fishermen on the Council, and this control, coupled with posts on Alaska and national Coastal Zone Management boards, made possible a degree of influence not formerly held by fishermen in local affairs. Perhaps spurred by their success in slowing pipeline construction and coupled with active participation in oil spill regulation, tanker safety issues and

other potential hazards to the fishery (Sea Grant Oil Spill Conference Proceedings, MESA workshop proceedings), these men and women became the voice for the majority who favored a fisheries based community. By early 1978, when a proposal to seek a state prison located in Cordova was considered, it was overwhelmingly defeated by Council. There appeared to be little doubt that other types of development would not receive much community support, at least in 1978.

CHANGING NATIVE-WHITE RELATIONSHIPS

Over the years, the Native people of Cordova have been considered not only poorer than white Cordovans but also unequal in many other respects. In addition, the loss of lives during the Russian period and the later abandonment of Alaganik, Nuchek, and other villages which preceded the migration to Cordova of many of her present residents both testify to a familiarity with death and explain its imagery in local Native-white relationships. The emotional content of this pervasive despair in the face of the opportunities now open to them with the Native Claims Settlement may appear perplexing to non-Natives unfamiliar with this history of Native-white relationships.

One of the earliest accounts--now published in the popular history of the Railroad era, The Copper Spike, and found in other historical accounts as well--is a statement made by the Reverend Sheldon Jackson in 1893 in which he described Eyak as a "horrible example" with

> "25 white men, 25 native women, and 25 stills capable of producing 2,500 gallons of liquor, mostly consumed by Natives. They had no

other visible means of support, although during the canning season the men did catch fish. " (Jansen, 1975, P.27)

A more recent account, in the widely used text, Fisheries of the North Pacific, talks about "The Men of the Fisheries" in these terms:

> "Toughest competitors among the native fishermen are those of the seine fisheries of Southeastern cutthroat affairs anyway, and hard words have been known to fly among white and Indian boats at work, while fists may follow if the respective crews encounter each other ashore, especially if the natives are Tlingit Indians. . . The situation differs somewhat in Western Alaska where the Aleuts and Eskimos are fewer, milder and more disorganized and the fisheries are, with the king crab and shrimp fisheries excepted, mostly one- and two-man endeavors like the red salmon gillnet fishery of Bristol Bay. The rivalries that tend to spring from crew · boat fishing seem not to start out to westward, partly perhaps because the short season keeps men too busy for anything but fishing and sleeping when the chance offers. In any event, white men rule all these fisheries of Western Alaska and the natives, as a group, have comparatively little to do with them except those of Bristol Bay, and to some extent, the growing shrimp fishery based on Kodiak Island.. ." (Browning, 1975, P.4)

And in referring to Native cannery workers, the same reference maintains that:

> "Nowadays, the political emphasis on cannery labor in Alaska is on employment of the locals, both native and Caucasian. Almost inevitably, the skilled workmen inmost canneries are Caucasians, many of them brought in from Seattle. Most members of the native ethnic groups have no such skills although there is a variety of programs trying with some success to teach these and other skills. But mostly they are the men and wormen who work the canning lines as silently and patiently as their Asian predecessors although at decent rates of pay and with working conditions as good as possible in sometimes-primitive surroundings." (Browning, 1974, P.295)

Even the sympathetic treatment given Native cultural and Land Claims issues in the Federal Field Committee's Alaska Natives and the Land discusses Eyak "loss of identity" as at the core of other losses:

> "Because the territory of the Eyaks was the center of much activity, including salmon canneries, mineral exploration, railroad construction, and trading enterprises commending as early as the 1880's, the Eyaks traditional way of life was seriously disrupted. Judging from their decline in numbers, their adjustment to changing conditions imposed by non-Natives was far from being successful, although a willingness to marry outside of their tribe may have been an important element in the fairly rapid loss of their identity. (Federal Field Committee, 1978, P.272)

These and similar attitudes are widespread among the white population of Cordova-Eyak and thus quickly Surfaced in conversations held in the summer of 1978. Discussions with white Cordovans usually contained references to either fears about the management of lands by Eyak Corporation, references to the "personalities" of some of the outspoken Eyak leaders, or the heavy drinking of other Corporation leaders.

As Chugach Region, Inc. has commented in a recent publication:

> "Another area of concern is the stereotyping of the Native corporations as born losers in the business world. While some of the Native corporations have had some financial cliff'iculties, there are others who have functioned very wel 1 in the business world. Chugach Natives, Inc. feels that they have a sound base and has yet to exploit its full potential. " (Alaska Natives Regional Profiles: prepared for Alaska Federation of Natives, Inc. Report No. 269, P.6-9)

From talks with residents in Eyak it is clear that the stereotypic attitudes about Native abilities and potential are extremely destructive influences in the day to day lives of Native residents of Cordova-Eyak. Yet their pervasiveness suggests the likelihood of a long term adjustment period. For the present, social relationships are strained. There is much avoidance of more than casual contacts and embarrassment, yet tolerance within the Native community of personal outbursts or drug or alcohol abuse

as salves for a difficult adjustment period.

Effects of ANSCA

Recent writing on the subject of assimilation and acculturation distinguishes between these terms and amalgamation which is "the crossing of racial traits through intermarriage" and social assimilation which is a "process by which persons who are unlike in their social heritages come to share the same body of sentiments, traditions, and loyalties." (Gordon, 1964, P.19) These distinctions may help differentiate between Eyak and Aleut adaptations to white contact historically while suggesting current and future processes.

The diversity of cultural heritages which together form the Cordova-Eyak community have over time created a unique community in which the cultural blending around common lifestyles associated with fishing, cannery work, and patterned subsistence activities is now widespread. The early boom-town on the one hand and subsistence and cannery village on the other which came together in the early years of Cordova's history have given way over time to dispersal of housing over the land, a fishing economy involving all major groups and individuals in Cordova-Eyak, and strong emotional ties to the land and its resources, as well as to the sea, its salmon and other fisheries. The early pattern of Eyak intermarriage has continued over the recent past to the point where only two Eyak language speakers now live in Cordova-Eyak although there are many descendents of the Eyak in the community.

The now more numerous Aleuts have become the dominant Native cultural group around which other Native groups have tended to assimilate particularly insofar as the Russian Orthodox Church, since its relocation in about 1925 from Nuchek', has become the dominant cultural institution in the Eyak area. The recent addition of two Native profit-making corporations and the non-profit Bidarki Corporation, the Eyak Youth Center, and more recently the IRA Tribal Council introduce a number of organized groups into the social fabric of Cordova-Eyak which have added considerable structural complexity to the community in a relatively short period of time. Formerly most racial distinctions, if they were made at all, were made in the context of different styles of fishing, different church affiliations or different family residence patterns. The relative poverty of Native members of the community reinforced social segregation and visiting, to some extent, and probably inhibited much social participation outside of neighborhood, family and church activities. The seasonality of employment, with its reduced population in winter, provided membership for a small number of active fraternal organizations such as the Moose and Elks and Masonic organizations as well as active church groups, but these were most often attended by non-Native Cordovans.

In recent visits, both Native and non-Native respondents spoke nostalgically of the intimate and close relationships shared formerly and current strains on these relationships. All seem to agree that today most individual relationships have been strained by designation of exclusive group membership in Eyak, Tatitlek or Chenega Corporations and that this "sense of group" was not formerly distinguishable in social relationships.

The loss of tradition and the history of amalgamation of the Eyak descendants may be particularly difficult to integrate with the opportunities of the claims settlement. The sense of deep loss on the one hand coupled with immensely expanding opportunities on the other may produce a greater amount of stress in individuals than is the case with more culturally homogeneous groups. Certainly the social pressures on Eyak Corporation in particular are enormous at this time.

It was not until 1925 that there was a school for Native children in the Cordova-Eyak area, and this school was located in Eyak until it was closed in the 1950's to make way for integrated programs. Recent changes in school tracking, however, have resegregate children to some extent (according to Eya k informants) producing an underrepresentation of Native children in "gifted" programs. Since access to educational benefits is at the core of long term equality of opportunity in other aspects of life in Cordova-Eyak, it is not surprising that there is concern about these recent changes in the schools. While a grant has provided for classes in the Native Claims Settlement Act, cross cultural programs emphasizing Native cultural heritage appear to have been minimized at best.

The rapidity of changes occurring organizationally in Cordova-Eyak have been matched by slow progress in the conveyance of lands. From 1971 until 1978, no lands in the area were conveyed. Concern over hunting and fishing rights, disputes over annexation of Eyak lands within the City of Cordova in 1972, over gravel extraction on Eyak lands in 1976-77, and anxiety over anticipated land management policies have been referred

to the Courts for resolution or have caused tension in social relationships in the absence of land conveyance.

The U.S. Forest Service's role both in opposing the designation of Eyak as a village and more recently, in opposing the land exchange proposed by Chugach Region, Inc. to compensate the Region for excessive glacial designated lands, may have increased the polarization between Eyak Corporation and some other groups with which Forest Service representatives are affiliated - most notably the local Chamber of Commerce. On the other hand, for a community formerly enclosed within a recreational forest preserve to suddenly face enclosure by privately held land is itself cause for alarm, regardless of who the private landholder is.

In addition to the anxieties over the escalating costs of living, changes in the schools and increasing regulation of the fisheries, the land freeze highlighted the increasing Federal presence locally. This presence is further heightened by the designation of the Wrangell-St. Elais National Monument and by pending RARE II wilderness designations.

Our summer fieldwork in 1978 indicated a high level of tension and frustration in the Cordova-Eyak area, possibly calmed somewhat by recent Eyak conveyances. Eyak residents were relieved to talk about their frustrations and anxiety associated with long delay in land conveyances as well as concern over exclusion of local fishermen from the limited entry program among other matters. But talks locally were convincing evidence of extremely high tension and frustration levels accompanied by concern

for possible outlets for this level of frustration in such a small, isolated town.

SOCIAL STRESS INDICATORS

Like other communities along Alaska's coast, Cordova experiences a long winter, heavy rainfall and a rugged environment that limits outdoor activity and physical exercise, especially in winter. Recognizing that these conditions may encourage alcohol abuse and other symptoms of stress, Cordova community services was formed in the early 1970's to create integrated programs to deal with Cordova-Eyak's mental health, juvenile related crime, and recreation and health needs. In addition, Bidarki Corporation with its Eyak Youth Center has been actively involved in creating positive alternatives to street crime and boredom among young people in Corodva.

Table IV.3 shows the number of criminal arrests in the City of Cordova for the fiscal years 1974-75, 1976-77, and 1977-78. These police statistics indicate a rather high level of "active" crime such as assaults, disorderly conduct, and drug and alcohol related crime including homicide and suicide. It seems reasonable to ask how a community with this type of response pattern could adapt to rapid population growth insofar as rapid growth tends to be associated particularly with increasing crime and bar related incidents. (Baring-Gould and Bennett, 1975) If the level of interpersonal violence is already quite high, additional stress might further escalate these individual response patterns creating a rash of violent crimes. The most recent community survey already indicates that sentiment

against lenient treatment of offenders is high in Cordova (73 percent of those surveyed felt the court system is too lenient). The survey also indicates that 83 percent of those responding felt the City ordinance concerning curfew for children under 18 should be more strictly enforced. (Payne, 1978) Recently the Cordova City Council elected to offer a cash reward for individuals involved in drug traffic locally citing youth addiction as a major problem. (Cordova Times, January 18, 1979)

TABLE IV.3
NUMBER OF CRIMINAL ARRESTS FOR SELECTED CAUSES
1974-75, 1976-77 and 1977-78
City of Cordova

	1974	1976-77	1977-78
Homicide	1	1	1
Rape	2	0	0
Suicide or attempted suicide	1	0	4
Assault	16	68	9
Aggravated Assault	6	16	31
Burglary-Breaking & Entering	27	33	5
Larceny	121	218	14
Motor Vehicle Theft	26	19	13
Juvenile charges	*	17	*
Driving while intoxicated	*	19	31
Disorderly Conduct	*	*	36
Mentally Deranged	*	*	11
Total Arrests	*	130	221
Journal Entries		2785	3097

Source: Correspondence and statistics supplied by the Cordova Police Department. Due to lack of uniformity over the years in reporting, * indicates unavailable for that year from compiled statistics.

Talks in Cordova-Eyak indicate there is considerable concern with crime, alcohol and drug related issues locally and a slow by steady growth in the use of community services. However, attitudes and use of mental health services are still relatively conservative, suggesting that these crime statistics will continue into the future in the Cordova area. The history of railroading and fishing both carry with them an emphasis on hard drinking and hard living which to some extent, encourage physical solutions to interpersonal problems. At the same time, the peak fishing season encourages early participation by young people in summer fishing with accompanying high incomes to be disposed of locally. A youth culture which encourages experimentation with drugs and alcohol was mentioned by many informants as a concern hard to counteract particularly at the high school level.

One community leader referred to Cordova as a "mid-Victorian society serviced by a jet plane" implying that attitudes toward traditional childrearing practices and school responsibility to maintain traditions are strongly felt in Cordova-Eyak. Natives and younger residents tend to be more accepting of deviations from strict Christian norms while older residents tend to view deviation more critically. The recent changes in level of service provided in mental health, recreation and alcohol and drug counseling for example, seem to be much more readily accepted by Native and younger residents than among old time residents. One old timer remarked that in "the old days" everyone looked out for the children rather than turning it over to agency professionals. Another old timer said "when I was young we used to chop wood" for recreation,

referring to programs at the Youth Center. As these comments suggest, there is still considerable appreciation of traditional methods of child rearing and education in Cordova-Eyak and resistance to more socially organized forms of recreation. The frontier tradition of rugged individualism is still deeply imbedded in the norms of this community.

Table IV.4 shows the number of Alaska Psychiatric Institute (API) admissions for the community of Cordova by race, sex and age for the years 1976 through 1978. These statistics indicate a relatively constant rate of admission to the State's only in-patient Psychiatric Hospital of around 10 admissions per year from Cordova-Eyak. Table IV.5 indicates that the rate of mental health admissions to local community treatment facilities is high for both Native and younger residents, due in part perhaps to greater acceptance of these services by these groups.

In 1977 and 1978, Cordova showed relatively high incidence of alcoholism. A second diagnosis especially prevalent in Cordova-Eyak is "transient situational disturbances" which refers to adjustment problems associated with various life stages such as infancy, childhood, adolescence, adult life, and late life. Further analysis of these cases indicates that a third high category in Cordova-Eyak's Community Mental Health profile is "social maladjustment without psychiatric disorder" which includes marriage counseling, occupation counseling and other non psychiatric forms of local counseling efforts.

TABLE IV.4: A.P.I. ADMISSIONS, CORDOVA, 1976-1978

YEAR	RACE			AGE				SEX		
	W	N	O	5& Under	6-18	19-60	61& Over	M	F	TOTAL
1976	5	8	0	0	8	3	0	11	2	13
1977	9	4	0	0	1	12	0	10	3	13
1978	4	4	1	0	0	9	0	9	0	9

Source: Tabulated from special computer tabulations provided by Alaska Department of Health and Social Services, Mental Health Information System, October 4,. 1978.

TABLE IV. 5: COMMUNITY MENTAL HEALTH **AOMISSIONS** , CORDOVA , 1977-1978

Y EAR	RACE			AGE				SEX		
	W	N	O	5& Under	6-18	19-60	61& Over	M	F	TOTAL
1977	61	23	3	2	13	54	2	38	48	89
1978	79	36	4	1	38	79	3	60	62	122

Source: Tabulated from special computer tabulations provided by Alaska Department of Health and Social Services, Mental Health Information System, October 4, 1978.

The high incidence of difficult transitions during various life stages is consistent with local discussion of an increasing drug problem in Cordova-Eyak and concern over the difficult adolescent period locally. Our discussions in mid-1978, although not definitive, do suggest that parents often expect a degree of independence from teenagers that is difficult for local teens to cope with. There is a tendency to "run with the crowd" which if drugs and alcohol are popular, means dependence or experimentation with these substances early in teenage. Like their parents, a few total abstainers stand out from the high school social scene, but by and large youth norms dominate behavior during this period. Eyak Youth Center activities appeal largely to younger "Junior High" youth. High school age students were characterized by one minister as "faceless" indicating a high degree of conformity within the adolescent social group.

MEASURES OF SUCCESSFUL ADAPTATION

In spite of the recent growth of the fisheries and aquiculture and the continuing threat of oil pollution and tanker traffic in Prince William Sound, local and national political participation by key Cordova individuals has managed to solidfy the community behind its fishing tradition. In addition, they have encouraged designation of the Wrangell-St. Elias National Monument, Federal sponsorship of a wilderness ecosystem study in Prince William Sound, and tougher guidelines in Coastal Zone Management protecting the fisheries off Alaska's coasts. This leadership within Cordova was considerably solidified by events occurring since 1971 when the CDFU voted to oppose the location of the trans-Alaska pipeline terminal in Valdez and became subsequently involved in other battles for the fishery.

In spite of individual and community stresses resulting from the settlement of Native Land Claims and the subsequent land freeze (until conveyances to Eyak Corporation in 1978) there has been a growth in both the number of local organizations and in the range of their concerns within the Native population of Cordova-Eyak from 1971-1978. A study of ANSCA has been undertaken in the schools and youth and social services are now integrated and more responsive to the needs of the Native community. Steps have been taken toward greater political representation in a town which prides itself on democratic processes. The transcience of the "fish camp" still manifests many vestiges of the past however, and the traditional "independence" of the fisherman and his family seems to resist attempts to curtail his freedoms.

The "no growth" philosophy which some informants argued against in our discussions may be a local mechanism for integrating the changes which have already occured to Prince William Sound with the introduction of oil development in Valdez. The changes brought by Native claims will also take time and effort to integrate. For a community that values its "balance" these adaptations may take longer than a less isolated, less subsistence oriented community might require. The former tendency of Native residents to remain silent in the face of discrimination has rapidly been replaced in recent years by open denunciation of discriminatory practices, suspicion and in some cases open hostility mixed with discussions of cultural separatism. These new expressions of distance in a small town are difficult to integrate with the needs for harmony in social relationships. Yet their toleration is likely to lead to more honest relationships based on

the new organizational, social and political strengths of Native community members. The extent of this development, however, will depend on trends in Eyak itself including a willingness to forego suspicion and to begin developing the cooperative relationships necessary to assume the responsibilities for conveyed lands in the interest of the whole community.

SUMMARY

Cordova-Eyak is a community which anticipated both OCS development and location of a gas terminal of the "All-Alaska Gas Pipeline", then saw both of these plans change. The community was encouraged to plan for oil and gas development which did not occur at a time when the 200-mile Limit and Limited Entry were pressing concerns and Native ?and selections in the area were causing their own set of conflicts, concerns and tensions. These combined influences created considerable stress both individually and socially in the community. In the period 1976-1978, all of the municipal offices that would be associated with planning for major industrial development changed hands. The community became fragmented around these various land and development issues. Social relationships were strained. Concern for juvenile delinquency rose as did concern for drug and alcohol abuses. Out of this conflict and strain the community collectively supported a fisheries-based lifestyle and fought off opposing development. At the same time, frustration with Cordova's loss in diversion of the gas pipeline proposal and unsuccessful OCS exploration may have encouraged representatives in the town supporting designation of the Wrangells-St. Elias National Monument.

APPLICATION OF SOCIOCULTURAL CATEGORIES TO CORDOVA-EYAK

1. Community Isolation - This is a central characteristic of Cordova-Eyak and a key determinant of other sociocultural system relationships.

2. Coastal Location - Cordova-Eyak's coastal location is critical to its fisheries-based lifestyle.

3. Wilderness Setting - In Cordova-Eyak its wilderness setting is both the subject of controversy and a deeply emotional, embedded part of the sociocultural system.

4. Cultural Heterogeneity - Both historically and more recently, Cordova-Eyak appears to have attracted a relatively heterogeneous population. A history of amalgamation and cultural blending on a family level is combined with relatively staunch independence of position on a community level. Yet family disputes and divorces in particular separate former allies and increase social tensions in the community.

5. Community Size - Cordova-Eyak's size fluctuates with the salmon seasons, but appears to also be growing. This growth may itself be adding to community tensions and conflicts.

6. Cohesiveness - Cordova-Eyak is still a "fish camp" according to many residents. This designation implies that its frontier social structure is not highly integrated or cohesive at this time.

7. Openness of Communication Channels - Cordova-Eyak, like other communities of its size and complexity, has a few key "gatekeepers" who mediate incoming communications and represent the community on state-wide and national issues.

8. Degree of Political Integration with Higher Levels of Government - Cordova-Eyak is relatively isolated from regional, state and federal government structures, yet key leaders are outspoken advocates for the community on state and national fisheries-related boards and commissions.

9. Degree of Economic Integration with Regional and State Economy - Cordova-Eyak's integration within the fishing industry ties the community to Seattle-based and increasingly Japanese-based economic interests. These dependencies may inhibit rapid response to non-fisheries related growth.

10. Level of Local Unemployment - Unemployment is not a key concern in Cordova-Eyak at this time.

11. Community Age Distribution - Concern for juvenile crime and drug and alcohol abuse are related to concern for younger members of the community.

12. Educational and Skill Levels - Cordova-Eyak's predominant fishing economy puts a limit on locally available skills suitable to rapid response to energy development. Community isolation also may increase community skepticism against newcomers who come to fill

managerial positions, a pattern which appears to have occurred in the past few years.

13. Child-rearing Practices - Cordova-Eyak's concern with juvenile drug abuse first drew attention to this factor. While this concern can be noted, explanation is beyond the scope of this analysis.

14. Community Conflict Resolution Methods - This factor is central to an understanding of Cordova-Eyak's response to recent stressful land and resource decisions.

15. Community Mental Health - Cordova-Eyak's mental health profile includes considerable frontier-style interpersonal violence with drug and alcohol abuse also considered as problems.

V. NON-OCS BASELINE FOR CORDOVA-EYAK

INTRODUCTION

This chapter summarizes briefly conclusions reached in preceding chapters concerning the recent past and predictable future for Cordova-Eyak without further OCS development impacts save those expectations about and plans for activity at Icy Bay and Cordova with Lease Sale 39.

METHODS OF FORECASTING

Sociocultural Categories Applied to Cordova-Eyak

In the earlier description of the methodology used in this sociocultural systems analysis, 15 sociocultural categories were utilized as a framework guiding the analysis of the sociocultural systems of Cordova and Seward. Some of these categories became more prominant in the analysis of the on going sociocultural system of Cordova-Eyak, others were more prominant in the analysis of Seward's sociocultural system. Those categories which were utilized as variables in the analysis of Cordova-Eyak's social organization are those which are implicit in the non-OCS forecast which follows. They are:

- Community isolation
- Wilderness setting
- Cultural heterogeneity
- Degree of political integration with higher levels of government
- Degree of economic integration with regional and state economy

- Child rearing practices
- Community conflict resolution methods
- Community mental health

The first three variables are the central environment and cultural constraints around which Cordova-Eyak's current lifestyles revolve. The second two concern the structure around which these three dominant sociocultural variables interrelate and interdepend. The last three variables each are adaptations or methods of coping with stresses produced by the interaction of the dominant environmental constraints on the one hand and the political and economic structure on the other. They are the frontier adaptations of residents in one of Alaska's more remote coastal locations.

The following non-OCS forecast utilizes these variables implicity in projecting a future for Cordova-Eyak without further OCS development. The variables are treated explicitly in the OCS forecasts which are found in Chapter Six.

THE FUTURE OF FISHING

For the foreseeable future, fishing will continue to dominate the lifestyles and economy of Cordova-Eyak providing the bulk of employment opportunities and sustaining the economy and its people. Government employment, especially in local and fisheries related areas, should expand slightly, given stability or moderate growth of the fisheries. The new Coast Guard facility and helicopter service, expanded harbor facility recently approved by Alaska voters, and improved water and sewer financed in part by CEIP funding, should provide for improved utilities for the

community at its present or slightly increasing population size.

For the time being at least, it is hard to foresee non-fisheries related growth receiving sufficient support locally to seriously affect the size or composition of the population. At the same time, while the number of permit holders and local fishermen dependent upon fishing for a livelihood has risen with Limited Entry, it is likely that the continuing professionalization of fishing will further erode the catches and earnings of more marginal local fishermen, unless attempts are made to augment fishing skills. While estimates of non-local fishermen in Cordova waters vary considerably with the source, fears of non-local domination of the Cordova fishery continue.

NATIVE CLAIMS AND COMMUNITY CHANGE

With some of Eyak lands conveyed, plans will probably increase to begin the harvest of timber on Eyak lands on a sustainable yield basis. In addition to minor gravel sales and purchases of a local trailer court and a local Marina, timber sales (probably in "round log" form for sale overseas) are the clearest short term goals of Eyak Corporation. Discussions of home construction and sub-division of some of the Corporations' lands continue with the Corporation maintaining a conservative stance toward subdivision and allocation of lands among Corporate stockholders while sentiments among the stockholders appear to favor larger individual allocation.

Chugach Region is encouraging land planning and resource planning within

the region and its villages. The Region appears to be a moderating influence on the local village level concerning conflicts over development plans. The Region's contacts with local Cordova political leaders, for example, appear to be somewhat more amicable than the current relationship to Eyak Corporation. The Region's plans for Cordova, in the absence of land conveyances, is conservative. Recent acquisition of the Orca Cannery from New England Fish Company and interest in development are recent regional efforts to become more involved in Cordova-Eyak's major industry.

At the present time The Region appears sensitive to Cordova-Eyak's preference for fisheries related growth and has invested instead in Valdez and Seward, two towns more hospitable to other types of development at this time. Chugach Region too has invested in a number of properties in Anchorage.

While it is likely that timber harvests by Eyak, Chenega and Tatitlek Corporations will begin to be made, their sale over the next few years will probably not entail further expansion of local timber processing, at least in the near future.

With increasing political activity and participation by Native Cordova-Eyak residents one can anticipate pressure to improve the quality of the education system as it affects Native students. In addition, pressures to improve the health system delivery to Native members of the community and, perhaps pressure to expand job opportunities in the canneries and

among other local year round employers to include more Native employees can be expected.

Housing is a big concern among Native residents of Eyak, long held back in their desire for improved housing by the land freeze and, before that, by low incomes - a condition which has not been overcome by the conveyance of lands. Now that lands have been conveyed, one can expect several years of increasing focus on improving the housing stock of local residents as well as interest in alternative energy and other means of reducing the high cost of living locally. Unless costs of living in Cordova-Eyak can be reduced or incomes substantially increased, there will be little incentive to expand housing locally in the absence of sufficient demand.

Another increasing focus stimulated by the Native Claims Act and the increasing pride of local residents in their Native heritages may be a resurgence of interest in and active stimulation of cultural practices long dormant or suppressed by minority status and embarrassment. Musical and language traditions, dance and traditional foods all could experience a resurgence.

A trend in recent years, which will probably increase at least in the short term, will be the seasonal or permanent migration of Native Cordova-Eyak residents to Anchorage for jobs, shopping or visiting. In contrast to the majority of non local fishermen who migrate to and from the Seattle area to fish in Cordova waters, most migration by Natives

appears to be to the Anchorage area although migrations to Seattle also are reported.

THE FUTURE OF THE COPPER RIVER HIGHWAY

There appears little likelihood of full-scale completion of the Copper River Highway without substantial incentive from outside development demands. Given the continuing predominance of fishing as Cordova-Eyak's economic mainstay, the costs of completion of the Copper River Highway appear substantial while the benefits are harder to justify beyond local pressure. Designation of the Wrangells-St. Elias National Monument would appear to further delay pressure to complete the Highway except on the local level.

COAST GUARD AND OIL TANKER TRAFFIC

In the absence of a major oil spill, current conflicts over crab fishing along the routes of oil tankers in Prince William Sound appear to be the major concern currently in Cordova-Eyak. Efforts to improve oil spill contingency planning and safeguards in the event of an oil spill continue however, and fears associated with oil-fishery conflicts are not far beneath the surface of current fisheries related planning and discussion.

PRINCE WILLIAM SOUND CONTEXT

While the local newspaper maintains a branch office and newspaper in Valdez, and while the Valdez office of the newly designated Prince William Sound Community College has authority over University extension courses

offered in Cordova, other contacts between the two communities at the mouth of Prince William Sound appear to be strained by their diverging lifestyles and the potential conflicts associated with expansion of Valdez as the site of the Alpetco refinery. As Valdez becomes more industrially oriented and its population increases, the urban industrial lifestyle and world view increasingly comes to dominate the area particularly in the light of Valdez' favorable tax base and the ability of key leaders to travel on her behalf in advocating for political and economic positions favored in Valdez. The isolation of communities along the Gulf and their vulnerability to economic domination from outside the community is keenly understood by their local leaders. Ability and resources to seek and find new industrial opportunities for Valdez are now within that community's means and cause concern not only in Cordova with fisheries but also to a lesser extent in Seward and Kenai Peninsula towns competing with Valdez for industrial opportunities. Discussions along the Coast with community leaders show a mixture of admiration and concern with the opportunities Valdez now has accompanied with envy at some of the local services now affordable by her population.

Valdez' recent vote. (April 10, 1979) on harbor expansion plans includes considerable benefits in reduced freight charges to Cordova as well and may add to pcsitive social relationships between the communities recently strained by oil-fishing conflicts.

Oil spill planning and a National Oceanographic and Atmospheric Administration (NOAA) sponsored wilderness ecosystem research effort (the

Prince William Sound Marine Ecosystem Project) have been recent attempts to provide a forum for the sharing of regional concerns and have been attended by residents of Valdez and Cordova as well as by residents of Whittier, Tatitlek, Chenega and Eyak.

Whittier, if provided with road access to Anchorage in the near future, could become a significantly greater tourist locale with accompanying shifts of tourist activity south to Prince William Sound and thereby to the Cordova area perhaps eventually impacting the fisheries in the Sound as well.

TIES ALONG THE COAST

It is likely that the significant participation in Alaska's fisheries in the Cordova area will continue in the foreseeable future and may in fact increase given rising competitive pressures with the Limited Entry program.

With the continuing lack of highway contact with southcentral Alaska, Cordova-Eyak residents will continue to be dependent upon Valdez, and to a lesser extent Seward, through the Ferry System for road transportation links to Anchorage. Primary dependence will continue to be on air transportation to Anchorage or south to Juneau and Seattle. Like communities along the southeastern coast, air links to Seattle and a fishing season that encourages migration south will probably continue the strong cultural ties to the Seattle area now felt by Cordova residents.

With the further industrial development of Valdez, ties to the less oil related regions of Southeast Alaska may increase.

IMPLICATIONS

The continued dominance of the local fishing industry and the moderate growth of Native economic activity in Cordova-Eyak with timber and other extractive activities should assure Cordova-Eyak a steady population, and, perhaps slight growth and stabilization of population over the foreseeable future.

It is anticipated that the lack of available land for housing and the tendency for fishermen in particular to locate in the Seattle area in off-season will continue to create obstacles to year round residence by a significantly large additional population. Opportunities in Valdez during construction of the Alpetco facility might provide enough cash for a few local residents to afford new housing as would continued high fishing incomes, but the tendency to forego community improvements in spite of good individual or family fortunes is likely to continue.

Park Service activity associated with the designation of Wrangell s-St. Elias National Monument might add a few additional jobs to the Cordova-Eyak economy as might increased tourism generated by expansion of the ferry system or air transportation system. At this time, significant additions in tourist activity appear to be slight.

EFFECTS OF LEASE SALE 39

Expectations and anticipations associated with Lease Sale 39 had a significant and, for the most part, negative effect on municipal functioning in Cordova-Eyak during the years 1976-78. The town was forced to consider plans for rapid expansion of the townsite and utility infrastructure at a time when fisheries expansion was a predominant preference as well as a continuing trend. The town and its residents were also badly polarized by the combined effects of settlement of native claims and more recent land related issues, such as President Carter's designation of St. Elias-Wrangells National Monument and pending Rare II decisions in Chugach National Forest.

Community attitudes toward all non-fisheries related growth solidified around opposition led by the local union who with additional seats on Council became the dominant community voice. The development of fisheries and encouragement by the present State administration including loan programs, salmon enhancement programs and other incentives, far outweighed the benefits to be seen from OCS development in the minds of many local Cordova-Eyak residents, particularly after initial news stories began to encourage opposition by fishermen.

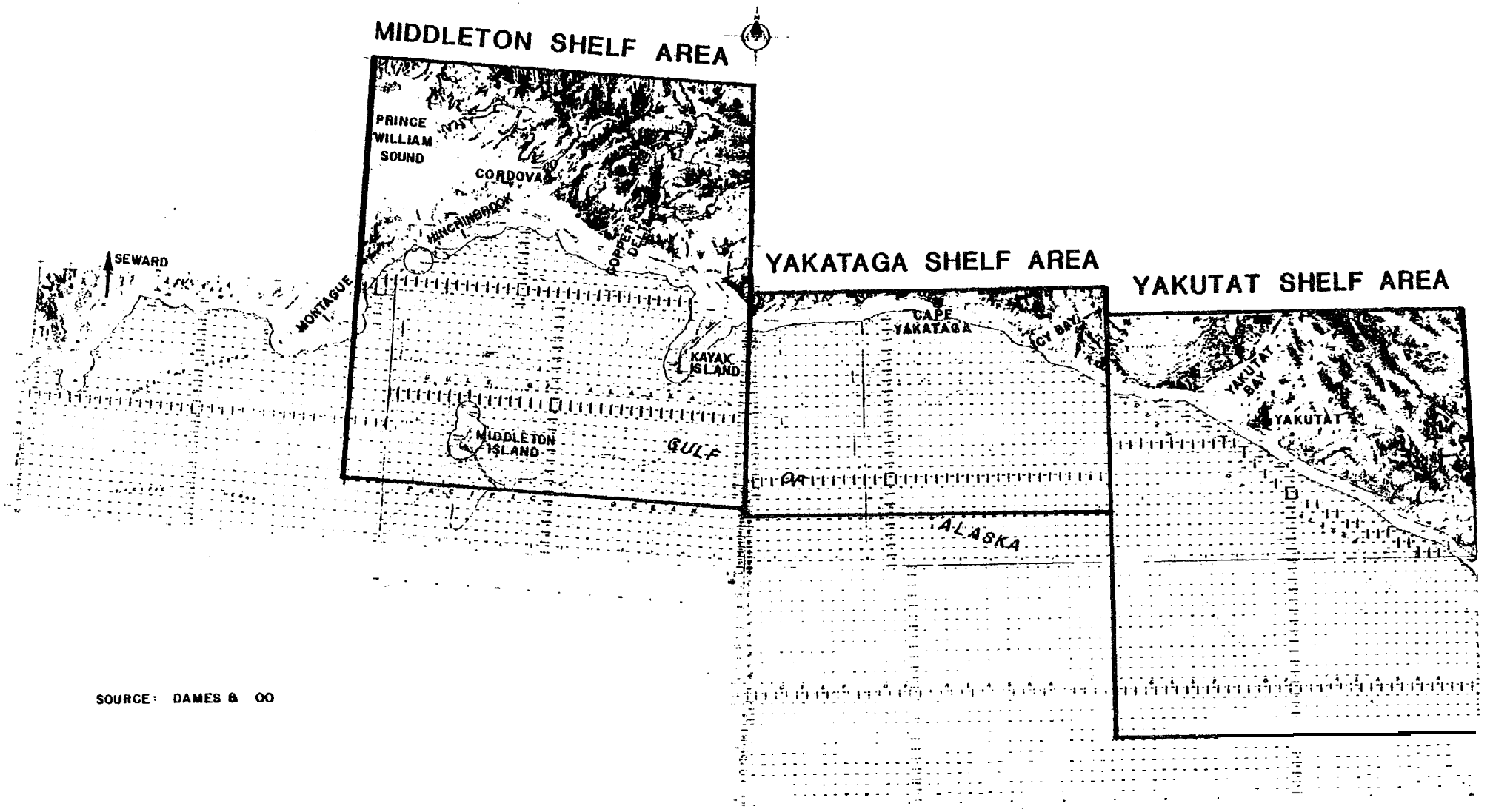
While CEIP funding of sewer and water improvements for the City will benefit fisheries related growth as well as prepare for potential OCS induced growth, funds to compensate Cordova-Eyak for the rapid turnover in municipal management induced by these changes needs to be seriously considered.

VI. THE OCS SCENARIOS FOR CORDOVA-EYAK

INTRODUCTION

This chapter presents the detailed methodology and projections of potential sociocultural impacts associated with three Outer Continental Shelf (OCS) petroleum development scenarios on the community of Cordova-Eyak. These scenarios were developed by Dames and Moore, based on oil and gas reserve estimates derived from the U.S. Geological Survey for gas reserves on the Middleton, Yakataga and Yakutat Shelves. These areas have been identified as the proposed basin for the Gulf of Alaska Lease Sale No. 55, currently scheduled for June of 1980. This sale is a second generation lease sale, having followed earlier exploratory drilling on leases sold in April 1976, as part of Gulf of Alaska OCS Lease Sale No. 39.

Based on U.S. Geological Survey estimates, Dames and Moore project that under the 95% probability case (low case) no oil or gas reserves are anticipated in this basin. The high (5% probability) indicates 4.4 billion barrels of oil and 13.0 trillion cubic feet of gas reserves for the basin. Statistical means for both oil and gas reserves indicate 1.4 billion barrels of oil and 5.0 trillion cubic feet of gas reserves. Out of these resource estimates, three scenarios are presented for the study area: 5% probability, statistical mean resource levels and the 95% probability of no commercial discoveries resulting in exploration only.



LOCATION OF STUDY AREA

The resource estimates on which these scenarios are based are listed below:

	Low Case 95% Probability	Statistical Mean	High Case 5% Probability
Oil (billions of barrels)	0	1.4	4.4
Gas (trillions of cubic feet)	0	5.0	13.0

Source: Dames and Moore, March 1979

In addition to the scenarios constructed by Dames and Moore, the sociocultural systems analysis of Cordova-Eyak is dependent upon the additional analysis by Alaska Consultants, Inc., of the socioeconomic and physical systems of these two communities. Utilizing the Dames and Moore scenarios as their guide to on-site construction and other characteristics associated with differing levels of OCS development, Alaska Consultants produced labor force and population forecasts for each of the three scenarios. These forecasts provide a framework for assessing the magnitude of community sociocultural impacts to be anticipated with each separate scenario, and in conjunction with projections about types of development expected and timing of exploration and development by Dames & Moore are the core constraints around which the analysis is ordered. Simultaneous changes occurring which might influence sociocultural response (question 5 below) are provided by the assumptions used in the ISER statewide and regional impacts analysis, which provide a logical basis for

projecting non-local development which might in turn add to population and economy in these two towns.

To summarize the different levels of analysis which lead to sociocultural projections for each of the three scenarios, five questions need to be asked. Each of these questions can be answered within the constraints of the set of assumptions and standards used by the sociocultural systems analysis itself or by other studies within the socioeconomic studies program to logically project sociocultural change associated with each of the three OCS scenarios and the non-OCS case. The five questions are as follows:

1. What are the most important changes likely to occur in the sociocultural system as a result of different levels of anticipated development?

This question directs attention to the earlier analysis of the on-going sociocultural system provided at the beginning of this report and the ' identification of key sociocultural variables for each town.

2. What are the resources of the sociocultural system which it can use to respond?

This question also directs attention to the earlier analysis of the on-going sociocultural system and the identification of key sociocultural variables for each town.

3. What are the obstacles or limitations within the sociocultural system which inhibit successful response?

This question too finds its response in the earlier analysis of the on-going sociocultural system and identified key sociocultural variables (see

discussion below).

4. What are the major constraints outside the sociocultural system which, however, influence sociocultural response?

For the purposes of this study, these constraints are delimited by the ISER state-wide and regional projections, the Alaska Consultants population and labor force projections, the Alaska Consultants population and labor force projections and the Dames and Moore scenarios for the proposed Lease Sale 55 in the Northern Gulf of Alaska.

5. What simultaneous changes occurring with OCS or without OCS development may influence response?

Again, for the purposes of this study, only those simultaneous changes treated in ISER assumptions which are the basis for state-wide and regional econometric projections are used in the present analysis.

For each of the scenarios which follow, each of these five questions will be asked and answered, within the limits of the standards and assumptions of studies used within the socioeconomic studies program and the analysis of the sociocultural system which has already been completed. The reader must keep in mind that the scenarios and subsequent analyses dependent upon them are in many senses hypothetical cases around which planning decisions need to be made within a logical framework of potential occurrence. Particularly with regard to sociocultural response, one at best attempts to project the range of responses the community is likely to experience in the process of responding to each hypothesized level of development. Yet the earlier analysis and the methods and standards used in projecting the non-OCS

case for each community provide a framework for logical analysis of each of the three OCS cases.

METHODS OF FORECASTING

Sociocultural Categories Applied to Cordova-Eyak

In the earlier description of the methodology used in this sociocultural systems analysis, 15 sociocultural categories were utilized as a theoretical framework guiding the analysis of the sociocultural systems of Cordova-Eyak. Some of these categories became more prominant in the analysis of the on-going sociocultural system of Cordova, others were more prominant in the discussion of Seward's sociocultural system. Therefore, in the process of projecting the non-OCS case for each of these communities, only the most critical variables utilized in the on-going analysis of these two towns were actually used in assessing a non-OCS case. The process of understanding that occurred during fieldwork and analysis of the on-going social organization of each town focused attention on a few key variables for each town which were critical to an understanding of its most recent response to OCS Lease Sale 39 and to other recent changes which have impacted each community. Utilizing this understanding of the key variables critical to each community, a projection was made of a most likely future for the community without further OCS development. This process will be repeated for each of the three OCS scenarios.

THE OCS SCENARIOS

The Ninety-Five Percent Case (Low Case)

Dames and Moore define this scenario as the "exploration only" scenario in which a high level of exploration activity is followed by no major finds sufficient to support a development phase. This scenario projects that 28 wells would be drilled with most interest centered around the Yakutat Shelf and a lesser number of wells drilled on the Middleton and Yakataga Shelves.

Population

Alaska Consultants indicate that under this scenario, Cordova area population would increase from 3,014 in 1981 to 3,076 in 1982, 3,126 in 1983 and 3,162 in 1984. After 1984, the population forecasts for this scenario would be the same as for the non-OCS case. In their base case forecast, assuming a ratio of two to one for population to employment in the Cordova area, they projected area-wide population of 3,521 in the Corodva area by the year 2000. These forecasts are presented in Tables one and two .

Employment under this scenario is forecast to increase by 11 additional jobs over the 1982-1983 period, fading by 1985 after initial exploration is completed. As Alaska Consultants has noted, this level of impact both to the economy and to the community, in terms of an anticipated additional 22 people residing in Cordova, is almost imperceptible. The base case forecast for the rest of the century indicates a relatively

TABLE V1.1

FORECAST OF EMPLOYMENT AND POPULATION
95 PERCENT PROBABILITY RESOURCE LEVEL SCENARIO
CORDOVA AREA
1981 - 2000

INDUSTRY CLASSIFICATION/YEAR	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
COMMODITY PRODUCING INDUSTRIES	732	743	753	765															
Agriculture, Forestry and Fisheries	(418)	(2111		430)															
Mining	(2)			2)															
Manufacturing	(289)			297)															
Contract Construction	23)			24)															
DISTRIBUTIVE INDUSTRIES	371	387	398	400															
Transportation, Communications and Public Utilities	(80)	(86)	(87)	(81)															
Trade	(161)	(166)	(171)	(175)															
Finance, Insurance and Real Estate	34)	(35)	(36)	(36)															
Service	I 96)	(100)	(104)	(108)															
GOVERNMENT	404	408	412	416															
TOTAL EMPLOYMENT	1,507	1,538	1,563	1,581															
TOTAL POPULATION - CORDOVA CITY	2,455	2,506	2,547	2,576															
CORDOVA AREA	3,014	3,076	3,126	3,162															

1985 - 2000 is same as Non-OCS Case

Source: Alaska Consultants, Inc. Table 35, March, 1979.

TABLE V1.2

FORECAST OF EMPLOYMENT AND POPULATION
CORDOVA AREA
NON-OCS CASE
1978 - 2000

1IUNJSIH% CLASS I F ICAT I0N/YEAR	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
COMMODITY PRODUCING INDUSTRIES	699	721	722	732	143	753	765	777	190	002	016
Agriculture, Forestry and Fisheries	(400)	(406)	(412)	(418)	[illegible]	[illegible]	(443)	(450)	[illegible]	[illegible]	[illegible]
Mining	(0)	(2)	(2)	(2)	[illegible]	[illegible]	(3)	(3)	[illegible]	[illegible]	[illegible]
Manufacturing	(277)	(281)	(285)	(289)	[illegible]	[illegible]	(306)	(311)	[illegible]	[illegible]	[illegible]
Contract Construction	(22)	(22)	(23)	(23)	[illegible]	[illegible]	(25)	(26)	[illegible]	[illegible]	[illegible]
DISTRIBUTIVE INDUSTRIES	316	345	355	365	376	387	391	407	418	431	443
Transportation, Communications and Public Utilities	(72)	(73)	(74)	(75)	(76)	(77)	(78)	(79)	(80)	(81)	(82)
Trade	(146)	(150)	(155)	(160)	(165)	(170)	(175)	(180)	(185)	(191)	(197)
Finance, Insurance and Real Estate	(33)	(34)	(34)	(34)	(35)	(36)	(36)	(36)	(37)	(38)	(38)
Service	(85)	(88)	(92)	(96)	(100)	(104)	(108)	(112)	(116)	(121)	(126)
GOVERNMENT	346	356	359	404	400	412	416	420	424	428	432
TOTAL EMPLOYMENT	1,301	1,422	1,436	,501	1,527	1.552	1,578	1,604	1,632	1,661	1,691
RATIO OF POPULATION TO EMPLOYMENT	2	2	2	2	2	2	2	2	2	2	2
TOTAL POPULATION - CORDOVA AREA	2,762	2.044	2,072	3.002	3,054	3,104	3,156	3,208	3,264	3.322	3,382
CITY OF CORDOVA	2,250	2,317	2,340	2,446	2,488	2,529	2,571	2,613	2.659	2.706	2.755

CLASSIFICATION/YEAR	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
COMMODITY PRODUCING INDUSTRIES	020	04 I	054	067	000	093	907	920	935	949	963	979
Agriculture, Forestry and Fisheries	[illegible]	[illegible]	(492)	[illegible]	[illegible]	[illegible]	(514)	(522)	(530)	(538)	[illegible]	(554)
Mining	[illegible]	[illegible]	(5)	[illegible]	[illegible]	[illegible]	(6)	(6)	(7)	(7)	[illegible]	(8)
Manufacturing	[illegible]	[illegible]	(341)	[illegible]	[illegible]	[illegible]	(356)	(361)	(366)	(371)	[illegible]	(383)
Contract Construction	[illegible]	[illegible]	(29)	[illegible]	[illegible]	[illegible]	(31)	(31)	(32)	(33)	[illegible]	(34)
DISTRIBUTIVE INDUSTRIES	456	468	486	506	525	546	567	590	615	639	6(I5	691
Transportation, Communications and Public Utilities	(83)	(84)	(85)	(86)	(87)	(88)	(89)	(90)	(91)	(92)	(93)	(94)
Trade	(203)	(209)	(217)	(226)	(235)	(244)	(254)	(264)	(275)	(286)	(297)	(309)
Finance, Insurance and Real Estate	(39)	(39)	(40)	(41)	(41)	(42)	(42)	(43)	(44)	(44)	(45)	(46)
Service	(131)	(136)	(144)	(153)	(162)	(172)	(182)	(193)	(205)	(217)	(230)	(244)
GOVERNMENT	436	440	444	440	452	451	462	467	472	477	4U2	489
TOTAL EMPLOYMENT	1,720	1.749	1.704	1,821	1,05?	1,896	1,936	1,977	2,022	2,065	2,110	2,161
RATIO OF POPULATION TO EMPLOYMENT	2	2	2	2	2	2	2	2	2	2	2	2
TOTAL POPULATION - CORDOVA AREA	3,440	3,498	3,568	3,642	3,714	3,794	3,872	3,954	4,044	4.130	4,220	4,322
CITY OF CORDOVA	2,002	2,850	2,907	2.967	3,026	3,091	3,154	3,221	3,294	3,364	3,438	3,521

Source: Alaska Consultants, Inc. Table 14, March, 1979.

steady 2% growth rate in the economy accompanied by an anticipated additional population of approximately 4%.

As Alaska Consultants note, this virtual lack of impact in either population or economy during exploration will be accompanied socially by a period of uncertainty, not unlike earlier anticipations associated with current leases sold under Lease Sale 39 in the Northern Gulf. (Alaska Consultants, March 1979). Yet, in the case of Cordova, the extended period of anticipation experienced with Lease Sale 39 also included anticipation associated with Point Gravina siting of an all-Alaska gas line, completion of the pipeline terminus in Valdez, major shifts in land status under the Alaska Native Claims Settlement Act and major changes in fisheries management. It is doubtful whether these life and livelihood changes which all occurred in Cordova over the 1970-1978 period would be approached again under this OCS scenario.

It is more likely that the changes already set in motion during the 1970-1978 period will themselves dominate other anticipations concerning potential OCS exploration efforts in the Gulf, dwarfing them by comparison.

Structure of Employment

Under the 95% scenario for Cordova-Eyak, Alaska Consultants assume that employment that does result in Cordova-Eyak itself will be generated by marine survey vessels docked in Cordova-Eyak conducting geophysical and geological surveys on the Middleton and Yakataga Shelves along Cordova 's coastline. The nature of this employment and its comparability with

Cordova's fishing and sea-oriented lifestyles should provide little disruption within the Cordova-Eyak area.

Only in the case of a major oil spill would Cordova's future between 1981 and the year 2000 under this scenario resemble the degree of conflict and community disruption the community has already recently experienced, especially between 1974 and 1978. Without such a catastrophic event, the sociocultural projection for Cordova-Eyak under the 95% scenario is essentially that projected under the non-OCS baseline case described earlier in Chapter Five.

Sociocultural System Variables

The factors discussed in the earlier methodology section were utilized in the base case as variables in a dynamic analysis of conflict and change in Cordova-Eyak over the past few years. The subsequent baseline forecast projected this earlier analysis of the on-going social organization of Cordova-Eyak into a most probable future without further OCS development.

The most important sociocultural variables in this analysis of Cordova-Eyak were the following:

- Community isolation
- Wilderness setting
- Cultural heterogeneity
- Degree of political integration with higher levels of government

- Degree of economic integration with regional and state economy
- Child rearing practices
- Community conflict resolution methods
- Community mental health

The first three variables account for some of the stress associated with recent changes which Cordova-Eyak is now or has recently encountered - they are the central environmental and cultural constraints around which this community's predominant lifestyles revolve. The second two concern the structure around which these three dominant sociocultural variables interrelate and interdepend. The last three variables each are adaptions or methods of coping with stresses produced by the interaction of the dominant environmental constraints on the one hand and the political and economic structure on the other. In a sense they are alternatives to the security provided by more "urban" economic and political structures - individual and social alternatives needed to cope with changes on-going in the first five variables in Corodva-Eyak or in other words, adaptations to life on one of Alaska's frontiers.

This set of variables and their interactions one with another are not upset by minor shifts in employment as is indicated in the 95% scenario. Their structural integration, as outlined in the preceding analysis and subsequent forecast in the baseline case, is still maintained in this case. Only a significant change in one of the variables, in this case employment or population, might change the structure of interdependence constructed for the baseline case.

MEAN OCS SCENARIO

Dames and Moore define this scenario as the "statistical mean resource level scenario" in which an estimated 1.4 billion barrels of oil and an estimated 5.0 trillion cubic feet of gas are discovered and developed. These resources are allocated to the Middleton Shelf, Yakataga Shelf, and Yakutat Shelf areas as follows:

	Oil (MMbbl)	Gas-Associated (Bcf)	Gas-Non-Associated (Bcf)
Middleton Shelf	350	250	1,000
Yakataga Shelf	---	---	---
Yakutat Shelf	1,050	750	3,000
	1,400	1,000	4,000

The resources are distributed on the assumption that five oil fields will be discovered and developed on the Yakutat Shelf; one oil field and one gas field are discovered on the Middleton Shelf and no commercially developable resources are discovered on the Yakataga Shelf. For Middleton Shelf resources, development on the southwestern end of Hinchinbrook Island near Cordova includes an oil terminal and LNG plant for shipment to the U.S. West Coast. (Dames and Moore, March 1979).

Population

Alaska Consultants indicate that under this scenario, Cordova area population will grow from 3,010 in 1981 to 3,240 in 1985. From 1985 through 1991, employment in construction camps located in the Cordova area would

boost population from 3,318 in 1986 to a peak of 4,098 in 1990, dropping off in 1992 and subsequent years with completion of terminal facilities on Hinchinbrook Island. By the year 2000, population in the Cordova area would reach 5,000 under this scenario. (Table 3)

Structure of Employment

Table 4 presents the Alaska Consultants forecasts for the phases of OCS exploration, development and operations for this scenario.

The years 1986 through 1991 would be the years under this scenario in which direct employment impacts in the Cordova area would boost total population significantly, yet under this scenario, helicopter crews ranging from 4 in 1981 to 15 in 1985 could be visable in the Cordova area. By 1986, with a development phase, additional helicopter crews, on-shore pipeline construction crews and oil terminal construction crews would begin to significantly impact Cordova-Eyak adding a total of 185 workers to the Cordova area in 1987, 286 workers in 1988, 179 workers in 1989, 493 workers in 1990, and 723 workers in 1992 with peak construction and early oil terminal operations crews, reducing to about 200 oil and gas terminal operators from 1993 to the end of the century. (Table 4)

While this level of added population and basic change in the economy of Cordova-Eyak itself would no doubt have serious consequences for the town and its ability to effectively function, the scenario assumptions predict construction of both the oil and gas terminals on Hinchinbrook

TABLE V1.3

FORECAST OF EMPLOYMENT AND POPULATION
MEAN PROBABILITY RESOURCE LEVEL SCENARIO
CORDOVA AREA
1981 - 2000

INDUSTRY CLASSIFICATION/YEAR	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
COMMODITY PRODUCING INDUSTRIES	112	743	?53	765	777	959	1,088	849	1,175	1,409	1,064	915	93'!	941	961	979	994	I ,000	,022	1,030
Agricul lure, Forestry and F i sheries	418	424	430	436	443	450	457	464	471	478	485	492	499	506	514	522	530	538	546	554
Mining	2	2	2	3	3	3	9	17	18	10	11	11	16	17	17	22	23	23	23	24
Manufacturing	289	293	297	301	306	311	316	324	329	334	362	372	378	383	388	393	398	403	409	415
Contract Construction	23	24	24	25	25	195	306	44	357	587	206	40	41	41	42	42	43	44	44	45
DISTRIBUTIVE INDUSTRIES	369	383	398	410	423	441	450	660	694	712	732	150	770	19 I	812	836	861	005	911	939
Transportation, Communi cat ions and Public Utilities	79	82	87	90	94	98	91	263	269	273	278	279	280	281	202	203	284	205	206	207
1 rade	160	166	171	176	181	187	195	217	227	235	242	250	259	260 I	.270 I	289	300	311	322	334
F inance, Insurance and Real Esta te	34	35	36	36	36	38	39	43	45	45	46	46	47	48	48	49	50	50	51	52
Service	96	100	104	108	112	118	125	145	153	159	166	175	184	194	204	215	227	239	252 H	266
GOVERNMENT	404	408	412	416	420	427	434	460	469	475	478	480	485	490	495	501	506	511	516	523
TOTAL EMPLOYMENT	I ,505	1,534	1,563	1,591	1.620	1,027	1,972	1,977	2,338	2,596	2.274	2,145	2,189	2,220	2,260	2.316	2,361	2,404	2,449	2,500
Employees Res Ident in Construction Crops	(--)	(--)	(--)	(--)	(--)	(}60)	(210)	(0)	(319)	(547)	(107)	(--)	(--)	(--)	1	--)	(--)	(-.)	(.-)	(--)	(--1
TOTAL POPULATION -																				
CORDOVA CITY	2,452	2,499	2,54?	2,592	2,639	2,?03	2,760	3,200	3,209	3,338	3,433	3,495	3,566	3,632	3,695	3,773	3,847	3.920	3,990	4,073
CORDOVA AREA	3,010	3,060	3,126	3,1132	3,240	3,310	3,300	3,930	4,030	4,090	4,214	4,290	4,310	4,458	4,536	4,632	4,722	4,012	4,090	5,000

Source: Alaska Consultants, Inc. March, 1979, Table 98.

TABLE V1.4

ESTIMATED DIRECT ONSHORE ONSITE EMPLOYMENT BY TASK
MEAN PROBABILITY RESOURCE LEVEL SCENARIO
NORTHERN GULF OF ALASKA - CORDOVA AREA
? 981 - 2000

Year	Service Base	Helicopter Service		Service Base	Onshore Pipeline	Oil Terminal	LNG Plant	Pipe	Oil Terminal	LNG Plant	Total Onshore
		Exploration	Development Production	Construction	Construction	Construction	Construction	Coating	operations	Operations	Oils ite
1981		4									4
1982		6									6
1983		10									10
1984		12									12
1985		15									15
1986		10			12	156					185
1987		5				278					286
1988	5		5			0			160		179
1989	5		5		12		307		160		493
1990	5		5				547		160		723
1991	10		10				167		160	22	369
1992	10		10						160	28	208
1993	10		10						160	28	200
1994	10		10						160	28	208
1995	10		10						160	28	208
1996	10		10						160	28	208
1997	10		10						160	28	200
1998	10		10						160	28	208
1999	10		10						160	20	200
2000	10		10						160	20	200

Source: Alaska Consultants, Inc. March, 1979, Table 99

TABLE V1.5

ESTIMATED OFFSHORE ONSITE EMPLOYMENT BY TASK
MEAN PROBABILITY RESOURCE LEVEL SCENARIO
NORTHERN GULF OF ALASKA - CORDOVA
1981 - 2000

Year	Survey	Rigs	Platforms		Supply/Anchor/Tug Boats			Platform Installation	Offshore Pipeline Construction	Total Employment Offshore Onsite
			Development Drilling	Operations	Exploration	Development	Production			
1981		46								46
1982										71
1983		1::								118
1984		140								140
1985		168								168
1986		140						233	21	394
1987		48	56					234		338
1998			1 00	16			6			122
1989			112	16			6	233	39	406
1990			61	16			6	234		317
1991				32			13			45
1992				32			13			45
1993				57			13			70
1994				57			13			70
1995				57			13			70
1996				82			13			95
1997				82			13			95
1998				82			13			95
1999				82			13			95
2000				82			13			95

source: Alaska Consultants, Inc., March, 1979, Table 100

Island, away from the Cordova townsite. This assumption alters somewhat the analysis of sociocultural impacts for Cordova-Eyak itself, and adds, in addition, the impacts on the Chugach Region of potential destruction of an early village site, since the abandoned village of Nuchek appears to be close to the Hinchinbrook development sites.

In addition to the estimates of direct onshore onsite employment and population associated with this scenario, Alaska Consultants also provide estimates of offshore onsite employment for the Cordova area, associated with the stages of OCS exploration, development and operations. These estimates are shown in Table 5.

In addition to onshore workforces ranging from a low of 4 in 1981 to a high of 723 in 1991, offshore employment in the Cordova area would add close to 50 employees during 1981, rising to a peak of 406 in 1989, with the combined rig employees and platform installation crews employed during early development of the oil resources. From 1991 to the year 2000, approximately 100 offshore workers would be located in the Cordova area.

Again, with offshore workers, Alaska Consultants assume that most of the servicing of supply boats and other service base functions will be performed out of either Yakutat or Seward, since both of these communities have served in this capacity under Lease Sale 39 exploratory drilling. Yet they do point out that under this scenario, perhaps the most critical

problem Cordova-Eyak will face is the challenge of absorbing 675 new residents (approximately 15% of the permanent population) from 1990 to the year 2000 (Alaska Consultants, March 1979).

Sociocultural System Variables

The most important sociocultural variables in the analysis of Cordova-Eyak were the following:

- Community isolation
- Wilderness setting
- Cultural heterogeneity
- Degree of integration with higher levels of government
- Degree of integration with regional and state economy
- Child rearing practices
- Community conflict resolution methods
- Community Mental health

Each of these variables will be treated below, taking into account the population and employment forecasts provided by Alaska Consultants and Dames and Moore scenario projections concerning location of employment facilities siting.

Community Isolation - Under the Mean probability resource level scenario, Cordova's isolation will be significantly changed. Starting with small helicopter exploration crews, and escalating with the addition of construction crews to build the oil terminal and LNG plants on Hinchinbrook Island, the permanent settlement of close to 200 operations personnel to man the oil terminal and LNG plant on Hinchinbrook Island will inevitably reduce the community of Cordova-Eyak's isolation from other

communities, particularly those in the Southcentral region. Not only will air passengers and helicopter crews increase, but telephone and other forms of communication necessary to coordinate housing facilities on the Cordova mainland with work schedules and transportation to and from the oil terminal and LNG terminal will also by necessity increase sharply. Greater communication with and through Anchorage would also increase with addition of oil-related industrial activity in Cordova-Eyak and its environs.

Wilderness Setting - The increases in population in the Cordova area under this scenario would alone contribute to alteration of Cordova-Eyak's wilderness setting somewhat. More significant perhaps is the range and magnitude of development foreseen on Hinchinbrook Island, and other offshore onsite crews involved in platform installation, pipeline construction and platform operations offshore. Combined with anticipated increases in pipeline tanker traffic during this period and the new construction of Valdez' dock facilities and perhaps the Alpetco refinery, offshore oil development activities could significantly alter the wilderness setting upon which Cordova-Eyak's lifestyle is dependent. In the event of a major oil spill from any of these sources, Cordova-Eyak's primary livelihood could be seriously jeopardized.

Cultural Heterogeneity - This variable too would show significant change under the Mean resource level scenario. From a predominantly fishing community, Cordova-Eyak would grow to include approximately 15% of its population employed by oil and 'gas resource companies, with their families. Because of the nature of the oil and gas industry, these

families would no doubt be significantly different in lifestyle, educational levels and orientations toward the environment, community facilities and services than the current population of Cordova-Eyak. While Cordova-Eyak might be able to relatively easily accommodate the helicopter crews stationed in the area, the construction workforces building the oil terminal and LNG plant might be less easily accommodated. Their large numbers alone and the likelihood that many would be non-residents of Cordova-Eyak suggest more stress on the community.

Particularly with the operations crews assigned to the permanent facilities, the contrast with current local Cordova-Eyak residents could be quite sizable and difficult to accommodate. The technical expertise and industrial orientation of these workers and their families is in sharp contrast to the idiosyncratic and individualistic lifestyles of many in the Cordova-Eyak area. These differences in lifestyle, education, skill levels and orientations to their environment also tend to correlate with rather "urban" demands on local services. In the case of Cordova-Eyak, these demands might also produce significant stress on municipal officials who might attempt to accommodate additional service demands by new residents that are inconsistent with or conflict with preferences held by longer-term residents of the town.

Degree of Integration with Higher Levels of Government - The greater demands placed on the communityof Cordova-Eyak over a relatively short period of time would require extensive integration with higher levels of state and federal government. Without a Borough government structure and without sufficient locally available expertise, Cordova-Eyak

would be forced to hire non-local managers to rapidly expand municipal services sufficient to plan for and expand local utilities, housing stock and related services. The rapid influx of non-local managers and their lack of integration into the prevailing Cordova-Eyak political system could encourage rapid turnover and disorganization in the municipal planning process. If the community chose to hire local managers to fill new roles in municipal government, their ability to adapt to the demands of rapidly expanding services and new population might also be severely stressed. The value system of Cordova-Eyak, with its emphasis on independence and deep resentment of government intrusion, appears to conflict with a rapid influx of municipal managers, planners and the accompanying expansions in municipal services implied by this scenario.

Land status conflicts over the recent past have heightened tensions between municipal, federal and Native land owners which may be difficult to resolve in the interests of orderly development, should rapid energy development occur.

Degree of Integration with Regional and State Economy - At the present time, Cordova-Eyak's economy is tied to a fisheries-based economic structure. This economic structure includes at least two elements that appear to conflict with the demands of rapid housing expansion and other municipal services implied by this scenario. First, the orientation of the fishing community appears to be significantly directed toward Seattle-based as well as Cordova-based fishing by both local and

non-local fishermen. The long history of northern migration of fishing fleets and their return to the Seattle area in off-season ties the community of Cordova-Eyak to Southeast Alaska and the Seattle economy and its fisheries-related services, opportunities and friendships. This long-standing tradition appears to be maintained today, although no hard data on actual in and out migrations is available for the community. In contrast to this cultural and economic orientation within the fishing industry, the oil industry is primarily based in Anchorage. An influx of oil-related personnel living in Cordova-Eyak would begin to integrate the community into the Southcentral economy to an extent not presently experienced. This might significantly alter community economic and political relationships.

Child Rearing Practices - Under the Mean probability scenario, during the construction phase of oil and LNG terminal construction on Hinchinbrook Island a significant influx of construction workers would be based out of Cordova-Eyak. The addition of a significantly larger component of the population in the young adult ages without family as in this case, appears to be related to breakdowns in community surveilance procedures used in small towns. Current concern about juvenile delinquency in Cordova-Eyak may be partially explained by significant influxes of cannery workers in summer. The addition of a large construction workforce to this already significant transient population in summer might further erode community and family controls on juveniles.

During the operations phase of this scenario, approximately 675 new residents would need to be absorbed by the community of Cordova-Eyak.

'These new residents might have significantly different child rearing practices from those prevailing in Cordova-Eyak without OCS development. This difference might manifest itself in changes in the schools, in churches and in other community-wide institutions with an interest in or concern for children.

Community Conflict Resolution Methods - The adaptations demanded by this scenario for the community of Cordova-Eyak may be difficult for this community to resolve with current conflict resolution methods and procedures. The rapidity of change, the significant growth implied in municipal government, the changes in year-round resident population, the increasing integration with the rest of the southcentral economy and especially Anchorage, demands for greater routinization of procedures, plans, and other municipal functions all require relatively rapid response to change when it occurs. It appears that community decision-making in Cordova-Eyak requires a fairly sizable amount of consensus of all major interest groups. Personal negotiation of these interests and strong values favoring democratic procedures encourage a slower pace in the decision-making process. The dominant economic pursuits of the town appear to also encourage a slower response, in that influential leaders may be busy or out of town postponing the decision-making process. A rapid influx of year-round industrial workers might significantly alter these political procedures and threaten the prevailing mode for resolving conflicts.

Under the construction phase of this scenario, a significant influx of single construction workers might adversely impact the level of violent

crimes committed in Cordova-Eyak, particularly in the area of physical assaults and related minor disturbances associated with bar and after-hours recreation.

Community Mental Health - Cordova-Eyak's over-all mental health record might show considerable additional stress under this scenario. Since the pattern of housing and community residence based primarily on a fishing tradition would be fundamentally altered during the operations phase, other community improvements and changes, interruptions in routine and a free and friendly lifestyle would be significantly interrupted during construction of housing and improvements in community infra-structure necessary to accommodate an additional 675 people in the area. Current levels of conflict over lands, fisheries and past energy-related development anticipations may have added to Cordova-Eyak's levels of stress. These current stress levels might be heightened by further construction activity. On the other hand, significant influxes of families to the town might add stability and continuity to its institutional and social structure that in time would reduce currently high stress levels experienced. Sale of land to accommodate housing demand might also provide Native Corporations an opportunity to gain respect and prestige in the community which might be reflected in lower stress on individual Eyak residents than appears to be experienced at the present time.

Summary of Sociocultural Impacts - Under this scenario, virtually every significant sociocultural variable in Cordova-Eyak would be significantly altered. The wilderness setting, community isolation and cultural

heterogeneity around which the community's lifestyle is centered would be fundamentally disturbed. The level of municipal functioning required to accommodate significant additions to utilities and additions to housing stock in a relatively short period of time would require major changes in the community's style of response to change, and could result in considerable disorganization and municipal turnover during the change process. Economic and political relationships would be seriously disturbed and might be permanently altered. Community conflict resolution methods might not be able to adapt to the rapidity of change. Community mental indications might improve in the long-term with a more year-round workforce and additions of families, but once any one of the sociocultural variables was significantly altered, the process of change in the others would begin to fundamentally alter the sociocultural system of Cordova-Eyak itself producing significant changes in all of the other variables. The community would be fundamentally altered largely in ways currently disapproved in the community today.

FIVE PERCENT SCENARIO (HIGH CASE)

This high scenario revolves around assumtions based on highly favorable initial findings of oil and gas on the Yakutat, Yakutage and Middleton Shelves which promote extensive exploration and development in these areas. The following quantities of oil and gas are projected under this scenario:

	Oil (MMbbl)	Gas-Associated (Bcf)	Gas-Non-Associated (Bcf)
Middleton Shelf	700	650	2,600
Yakataga Shelf	400	---	---
Yakutat Shelf	3,300	1,950	7,800
Totals	4,400	2,600	10,400

Source: Dames and Moore, March 1979.

This scenario projects development of eight oil fields and four non-associated gas fields on the Yakutat Shelf, a single oil field discovered and developed on the Yakataga Shelf and three oil fields and two non-associated gas fields developed on the Middleton Shelf.

Like the Mean OCS scenario, the predominant impacts occur under this scenario to thecommunity of Yakutat, yet the extent of development in Cordova-Eyak in this high case is also extensive and would stress the communities heavily. In the case of Cordova-Eyak, pipelines connecting oil and gas resources to an oil terminal and LNG plant at Port Etches, Hinchinbrook Island, have serious consequences for the sociocultural system. Tables 9 and 10 show the extensive on-shore construction implied under this scenario.

Population

Tables 6, 7, and 8 outline the population and employment forecasts associated with exploration, development and operations under the 5% scenario. As Alaska Consultants indicate, population increases and associated on-site housing and other demands in Cordova-Eyak are

similar under this scenario and yet much more extensive in magnitude. Initial impacts in Cordova-Eyak would be relatively small, escalating during the development phase with the addition of an estimated 675 jobs, 75% of which are directly tied to OCS activities. As offshore platform activities complete their construction phase and shift into an operations phase, it is projected that many of these workers will choose to reside in Cordova-Eyak and commute to work on Hinchinbrook Island. This would add a substantial new permanent population to Cordova-Eyak in a relatively short period of time and could thereby threaten local political and economic relationships, as well as fundamentally alter the character of the town and thereby its attractiveness to current residents.

Structure of Employment

As in the Mean Scenario, physical construction of terminal and LNG plants is projected to occur on Hinchinbrook Island rather than in the community of Cordova-Eyak itself, yet the decision to locate the operations work crews permanently in Cordova-Eyak adds these workers and their families to the population base of Cordova-Eyak and, by implication their social interactions into the social structure of the town itself. This pattern of commuter residence would add a substantial new population to Cordova-Eyak, with substantially different employment patterns, job skills and predictably different environmental, service and community improvement values than those now held by Cordova-Eyak's predominantly fishing related residents.

Sociocultural System Variables

Community Isolation - As in the Mean Scenario, Cordova-Eyak's isolation

would be substantially reduced under this scenario. The communications and transportation linkages required to support such major increases in population and off-shore and on-shore logistical support for extensive OCS development would permanently alter this community's isolation and its cultural and economic orientation to Southeast Alaska and the Seattle area. The community would be powerfully linked to the south-central economy and Anchorage. While its salmon streams would be protected under current Antiquities Act wilderness designations, its fisheries lifestyle would be constantly threatened by the potential for oil and gas pollution from both OCS and other Prince William Sound oil developments and resulting tanker traffic.

Current Prince William Sound tanker traffic conflicts with crab fishermen could be expected to increase with substantially increasing oil and gas tanker traffic.

The development on Hinchinbrook Island would permanently alter this island's cultural resources which remain from the site of Nuchek, once a thriving Chucagh Eskimo settlement and center of Russian Orthodoxy in the Sound.

Cultural Heterogeneity - Cordova-Eyak's cultural mix and associated political and economic relationships would be permanently altered. The orientation that unites the community around its fishing tradition and which has provided a basis for considerable cultural blending and amalgamation within and between families and individuals up until this

time would be altered with a major influx of non-related industrial workers and their families.

Degree of Integration with Higher Levels of Government - Like the Mean OCS scenario, this scenario would require considerable intrusion by outside government in the internal changes in Cordova-Eyak necessitated by rapid expansion of the community's physical infrastructure, housing capacity and related services. Even with this major influx, it is doubtful the community could expand its facilities rapidly enough under the constraints of the scenario to avoid major disruptions in services, facilities and living costs during the boom period.

Degree of Integration with Regional and State Economy - This scenario, like the Mean OCS scenario, implies considerable integration with the predominant population and economic center of the oil and gas industry in Anchorage. It is doubtful this imposed integration of Cordova-Eyak could be achieved without considerable community conflict and disruption. While an orientation toward Anchorage may in fact be occurring somewhat without OCS, the demands of substantial OCS development might permanently change the community's basic orientation southward. With the potential for oil spills, the viability of Cordova as a major fishing port might be seriously jeopardized. Disruptions to the fishing tradition during construction of facilities might be sizable, encouraging conflict, heavy criticism and municipal management turnover and disorganization.

Child Rearing Practices - Cordova-Eyak's patterns of community-based and family-based child rearing might be seriously interrupted during

TABLE V1.6

FORECAST OF EMPLOYMENT AND POPULATION
5%PR0BAB1LIT% RESOURCE LEVEL SCENARIO
CORDOVA AREA
- ?981 - 2000

INDUSTRY CLASSIF ICATION/YEAR	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
COMMODITY PRODUCING INDUSTRIES	1.s2	743	753	165	777	941	1.669	2.006	I ,250	909	991	902	995	1,024	1,048	I ,067	1,082	1,095	1,110	1.125
Agriculture. forestry and f i sher les				436	44'3	450	457	464	471	4?8	485	492	499	506	514	522	530	538	546	554
Mining	~4':1I42!)[4331			3	3	3	3	17	45	54	45	24	24	40	50	55	56	56	56	57
Manufacturing	209	293	297	301	306	311	317	323	329	406	411	416	421	426	431	436	441	446	452	458
Contract Construction	23	24	24	25	25 II	177	892	1,282	405	51	50	501	51	52	53	54	55	55	56	56
DISTRIBUTIVE INDUSTRIES	371	387	403	418	428	432	469	504	664	919	947	965	984	1 ,009	1,033	I ,057	1 ,082	I ,107	1,132	1,152
Transporta t 1011, Communications and Public Utilities	80	86	92	98	99	90	98	108	240	427	440	445	446	448	449	451	452	453	454	448
Trade	161	166	171	176I	181	187	201	213	227I	2601	261	273	282 !	292	304	314	325	336	347	358
finance, Insurance and Real Es Late	34	35	36	36	36	37	40	42	44	50	51	52	52	53	53	54	55	56	56	57
Service	96	I 100	104	108	112	118	130	141	153	182	189	195	204	216	227	238	250	262	275	289
GOVERNMENT	404	408	412	417	421	427	441	454	469	509	512	512	516	521	530	535	540	545	5 50	5 56
TOTAL EMPLOYMENT	1 ,507	1,5311	1,568	,600	1,626	I ,000	2,5?9	3,044	2,303	2,417	2,450	2,459	2,495	2,556	2,611	2,659	2,704	2.741	2,792	2,833
Employees Resident in Construction Camps	(-")(	--1(	--)(	--}(	--)	(150)	(861)	(1,247)	(367)	(--)	(--)	(--)	(--)	(.-)	(--}	(--)	(--)	(--)	(--)	(--)
TOTAL POPULATION -																				
CORDOVA CITY	2,455	2.506	2.555	2,607	2,649	2,680	2,199	2,928	3,205	3,930	3,992	4,006	4.065	4,166	4.254	4.332	4,406	4,479	4,549	4.616
CORDOVA AREA	3,014	3,076	3,136	3,200	3,252	3,300	1,436	3,594	4,032	4,834	4,900	4,918	4,990	5,114	5,222	5,318	5,408	5,498	5.5114	5 ,666

Source: Alaska Consultants, Inc. March, 1979, Table 140

TABLE VI.7

ESTIMATED DIRECT ONSHORE ONSITE EMPLOYMENT BY TASK
5% PROBABILITY RESOURCE LEVEL SCENARIO
NORTHERN GULF OF ALASKA - CORDOVA AREA
1981 - 2000

Year	Service Base	Helicopter Service			Service Base Construction	onshore Pipeline construction	Oil Terminal Construction	LNG Plant Construction	Pipe Coating	Oil Terminal Operations	LNG Plant Operations	Total Onshore Onsite
		Exploration	Development	Production								
1981		5										5
1982		10										10
1983		15										15
1984		20										20
1985		20										20
1986		9					150					159
1987		5	7				621	240				873
1988		2	16			25	229	993				1,265
1989			10					367		136		513
1990	15		15	15						272	68	305
1991	25		10	25						272	68	395
1992	30			30						212	68	400
1993	30			30						272	68	400
1994	30			30						272	68	400
1995	30			30						272	68	400
1996	30			30						272	68	400
1997	30			30						272	68	400
1998	30			30						212	68	400
1999	30			30						212	68	400
2000	27			27						272	68	394

Source: Alaska Consultants, Inc. March, 1979, Table 141

TABLE V1.8

ESTIMATED OFFSHORE ONSITE EMPLOYMENT BY TASK
5 PERCENT PROBABILITY RESOURCE LEVEL SCENARIO
NORTHERN GULF OF ALASKA - CORDOVA
1981 - 2000

Year	Survey	Rigs	Platforms		Supply/Anchor/Tug Boats		Platform Installation	Offshore Pipeline Construction	Total Employment Offshore Onsite
			Development Drilling	Operations	Exploration Development	Production			
1981		75							75
1982									98
1983		1::							151
1984		237							237
1985		219							219
1986		78							78
1997		70					467		537
1988		70	126				1,167	104	1,467
1989			414				600.		1,014
1990			398	48		20	233		699
1991			238	80		33	234		585
1992				96		39			135
1993				96		39			135
1394				171		39			210
1995				221		39			260
1996				246		39			285
1397				246		39			285
1998				246		39			285
1999				246		39			285
				246		36			282

Source: Alaska Consultants, Inc. March, 1979, Table 142

TABLE VI.9

5% PROBABILITY RESOURCE LEVEL SCENARIO:
OIL AND ASSOCIATED GAS PRODUCTION

Shelf	Field Size: Oil (MMBBL)	Field Size: Gas (BCF)	Production System	Platforms No./Type[1]	Number of Production Wells	Peak Production: Oil (MB/D)	Peak Production: Gas (MMCF/D)	Water Depth Meters (feet)	Distance to Shore Terminal[2] Kilometers (miles)	Pipeline Diameter (inches): Oil	Pipeline Diameter (inches): Gas
Yakutat	1000	1000	Steel and concrete platform, shared trunkline to shore terminal.	2S 1C	120	288	288	122-152 (400-500)	56-81 (35-50]"	32-34	36-38[3]
Group 1	500	950	Steel platforms, shared trunkline to shore terminal.	2 S	80	192	364.8	122-152 (400-500)	56-81 (35-50)	Trunkline from Group 1 fields to shore terminal with 672 MB/D peak throughput.	
	35(3	--	Steel platforms, shared trunkline to shore terminal.	1 s	40	96	--	122-152 [400-500)	56-81 (35-50)		
	250	--	Steel platforms, shared trunkline to shore terminal.	Is	40	96	--	122-152 (400-500)	56-81 (35-50)	--	--
	400	--	Single concrete platform with storage, offshore loading.	1 C	40	96		152-183 (500-600)	--	--	--
	250	--	Single steel platform with storage buoy, offshore loading.	1 S	40	96		152-183 (500-600)	--	--	--
	300	--	Single concrete platform with storage buoy, offshore loading.	1 C	4 0	96		122-152 (400-500)	--	--	--
	250	--	Single steel platform, no storage, offshore loading.	1 S	40	65		61 -91 (200-300)	--	--	--
Yakataga	400		Single concrete platform with storage, offshore loading.	1 C	40	96		152-183 (500-600)	--	--	--
Middleton	350	650	Single steel platform with gas & oil pipelines to shore terminals.	1 S	40	96	?78	91-122 (300-400)	48-64 [30-40)	14-16	24[4]
	150		Single steel platform, no storage, offshore loading.	1 S	30	72		61-91 (200-300)	--	--	--
	200		Single steel platform, storage buoy, offshore loading.	Is	40	96		61-91 (?00-300)	--	--	--
TOTAL	4,400	2,600		15	590	s	s				

TABLE VI.10

5% PROBABILITY RESOURCE LEVEL SCENARIO
NON-ASSOCIATED GAS PRODUCTION

Shelf	Field size (BCF)	Production System	Platforms No./Type[1]	Number of Production Wells	Peak Production (MMCF/D)	Mater Depth Meters @ W--	Distance to Shore Terminal* Kilometers (miles)	Pipeline Diameter (inches)
Yakutat	3000	1-24 well steel platforms & shared pipeline to shore	1 S	24	576	122-152 (400-500)	56-80 (35-50)	36-38 Gasline tied-in with associated gas production
	2000	1-16 well steel platform & shared pipeline	1S	16	384	122-152 (400-500)	56-80 (35-50)	
	1800	1-16 well steel platform & shared pipeline	1S	16	384	122-152 (400-500)	56-80 (35-50)	
	1000	1-8 well steel platform & shared pipeline	1S	18	192	122-152 (400-500)	56-80 (35-50)	
Yakataga	--	--	--	--	--	--	--	--
Middleton	1600	1-16 well steel platform & shared pipeline	1S	16	384	61-91 (200-300)	56-80 (35-50)	24" gasline tied-in with associated gas production
	1000	1-8 well steel platform	1S	8	192	61-91 (200-300)	56-80 (35-50)	
TOTAL	10,400		6	88	4			

'Source: Dames & Moore, March, 1979

[1] S = Steel, C = Concrete

[2] Yakutat Day; Icy Bay

NOTES:

1. Yakutat LNG plant peak input=1.344 BCF/D non-associated gas plus .653 associated gas = 1.997 BCF/D; trunkline to handle 2.0 BCF/D = 36"-38'
2. Middleton LNG plant peak input = 826 MMCF/D total associated and non-associated; trunkline to handle 826 MMCF/D=24"
3. [economically recoverable gas in the Gulf of Alaska must be converted to LNG. Thus, onshore impacts from gas discoveries are identical for either maximum or minimum onshore impact cases under existing technology.
4. These fields will not peak at the same time. Time and level of overall peak is not yet determined.

boom construction and resulting disruptions in city services to meet the demands of rapid energy development under this scenario. The current problems of juvenile delinquency and drug and alcohol related abuses could increase. While a large increase in permanent families with steady incomes and jobs could provide a stabilizing influence in the community over time the disruptions during construction and the different orientations of these workers and their families might in fact increase conflicts in schools, churches and other community-wide institutions if local resident values conflicted too sharply with those of the newcomers.

Community Conflict Resolution Methods - This scenario would put Cordova-Eyak back into a state of relatively intense conflict not unlike the period of 1974-78 described earlier. While this conflict-intensive period would occur approximately 10 years after the present conflict-intensive period, one can anticipate some of the same consequences of another high conflict period: rapid turnover in municipal services and managers, heavy criticism of local managers and considerable conflict and tension in most or all social relationships. The resulting increase in individual and social stress already described under the 1974-78 case might occur again.

Community Mental Health - As in the case of the Mean OCS scenario, the substantial addition of new population to Cordova-Eyak would permanently alter the cultural and social mix in Cordova-Eyak and might alter social and individual stress levels. While the population of the community would be altered, the level of individual and social stress likely to

ensue under the demands of this scenario would no doubt be substantial. As is mentioned under community conflict resolution methods, the amount of individual and social stress likely to occur in Cordova-Eyak with this scenario would probably approach the conflict-intensive period of 1974-78, which did affect community mental health rates adversely.

Summary of Sociocultural Impacts for Cordova-Eyak - As in the case of the Mean OCS scenario, most or all of the major sociocultural variables on which the current lifestyle and preferred standards of the community are based would be substantially altered under this scenario. The community would be permanently altered and much of its attractiveness to current residents would change. Political and economic relationships in the community and within its broader political and economic context would be altered, upsetting the current predominance of fishing in the community and perhaps encouraging a decline of this industry locally. The whole structure of the social system and its interrelationships would be fundamentally altered, largely in ways opposed by most current community residents.

VII. THE COMMUNITY OF SEWARD

INTRODUCTION

This chapter outlines the broad historical events and changes which have influenced the present town of Seward, its residents, economy and politics. First, the physical setting of the city and its environment are discussed along with the archaeological record of pre-historic settlement. The founding of the city, its early development and prosperity are treated next. Changes which have occurred with the growth of Anchorage, the 1964 Good Friday Earthquake and change resulting from participation within the Kenai Peninsula Burough are also discussed. This chapter views Seward in its broadest environmental, regional and political context. Subsequent chapters deal with the social structure of Seward itself, social conflict and change - both locally and within the Chugach Region and the Kenai Peninsula Borough - and finally with future stability and anticipated change for Seward.

PHYSICAL SETTING

Resurrection Bay is one of the many coastal fjords lining the Northern Gulf of Alaska from centuries of receding glacial activity in the area. The Bay itself is situated at the edge of a deeply eroded glacial valley and is surrounded by steeply sloping mountain peaks with elevations of between 2000 and 5000 feet. Seward itself is situated on the alluvial fan of Lowell Creek which flows out of these mountains. Other developed land in the area and land yet undeveloped but acceptable for industrial and other land uses is also alluvial lowland for the most part.

Seward lies 129 kilometers (80 air miles) south of Anchorage, 306 kilometers (190 air miles) northeast from Kodiak and 97 kilometers (60 air miles) southeast from Kenai. Like other communities along the Gulf of Alaska, Seward's climate and many aspects of local living are influenced by the backdrop of the Chugach Mountain range which stretches from the St. Elias Mountains northwest through the Kenai Peninsula to Afognak and Kodiak Islands. The monumental glaciers to the east in the Nellie Juan wilderness area, the local mountain ridges which separate Seward from other Kenai Peninsula Borough communities, and the turbulent and gusty Gulf of Alaska provide natural barriers on all sides of Seward. Yet Seward's location is also a gateway to the rich agricultural and mineralized lands of Alaska's interior--both the populated Anchorage and Fairbanks communities and the agricultural and mineralized lands and settlements on either side. It was this strategic location and the construction of the Alaska Railroad which first made Seward a permanent settlement. And it was Seward's gateway location which gave impetus to the growth of Alaska's largest city, Anchorage - an association which has continued to the present time.

Resurrection Bay's bountiful yet limited salmon stocks, the competition with sport fishing enthusiasts, and the distance to major salmon fishing grounds in Prince William Sound or Kachemak Bay have all encouraged a relatively small commercial salmon fishing fleet in Seward. Yet the location of a major new cannery with primary interest in halibut, fish meal and other bottomfishing stocks and products promises a larger share of fisheries-related growth for Seward in the future.

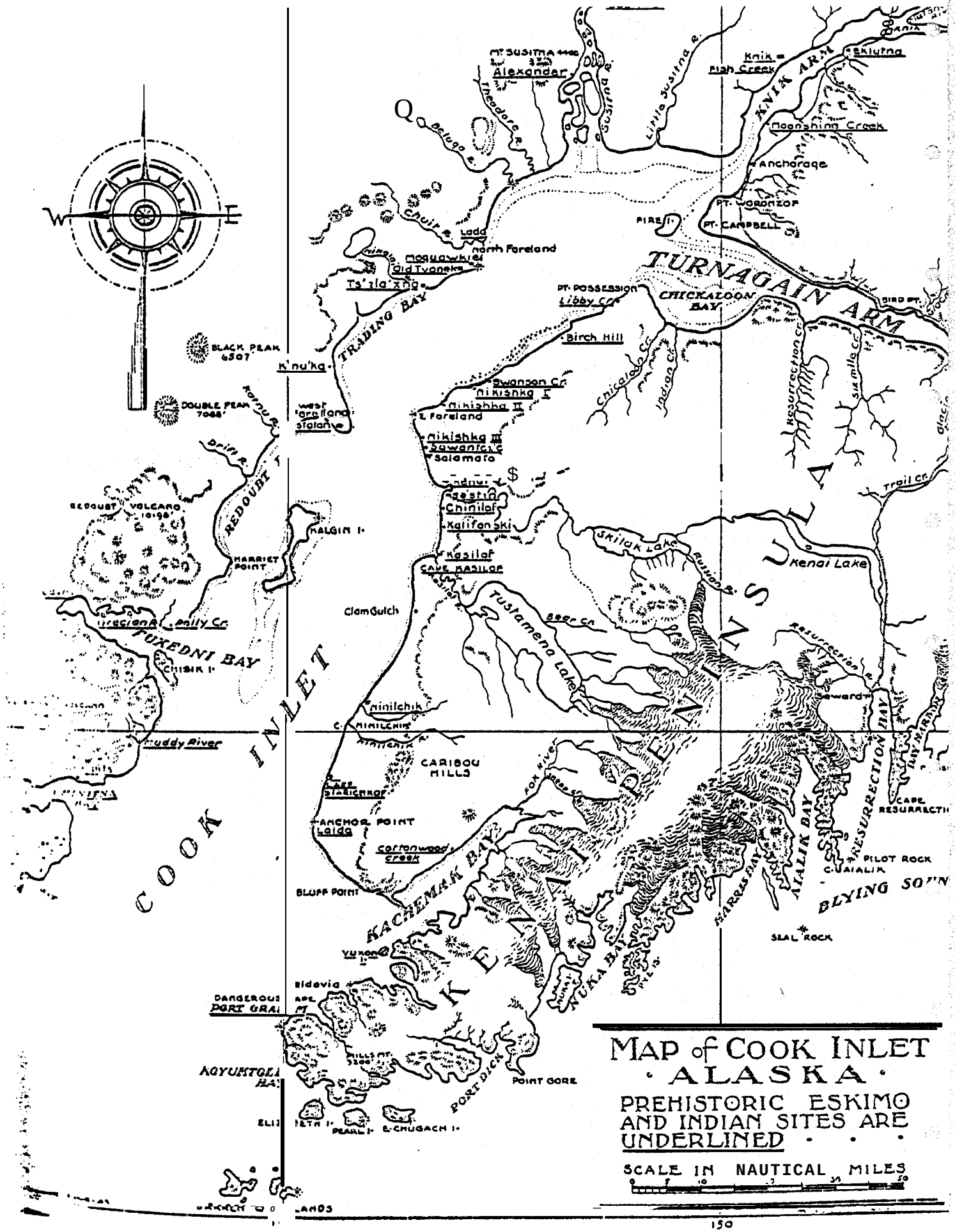
Seward's location close to the oil and gas development activities taking place within the Kenai Peninsula Borough and ties to the Anchorage metropolitan area are important considerations to Seward residents. The urban lifestyle of most Seward residents has encouraged leaders to seek greater industrial opportunities for the town including bottomfishing development, OCS Supply Base activity and, most recently, the Alpetco refinery.

Yet even with a more urban lifestyle, Seward residents still enjoy local resources through sport hunting and fishing, seal and sea mammal hunting (by Native residents), berry picking and food gathering in the area. Their dependence upon these resources, however, does not approach that of smaller coastal villages within the Kenai Peninsula Borough such as English Bay and Port Graham to the west, or Cordova-Eyak or Tatitlek further east.

HISTORICAL OVERVIEW

Pre-Russian Period

The record of settlement of Resurrection Bay dates to the early settlement of Kachemak Bay, and later Prince William Sound by the Chugach Eskimo. According to Birket-Smith (1953, P.99), the Eskimo of Nuka Bay, near Seward, were referred to by other Chugach Eskimo as "Qutatluq" and distinguished from residents of other villages in the Sound and on Kachemak Bay. A Chugach historical legend entitled "The Killing of the Five Brothers



Source: Plate 1, Frederica de Laguna, The Archeology of Cook Inlet, Alaska, Second Edition. Alaska Historical Society, 1975. Based on fieldwork completed in 1933.

from Kangiaq" alludes to the abandonment of this village (Day Harbor near Seward) in a hunting battle between its residents and other hunters from a village close to the former site of Chenega (de Laguna, 1956, P.34-35). Another Chugach legend entitled "The Deceived Husband" talks of a village called Kangilik near Seward "where many people were living," which had two bays with villages in each bay (Birket-Smith, 1953, P.146-47). Nuka Bay is mentioned both in this legend and through her sources by de Laguna (de Laguna, 1956, P.34-35).

Russian Period

In spite of these early Eskimo settlements, Resurrection Bay was apparently unoccupied by the time of Russian exploration and the developing sea otter trade. In fact, the Bay was named by Alexander Baranov, Alaska representative of the Russian-American Company, in about 1793 when he chose it as the ship-building site for the growing Russian capital of Three Saints Bay on Kodiak Island. Three ships were built at Resurrection Bay before Russian plans changed relocating the Russian capital from Kodiak to Sitka in Southeast Alaska in 1804. The first and most notable (it was the first large ocean-going vessel built on American soil) was a Russian Galiot with three masts (The Phoenix) which was launched in September 1794, and saw several years of service between the Siberian port of Okhotsk and Russian America until it was lost in a Gulf storm in 1799 (Chevigny, 1965, P.90).

Resurrection Bay's strategic location between the larger resources and settlements along Kachemak Bay-Cook Inlet and Prince William Sound was a

consideration in its choice by Baranov who sought for a time to establish Russian-American Company influence over the Kenai-Prince William Sound areas. Competition between the Russian America Company and the Lebedev Company, both involved in the lucrative sea otter trade, eventually led to abandonment of ResurrectIon Bay by Baranov's party. For a time, ship building was shifted back to Okhotsk but by the turn of the century, the headquarters of the Russian-American Company had shifted to Sitka and along with it Russian ship building efforts (Pierce, 1969, P.49, and Bancroft, 1886, P.340-383).

Birket-Smith's account of the condition of the Chugach people under Baranov's rule, while specifically dealing with the sea otter trade, is probably not inconsistent with accounts of treatment received by Native workers during the building of the Phoenix:

> Among the Eskimo the government of the Tsar has not left a good reputation. There can be no doubt that even if conditions improved considerably during the rule of the Company. . . the manner in which the natives were forced to pursue the sea otter hunt in the service of their white masters was considered - and in fact scarcely differed much from - a kind of slavery. According to the privileges of the Company each male person was obliged to serve it between his 18th and his 50th year, each person, however, not more than three years. The men were mostly employed in hunting and received a payment for every skin according to a set price. Fred Allen gave the following account of the daily routine during the Russian colonization: They made the Chugach dry fish for them and do other work. Every morning a bell would ring, and all men and women had to go to work. If a person did not come, he or she was sent for and soundly whipped. At noon they had a mixture of codfish, seal oil, and flour cooked up together. For their work they received the equivalent of 5 cents a day (this means nothing, of course, as long as the buying value of the money is not known) (Birket-Smith, 1953, P.11).

While working conditions under the Russian-American Company were no doubt harsh, it appears that Baranov's personal relationships with Koniag and Chugach Eskimo hunters were marked by considerable admiration and mutual liking (Chevigny, 1965). An historian of several volumes of Russian-American history remarked that "Like all frontiers, Russia's brought out her best and her worst." (Chevigny) The lasting influence of the Russian Orthodox Church both on the Kenai and in Prince William Sound testifies to the strong spiritual and social bonds developed with Alaska's Native population during the Russian period. As Sister Victoria of St. Herman's Pastoral School in Kenai has noted, the Russian-American Company gave free passage to Orthodox missionaries in their yearly rounds to outlying missions, in addition to paying their salaries. These privileges were free of any obligation however, since Orthodox priests were often critical of Russian-American Campany practices toward Native workers and often intervened on the worker's behalf (Hornaday, 1974, P.58).

American Period

The period of Russian trade and exploration was followed by relative quiet at Resurrection Bay until the Gold Rush era. In the early twentieth century, with the growth of gold mining activity in Sunrise, in l-lope and in Nome and other towns to the west, Seward's gateway location again became important. The Alaska Road Commission in 1908 began surveying a new trail to follow the dog and pack trails leading from Seward through Sunrise and Hope to Nome. From 1910 to 1911, nearly 1,000 miles of what would become known as the Iditarod Trail were marked and cleared from Nome to Kern Creek, 70 miles north of Seward. 'This historic trail is

now under consideration as part of the Nation's Historic Trails system. (U.S. Department of Interior, Bureau of Outdoor Recreation: 1977.)

In part to counter threats of development from increased mining activity in and around the Kenai Peninsula and Prince William Sound, Chugach National Forest was established in July 1907, setting aside over 7 million acres under U.S. Forest Service Management. (Chugach National Forest Lands in Alaska: 1911)

CITY OF SEWARD

Unlike the brash boom towns of Valdez and Cordova, Seward was founded by a group of settlers who prided themselves in their refinement and created a town that would be a permanent home for families and a stable gateway to the vast resources of Southcentral Alaska and the Interior. In 1902, Major John E. Ballaine of Seattle, Washington determined that a railroad from the Northern Gulf coast to the interior of Alaska was both needed and timely; so he set about, in the company of other Seattle businessmen, to determine the best route to the interior from the coast. After examining the harbors of Prince William Sound and Cook Inlet, Major Ballaine settled on Resurrection Bay. In his account of the selection, he stated that there were three criteria used to select the best location for the coastal starting point for his Alaska Central Railway:

> First, a trunk line railroad north and south through Central Alaska, tapping the widest diversity of mineral and agricultural resources, where the largest permanent populations will dwell, and so situated that feeders might radiate eastward to the Matanuska and Copper River valleys and westward to the Kuskokwim Valley, draining every productive part of interior Alaska into one channel. Second, the best possible harbor and most commodious

> terminal facilities on the southern coast for a starting point. . . Third, a northern terminus central to the great system of navigable rivers of interior Alaska (Ballaine, 1911, P.29).

Ballaine's conviction that Seward would become one of Alaska's largest cities led him to seek President Theodore Roosevelt's aid in obtaining the name Seward, after Secretary of State William H. Seward who had negotiated the purchase of Alaska from Russia in 1897. Two other communities in Alaska were already using the name, but with Roosevelt's aid, Ballaine secured a post office for his new town using the name of Seward, thus ending the contest.

Like construction of the Copper River and Northwestern Railway from Cordova, the Alaska Central Railway encountered both financial and other difficulties after laying only 50 miles of track. The original company disappeared into receivership in 1908. In 1910 it was reorganized as Alaska Northern Railraod, but only another 21 miles were completed under this ownership. Not until President Wilson authorized the purchase of the Alaska Northern by the Alaskan Engineering Commission in 1915, and with government financing did the railroad from Seward to Fairbanks finally reach completion (Hulley, 1958, P.311-314).

While the dream of a railroad into the interior of Alaska was to languish, the new town of Seward prospered during this period. An article in Alaska-Yukon Magazine detailed a prosperous middle class town with "an excellent high school . ..pursuing the same course of studies as Seattle," (Pederson, 1911, P.4) a daily newspaper - the Seward Daily Gateway - an electric

light plant, sawmill, two telephone systems, a telegraph, two hardware stores, two jewelers, three hotels, two lodging houses, three restaurants, a number of notions stores, "two places doing tinning and plumbing, two machine shops, a brass and sheet metal works, a well equipped sash and door factory operated by electricity, two banks, a butcher shop, two cold-storage plants, a bakery, and a number of saloons." (Pederson, 1911, P.11)

Seward of 1910 could also boast two physicians and a dentist, a volunteer fire department with 35 members, a Roman Catholic, Episcopal and Methodist-Episcopal Church, a Woman's Christian Temperance Union, Young Men's Christian Association whose building included recreational gymnasium and a reading room containing "45 papers and periodicals" - quite an achievement for the times in Alaska.

A Seward Commercial Club was formed, modeled after a similar business group in Seattle, who met weekly in the YMCA gymnasium, bringing members from the Kenai Peninsula, Cook Inlet, Susitna Valley, and further South-central Alaska settlements to discuss legislation, transportation, local charities and other concerns. According to Pederson:

> At this time of writing there lie in the post office in Seward a number of sacks of registered mail for Kenai, these having been dispatched for that village three times and as many times brought back because of the inaccessibility of the village by the present route; the club is making an effort to have established a winter route overland by which Kenai can be reached without fail in four days. (Pederson, 1911, P. 6)

Expecting their town to become the regional center of trade for the Kenai

Peninsula and Southcentral Alaska, Seward businessmen constructed a wide range of businesses; many of which survive today. An enterprising partnership between Charles Brown, a young banker, and Thomas Hawkins, a merchant, led to the founding of a general merchandise store in Seward, with a branch in Anchorage, and banks in Seward and Anchorage which have become two of the largest banks in Alaska--the First National Bank of Anchorage and the National Bank of Alaska.

Pederson concluded that "The tastes of its people are evidenced by the circumstances that they have the largest number of pianos in proportion to the population of probably all the Alaskan towns, and. ..The place is a 'home' town, almost every house suitable for family residence being occupied continuously." (Pederson, 1911, P.9)

The image of a middle class, temperate, hard-working, and enlightened town persists to this day in Seward, despite recent setbacks in the economy and a much smaller community size than formerly envisioned. The tone of the town was set in these early days and current residents strive to live up to these high standards; some succeeding better than others. Like the housing stock of elegant turn-of-the-century residences, the value system of present day Seward shares much of the flavor of its early history.

SEWARD'S NATIVE POPULATION

In 1925, the Jesse Lee Home, an orphanage established by Methodist Missionaries in Unalaska in 1892, was moved to Seward. One of the town's

oldest and most respected residents, Fannie Koontz, was a member of the original 90 children who moved from Unalaska to Seward that year. According to Koontz, between 1925 and 1936, 131 children were cared for at Jesse Lee Home in Seward; many of them orphaned by tuberculosis.

The Jesse Lee Home established its reputation in Seward and throughout Alaska as a Christian home for Native children which taught vocational skills of a practical as well as scholarly nature while strictly maintaining a disciplined and faithful obedience from its students and encouraging Christian habits and behavior. Children at the Home attended their own elementary school but used the regular Seward High School. The home is now located in Anchorage, having moved from Seward after the 1964 Good Friday Earthquake.

A former resident at Jesse Lee, Bennie Benson, successfully competed in the Alaska Flag design contest in 1927 which is a source of considerable pride locally.

A testimony to the strength of Jesse Lee's influence in the life of the present-day Native population of Seward can be gained from discussions we had in Seward with members of the recently formed Mt. Marathon Association. Many of these members were raised at Jesse Lee or had parents who were. Many still attend the local Methodist church and are quite well integrated into Seward's social and political life.

Two other institutions in Seward have contributed substantially to the

present size of Seward's Native population. A tuberculosis sanitarium, established under Methodist sponsorship, operated from 1945 to 1958 in the building which now houses the Wesleyan Nursing Home. Some current residents of Seward were former patients of this institution established to treat the epidemic levels of tuberculosis found among Alaska's Native population during this period. This sanitarium was closed around 1958 and another Methodist group took control and operated the institution as the Wesleyan Hospital for Chronic Diseases. Following the 1964 Earthquake, this hospital experienced financial difficulties and was sold to become Wesleyan Nursing Home. Throughout all these changes, the patients were predominantly Alaska Natives ("Seward's Past,": 4 and Alaska Consultant's Working Paper #6).

Seward Skill Center, founded in Seward in January 1970, is an Alaska Department of Education vocational-technical school that in some ways continues the Methodist tradition of Jesse Lee Home. It offers skill instruction of a practical value beyond high school to a wide range of village and small town students who prefer the small town flavor of Seward to schooling in a larger community. Many of the present members of Seward's Mt. Marathon Association have either obtained training at this institution or work for the school (Mt. Marathon meeting).

In contrast to the Jesse Lee Home and the Sanitarium and Nursing Home the staff and students at the Skill Center have expectations of more active participation in the life of the community of Seward. Social distance that does exist between students and staff and the rest of the

town is the subject of ameliorative efforts on both sides.

MILITARY INFLUENCES

The role of the military in the economic development of Alaska has its counterpart in Seward's history and social institutions as well. While road construction of the Seward Highway brought construction crews to work in and around Seward during the 1930's it was only with the build-up of military strength during the 1940's and early 1950's that this Highway was completed. In 1952 the Highway was completed linking Seward to Girdwood, south of Anchorage. Also during this period, Fort Raymond was established in Seward as part of the Army's World War II Coast Defense System. Although this military installation was deactivated in 1945, remnants of Fort Raymond facilities are still important elements in the local Seward community. The Seward Methodist Church was constructed originally as an Army Chapel at Fort Raymond, and was moved to its present location after purchase from the Army in 1946. The present American Legion clubhouse was the former NCO club. Present Army and Air Force recreation facilities were also constructed during the World War II period. Military necessity added to Seward's dock facilities and upgraded railroad linkages to Anchorage and Fairbanks (Kresge, et. al. 1977, P.45). On the other hand, military interest and the development of the rail facilities at the port of Whittier have seriously eroded Seward's earlier preeminence as a rail port of entry in the Gulf (Eckland, Working Paper Number 2, P.90; Gruening, 1968, P.423-24).

REGIONAL CONTEXT

The Growth of Anchorage

With World War II and the growth of Anchorage, Seward's history began to shift. The bustling tent city of Anchorage was to become Alaska's largest and most rapidly growing city, outdistancing other communities of former preeminence. (Table VII.1) With World War 11 and its aftermath, Seward became increasingly the sport and recreation center for the military and later sport fishermen and weekend vacationers from Anchorage. The bars, restaurants and waterfront services grew, as did other facilities geared to the expanding demand for tourist-related services. With this shift away from basic industry and the increasing growth of tourism and sport fishing, the Seward economy lost some of the dynamic quality it had had in earlier days, and both the winter-time economy and pasttimes of its people reflected a slower, less energetic pace.

Beginning with its choice as the headquarters of the Alaska Railroad, Anchorage began to mushroom during the World War II and Korean eras, and with the growth of Ft. Richardson and Elmendorf AFB, soon outdistanced all other population centers in Alaska. The growing Federal establishment in Anchorage also added to its expansion as did the growth of State government. With the discovery of oil, first on the Kenai Peninsula and later at Prudhoe Bay, Anchorage's role as a port, distribution and administrative center for the State as a whole was assured. With this accelerating growth, the Anchorage metropolitan area came to dominate the

TABLE VII.1: POPULATION OF SEWARD AND ANCHORAGE AREA, 1910 to 1978

	SEWARD	%	ANCHORAGE AREA	%
1910	534	--	N.A.	--
1920	652	22.1	1856	--
1930	835	28.1	2736	47.4
1940	949	13.6	4229	54.6
1950	2114	122.8	30,060	610.8
1960	1891	-10.6	82,736	175.2
1970	1587	-16.1	126,333	52.7
1978	1756	10.6	201,790	59.7

SOURCES: Seward statistics from Seward Museum, from U.S. Census reports, 1978 statistics; Kenai Borough Special Census, 1 97%.

Anchorage statistics from U.S. Census Reports. More recent statistics from 1976 and 1978 Population Profile; Municipality of Anchorage, Anchorage Urban Observatory.

region in which it is the Center; and communities in this region began to feel the push and pull of the dynamic forces operating to concentrate population in Anchorage and its metropolitan area while encouraging the specialization of outlying communities to serve its growing needs.

In Seward, the Silver Salmon Derby was initiated in 1956 and has since drawn record crowds, largely from Anchorage. The Army and Air Force recreation facilities in Seward, established after the closing of Fort

Raymond, provided a ready and growing population of military and sport fishing enthusiasts for Seward's many facilities, excellent harbor, and silver salmon stocks. With the expansion of its small boat harbor and the ease of travel between Anchorage and Seward via the well-maintained Seward Highway, Seward became the most convenient sailing and sport fishing town in the Southcentral region and a favoriteof Anchorage's urbane recreational boaters.

Table VII.1 showsthe slowgrowth of Seward before World War II and the rapid growth of Anchorage after the War. These trends were already in motion before the devastation of the 1964 Earthquake, but the loss of Seward's Port and Harbor facilities and their slow recovery after the Earthquake were to add to the advantage of Anchorage's port at a crucial time in Alaska's economic growth assuring the growing predominance of the Port of Anchorage over other earlier ports in Southcentral Alaska.

The Good Friday Earthquake dealt a devastating blow to the economy of Seward and especially the preeminence of its harbor and port. Like its neighbor Valdez, Seward had enjoyed considerable port traffic in the old days which, after World War II and the growth of Anchorage, began to give way under competitive pressures and economies of scale; however, two other transportation decisions, one in 1954 and another in 1952, preceded the Good Friday Earthquake and added to Seward's disadvantage as a port. The first in 1954 was the discontinuance of the Alaska Steam-ship Company's passenger service to Seward; a former link to Southeast Alaska and Seattle made obsolete by the growth of Anchorage and the

redirection of Alaska's economy and population in favor of this growing center. The second was the completion of the Seward Highway in 1952. With the earlier completion of the Alcan Highway connecting Anchorage to the rest of the United States and construction of the Anchorage International Airport in 1952, Anchorage was rapidly becoming the transportation hub of the State of Alaska further eroding the need for transhipment via Seward or Whittier. (Fischer, 1976, P.11-12)

THE GOOD FRIDAY EARTHQUAKE

The 1964 Good Friday Earthquake devastated much of Southcentral Alaska, causing the relocation of Valdez, major urban renewal projects in Kodiak, Anchorage and Seldovia, and long-term disadvantage to all of the smaller towns of Southcentral Alaska. It was particularly destructive to Seward's economy by eliminating in one day's time much of its port and industrial capability. A strip of land between 50 and 400 feet wide along Seward's waterfront slid into the Bay. Tsunami waves ran up as much as 30 feet above the mean lower tide water for several hours. Seward residents fled to high ground. Thirteen residents were killed and five were injured. Eighty-six houses were totally destroyed and another 269 were heavily damaged. Estimated damages were in the neighborhood of $22 million (Lemke, 1967).

Three of Seward's prime docks slid into the Bay as did another small dock and cannery at Lowell Point. The Standard Oil dock and 13 of its oil tanks were swept away by the water. Waves that destroyed many of the homes of Seward were topped by burning oil from these oil tanks.

Amidst this devastation, however, the organizational strength and unity of purpose which seems to have long characterized Seward was clearly evident. As Lemke indicated: "Response to the disaster was immediate and decisive. City, State and Federal agencies, as well as other organizations and individuals, gave unstintingly of their time and facilities. Within a few days, there was temporary restoration of water, sewage and electrical facilities." (Lemke: E1-E2)

After the Earthquake, reconstruction of dock, boat harbor and other community facilities changed the face of Seward and altered its traditional land uses. The small boat harbor was rebuilt in 1964-1965 at the head of Resurrection Bay on the eastern side of town as was the new railroad dock. A new comprehensive plan suggested that this redirection of industrial and waterfront uses however was beneficial to the long-term growth potential of Seward while at the same time assuring the quality of Seward's past. By concentrating industrial and fisheries-related development activity and sport-fishing activities in the northeastern part of town, western and southern areas could continue as a downtown business core and a focus for medium and low density housing. Newer low density housing was encouraged north of the central business district and along the Seward Highway and Nash Road.

Seward was named an "Ail-Prnerican City" by the National Municipal League in 1963 but before it could accept the award, the earthquake destroyed much of the original town. For its efforts at recovery, however, and in recognition of the community spirit behind these efforts, Seward received

the award again in 1965 (Seward Comprehensive Plan: 75).

KENAI BOROUGH CONTEXT

With statehood, Seward became one of five cities and a number of villages and unincorporated places along the Kenai Peninsula which came under the partial jurisdiction of the Kenai Peninsula Borough, one of three regional boroughs formed after Alaska Statehood in 1959.

The Kenai Borough is a second-class borough which gives it tax assessing, planning and zoning and other limited powers. With oil and gas-directed development in the Kenai-Soldotna areas, Borough Government has grown and now includes 102 employees. Since the early 1970's, planning and coordination activities necessary to prepare and plan for outer continental shelf oil development, fisheries development and potential impacts associated with LNG refinery construction have consumed staff attention, while Assembly business has focused on city zoning, planning and zoning and school issues. As growth in unincorporated areas of the Borough continues to accelerate, however, pressures to provide for service areas outside of city boundaries and to consolidate certain key services, such as port and fire authority have grown and are presently the subject of controversy.

Although they clearly envisioned a regional governmental unit which could provide services at lower cost and yet promote self government and local control on the part of cities within its boundaries, the delegates to the Constitutional Convention did not foresee some of the

difficulties this form of government might create, particularly in a Borough containing five independently constituted cities! Some of these conflicts and their relationship to Seward's growth will be discussed in Chapter 8.

Through Borough association and with the oil and gas revenues generated from development of these resources on the Kenai, Seward rebuilt her elementary school in 1970 and completed a brand new high school in 1978. But Home Rule sentiments remain high in Seward as Seward's voting strength in the growing Kenai Borough is eroded, first by the growth of Kenai and Soldotna with oil and gas development, and more recently with the growth of the unincorporated areas in the Borough. The dynamic growth of basic industry which first occurred in Anchorage is changing the Kenai Peninsula Borough as well, and this systemic change tends to exclude Seward to some extent, as it does other villages and towns further removed from" the central core of Kenai-Soldotna. Seward appears to be responding in part to these influences in a growing emphasis on boat servicing, maintenance and repair facilities.

SUMMARY

The community of Seward is located on a coastal fjord dubbed Resurrection Bay by the Russian Lord Baranov in 1793. During this period, the site became a shipyard in which the first vessel constructed on American soils (the Phoenix) was built. The site was abandoned by its Russian and Chugach Eskimo inhabitants shortly after the Phoenix was built and it was not until 1902, with the beginning construction of the Alaska Central

Railway, that the Cityof Seward was founded and a permanent settlement established. Seward's founders built a city for families modelled in many ways after their homes in Seattle. Unlike Alaska boom towns of the period, the community of Seward took pride in itself as a middle-class, temperate and enlightened town suitable for family residence.

Seward's Native population consists of migrants to Seward. Seward's earliest native inhabitants were a Methodist Home for children orphaned by tuberculosis. Others were patients at a local Methodist Tuberculosis Sanitarium. Many of these early residents and their children continue to live and work in Seward.

With the growth of Anchorage which became the headquarters of the Alaska Railroad and a regional transportation and distribution hub, Seward's size stabilized at a small scale and the City became integrated into the southcentral economy and social system through specialization as a recreation and sport fishing capital, first for the military headquartered in Anchorage, later for primarily Anchorage-based tourists. Government employment also increased. The Good Friday Earthquake of 1964 destroyed much of the Seward economic base, including her docks, cannery and boat harbor, but the City rebuilt. Still, the City's former pre-eminence had already begun to slip with the rapid growth of Anchorage. Oil-directed development in Kenai and Soldotna, too, integrated Seward into a growing economy and social system within the Kenai Peninsula Borough, yet without the basic industry which aided other Kenai Borough

towns’ growth. Still, Seward residents supported their town and worked to rebuilt its economy, add jobs for local residents and encourage new industry to locate there.

"VIII. THE SOCIAL STRUCTURE OF SEWARD

INTRODUCTION

This chapter treats population characteristics, social organization, political organization, predominant lifestyles, public opinion and other aspects of the social system which contribute to its current level of social integration, including the prevailing value system.

POPULATION AND HOUSING

Seward's population has recently been the subject of controversy and is in itself an indicator of the changes which Seward has experienced over the last 20 years, as well as a present concern within the context of impending reapportionment of the Kenai Borough Assembly. As a result of the hardship this community suffered during and after the Good Friday Earthquake of 1964 and the subsequent decline of its transportation industry, job opportunities have been scarce in Seward. Over time, many of the young people of this community have been forced to migrate out of the community for permanent work opportunities. As a result, the population structure of the community has begun to age with higher proportions of older persons remaining in the community due to the low cost of their housing and other personal reasons. At the same time, road access to Anchorage makes possible rapid outmigration from Seward and other Southcentral communities when job opportunities are unavailable locally. In contrast to more isolated communities, Seward can draw on the Anchorage and Kenai Peninsula labor market areas when job opportunities do become available and its subsequent population structure will then

reflect this influx. Informal discussions and data on Native population from Chugach Region, Inc. support the view that the OCS and pipeline era dock-related activity did add to the population of Seward during the 1974-77 period; but with a slowdown in the state-wide economy with the completion of pipeline construction and with completion of OCS exploration, Seward too has experienced both a population and an employment decline.

Table VIII.1 shows the population in Seward in 1970 by sex and race. The total Native population in Seward was only 218 in 1970. By 1977, Davis reports that Chugach Region, Inc. enrollment in Seward has reached 480 Natives. As of September 1978, CNI reports 337 members of Chugach Region give Seward home addresses. Total employment levels also reflect an increase in employment in Seward over the years 1975-76. These dropped off slightly in 1977 and, according to local reports, have continued to drop somewhat.

Like other cities in the Kenai Borough, Seward too has experienced relatively rapid growth of population surrounding her city limits particularly in the Bear Creek area north of town. Using Kenai Borough unofficial 1978 Census figures, this area now has 687 residents, or close to 40 percent of the population in the two downtown Seward precincts. From talks with Bear Creek residents, it is clear that a preference for a more rural, less structured lifestyle is implied by residence at Bear Creek'. Another aspect of Bear Creek's growth is the availability of mobile homes in this area, since mobile homes are not permitted downtown.

TABLE VIIL1: POPULATION OF SEWARD BY RACE AND SEX, 1970

	MALE	FEMALE	TOTAL	%
White	706	660	1366	S6.1
Negro	2	1	3	.2
Indian	26	19	45	2.8
Al eut	44	36	80	5.8
Eskimo	41	36	77	4.9
Other	7	9	.16	1.0
Total	826	761	1587	100.0

Source: I. S. E. R., "Age and Race by Sex Characteristics of Alaska's Village Population," Review of Business and Economic Conditions, September 1973.

Housing in downtown Seward is a mixture of older homes, some of which were constructed during the early decades of this century including multiple housing units (primarily duplexes), a few larger apartment units, and apartments above commercial buildings in the Central Business District area of 3rd, 4th and 7th Avenues. The gridiron street system of the downtown area and the small lot sizes of the older homes make expansion of downtown housing difficult. The Anchorage Urban Observatory study completed in 1976 found that a relatively high proportion (47 percent) of Seward's downtown housing is renter occupied, while among the single family homes, 74 percent are owner occupied. Outside of the downtown area, residences are mostly low density and/or entirely single family homes or a mixture of single family homes and mobile homes. The Seward Lagoon to Resurrection River area and the Resurrection River-Nash Road area outside the city's boundaries are areas of expanding residential development. Future expansion of the city will most likely occur in these two areas and may also occur in the Fourth of July Creek area recently

annexed by the City of Seward.

Present Native Population

Seward's Native population is not highly visible and, without benefit of an original village site, will most likely continue to be integrated into the on-going life of Seward. Our discussions locally indicate that virtually all the present residents of Seward were themselves migrants to Seward or are sons and daughters of former migrants, many having been former students at Jesse Lee Home or patients at Seward Sanitarium." In a specially called meeting of Mt. Marathon Association, we found that those attending were a diverse group of. predominantly Eskimo and Aleut people, many of whom had early associations with Jesse Lee Home or the Seward Tuberculosis Sanatorium.

More recent Native migrants into the community include staff at the Seward Skill Center and former students of the Skill Center who have continued to reside in Seward as well as state ferry personnel. Longer time residents include families of fishermen and longshoremen. There is no long term cannery workforce here locally. Many of the Native residents of town have white collar occupations as do their white friends and neighbors. There is no apparent housing segregation and little deep-seated antagonism between white and Native here.

Younger and older Native residents of Seward appear to diverge somewhat from one another concerning issues relating to the organizational strength and purposes of the Mt. Marathon Association. The younger and a few older

members appear more active in pursuing an organization in which cultural pride can be stressed and traditional Native crafts such as ivory carving, skin sewing, woodcarving and language instruction can be encouraged. Other members of the organization appear more ambivalent about the role the organization should play in the community. The recent opening of the local Mt. Marathon-sponsored Teen Center provides an opportunity for expression of these differing views in the process of organizational growth.

Mt. Marathon Association has two active committees in addition to individuals active in the formation of the Teen Center site and program. These include the Johnson-O'Malley Education Committee and the Health Committee. A Native outreach worker and part-time public assistance provider is also waiting for space at the new Teen Center to continue her work. Concern for the day care needs in the community was also mentioned during the meeting as a possible goal for the group in the future.

The Mt. Marathon Association is presently growing as an organization with a unique identity. Without a history of either village status or separate residence and without a long history of forced subservience such as encountered in other predominantly white communities along Alaska's Coast, the predominantly middle class Native residents. of Seward presently enjoy relatively harmonious relationships with the rest of the community. Present residents of Seward Skill Center do encounter some prejudiced treatment from Seward residents, but this is not widespread and appears,

from talking with representative students, to be well within levels of toleration. For the most part, Seward Natives appear to receive as equal a treatment as any ethnic minority might receive in a small coastal town. A "joking relationship" exists in which white and Native friends joke about their backgrounds, while still maintaining close personal ties. It appears that migration into the community by both white and Native residents and a commonly shared middle-class occupational status have contributed to this high level of equality over time.

Assimilation is also facilitated by patterns of church attendance. There is no local Russian Orthodox Church in Seward and Native residents we talked with mention that few if any of the local Native population attend the Kenai church because of the long drive. According to one resident, most Native people attend either the Lutheran or Methodist churches.

Native residents and stockholders of ChugachNatives, Inc. take a keen interest in the investments of their region and are a voice for moderate, sound investment policy in the Region as a whole. The Region has acquired approximately 150 acres of residential land in Seward and has considered development of at least some of this acreage. Both local opposition to multi-family housing units downtown and management turnover within the Chugach Region have resulted in postponement of two local projects. (These issues will be discussed in greater detail in Chapter 9.)

A Native resident of the Seward area ran for a position in the Alaska

legislature in 1978, and although he did not win 'the election, his local and regional support was encouraging to both CNI and local Native residents.

There is one group of families, present property owners in the Grouse Creek area north of Seward, who have applied for "Group" status under provisions of the Alaska Native Claims Settlement Act which, if successful, could mean entitlement to 320 acres of land per person. This small group of families is interrelated by marriage and through long time residence near each other. Their status as a "Group" is still under study.

SOCIAL ORGANIZATION

Seward is a fairly tightly organized town compared to other towns along the Gulf. Its history of moderate growth, the availability since its inception of a wide range of businesses, and an active social life centered around club and organizational memberships and activities all contribute to its cohesiveness. The compact central business district and the socializing this encourages is also a factor in Seward's cohesion. In contrast to other towns with a similarly seasonal economy, social institutions and organizations in Seward have remained active over its whole history. The Mt. Marathon Race has been an institution in Seward since at least 1910 when two local men argued about each's ability to run up and over the nearest mountain and wagered a drink to benefit the winner. The local bridge club, sport, and religious groups also have a long tenure.

Sumner softball and winter basketball and volleyball draw huge crowds

and active participation from a wide segment of the community. The American Legion, Elks, Jaycees, Lions, Masons, Eastern Star, Rainbow Girls, Mt. Marathon Native Association, Bridge Club, Girl Scouts and Boy Scouts, and Seward Yacht Club are all active here. Additional organizations include two homemaker groups, 4-H, an American Legion Auxiliary, Wesleyan General Hospital Auxiliary, Pioneers of Alaska, a C.B. Alert Club, Coast Guard Auxiliary, Spectrum-Seward Arts Council, Business and Professional Women, Resurrection Bay Historical Society, Resurrection Bay Art Guild, an active Library group, Council on Alcoholism, and Seward choir. According to some, Sewardites all belong to three or four organizations apiece as well as attending a wide range of churches, plays produced at the high school, community college and community school classes. There are at least 200 who participate in the local bowling league.

Like the small towns of Southeast Alaska and many others across America, Seward takes pride in celebrating major holidays and events. Fourth of July is an important event here with much organized activity including the Mt. Marathon race and sailboat racing. The Seward Salmon Derby is a summer event of active local and tourist participation as is the annual Seattle picnic. The American Legion sponsors an Easter egg hunt and Christmas party, and a local bar sponsors an “earthquake party”. St. Patrick’s Day is honored, as are the major fires of Seward’s past. A sled derby in winter and a library talent show involve young enthusiasts.

In addition to these social organizations, community volunteer activity

is also high. A volunteer fire department and volunteer ambulance corps involve approximately 20 members in each organization. The Bear Creek Volunteer Fire Department has also been recently formed and provides fire service and active involvement to families in the Bear Creek fire service area. The library also sponsors a number of activities.

Local churches include The Seward Chapel, Church of Christ, First Baptist Church, Moose Pass Baptist, Resurrection Bible Church, Assembly of God, Harbor Lights Mission (United Pentecostal), Nazarene Church, Kenai Lake Baptist Church, Seward Church of Christ (Christian), Sacred Heart Catholic Church, United Methodist Church, Moose Pass United Methodist, St. Peter's Episcopal Church, Resurrection Lutheran Church, International Assembly of Baha'i, Conservative Baptist, Church of Latter Day Saints (Mormon), and the Church of God. Residents say the Catholic, Methodist and Baha'i groups have the largest attendance. The local radio station also broadcasts a number of religious programs during the week.

The lack of distinct neighborhoods and the history of active participation in social organizations both encourage high levels of organized activity and the development of tight groups of friends or cliques associated with one or more organizational affiliations. This interlocking of friendships and organizational memberships and participation creates a unity of purpose and community climate of opinion that discourages radical departure from community norms.

During summer fieldwork in the community, an oldtime resident recalled an

incident in which a new teacher in town began complaining about certain services he missed. This local store owner quickly made clear that "the road out of town was there for him to use" if he wanted to complain - which of course he refrained from doing in the future although he stayed in the town for many years. During City Council meetings held to discuss the possible Alpetco Refinery siting in Seward, residents who opposed the project were immediately followed by at least three times their number who went on record in strong support. This pattern was repeated in a number of other settings including church, the Mt. Marathon Association, the Seward Skill Center, City Hall, and in dock, hotel, bar and restaurant conversations.

The cohesiveness of Seward is not as strongly based on extended family relationships as that of some Alaskan small towns. Rather, it is based on the interconnecting social organizational memberships of its population. Relative newcomers to town can still become actively involved in social organizations and need not encounter the social distance often afforded newcomers in a more isolated community. The activity in bars, churches and sport functions involves newcomers more easily in a round of activities in which they can actively participate. One former resident refers to Seward as a "tolerant" town; not in the sense of a fishing community in which everyone is intermarried, but in a more urban sense in which cliques form on the basis of shared interests. Differences of family, origins or race are less important than one's refinement, decorum or willingness to be sociable - plus a willingness to accept and abide by community standards. "

Dress at community meetings is indicative of community standards. At a summer Council meeting, six of the men in the audience present wore suits or sport jackets, another two wore leather jackets, four more wore Pendleton shirts, another four were more casually dressed in summer shirts or a windbreaker. These men, and the women present, were a mixture of old and young; but all had relatively short hair, evenly trimmed beards or were clean shaven. At this meeting, an itinerant merchant dressed in embroidered clothes and heavily bearded was asking for permission to sell handcrafted leather jackets from his van. Community opposition was strongly stated, especially from older town residents who opposed a permit system that discriminated against local store owners who paid city taxes. While younger members of the audience and on City Council were more supportive of the merchant's position, sentiment against the itinerant nature of his sales seemed to be overwhelming.

Residents of the town frequently mention that street vending and street sales by local merchants are opposed here in part because they appear to violate norms of good taste. On the other hand, many complain that these standards discourage competition. Business practices that discourage competition and innovation have come increasingly under attack as business and the economy have slowed. Similarly, union practices are receiving much closer scrutiny. So long as the economy is prospering, business and union practices can be safely ignored in the interests of harmony. But in winter, when the economy slows - and especially in these last three winters - more open criticism of business practices and union rules that discourage competition have been aired. In the context of Seward's small

system, few seem to admit the possibility that a recession may be the result of outside forces over which the community has little control.

SEWARD VALUE SYSTEM

The cohesiveness of Seward is tied closely to a commonly held set of values. According to residents with whom we talked, this value system seems to have been relatively consistent over time in Seward. With this in mind, an analysis of a local newspaper published in the 1950's by a local women's organization was undertaken. This newspaper, The Petticoat Gazette, is an Alaska gem of the 1950's and was the winner of at least one Alaska Press Club award during the period. The paper was produced as a volunteer effort and distributed primarily in Seward and within the Southcentral region. Table VIII.2 shows the most frequently mentioned values represented by this newspaper from a selection of twelve newspapers over a seven year period using a value scale developed by Milton Rokeach and published in his Beliefs, Attitudes and Values in 1968. Of the thirty-six dimensions of value possible, only seven stand out as predominant in these newspapers: public spirit, helpfulness, social recognition, a sense of accomplishment, ambition or hard work, and a world of beauty or appreciation of beauty, nature and the arts.

This value configuration appears to be more pronounced in Seward than any of the other small towns on the Kenai or bordering Prince William Sound. The sense of activism and mission that flow out of these values is evident in the community today as it was in Seward's early days in its response to the devastation of the Good Friday Earthquake in 1964. Seward's image

Tavle VIII.2 MOST FREQUENT VALUES REPRESENTED IN SEWARD PETTICOAT GAZETTES, 1956-1965

VALUES	1956	1957	1958	1959	1960	1965	TOTAL
Comfortable life	1		3	2	1		7
Sense of accomplishment	1	3	4	3	3	4	20
A world of beauty	2	3	3	5	5	4	22
Equality/brotherhood	2	1	2	2			7
Family Security	1	2	1		2	1	7
Public spirit	9	6	7	6	6	9	43
Salivation	1	1			1		3
Social recognition	1	5	3	5	2	4	20
National security	3	1					4
Ambitious	3	3	4	4	4	6	24
Capable	5	1	3		2		11
Clean/tidy	2		2	3	2	1	10
Helpful	4	7	5	2	4	4	26
Independent	1	1	2				4
Happiness		1					1
Pleasure							1
Freedom				3			3

Source: at least two issues per year of the Petticoat Gazette in 1956, 1957, 1958, 1959, 1960, and 1965, coded according to a 36 item scale of values developed by M. Rokeach in his Beliefs, Attitudes and Values 1969 The total listing of values in this scale is given in the Appendix

in Juneau as a "skookum" town is representative of this spirit of activism or a kind of "protestant ethic" believed locally. The strong Methodist influence in the Jesse Lee Home's tenure and subsequent involvement in other institutions in Seward as well as the current prominence of the Methodist church locally, carry the strong influence of this pioneering protestant tradition throughout Seward's history. On the other hand, Seward's value configuration would seem to be ill-suited to the situation in which Seward now finds itself--namely one of relatively high unemployment. It is suggested that the dua7 choice of an activist city manager and recently elected pro-development council and Ad Hoc Committee from Council and deepening levels of alcoholism are both sides of Seward's activism and present depressed economy. Seward's alcoholism problem will be discussed in greater detail in Chapter 9.

Predominant Lifestyles

Most people in Seward participate in a family-centered small town lifestyle in which school, church, and work activities are integrated with participation in several social organizations, organized sports, and other related activities. Summer activity levels, beginning April-May with fishing and recreational boating interest, accelerate with daylight hours encouraging a high level of activity, travel, recreational and subsistence-oriented pursuits. Winter darkness and the decline of water-based sport activity encourages a less active home-oriented period in which hobbies and crafts are pursued, theater productions and school and social

organizational activity accelerate, and indoor sports such as volleyball and basketball predominate.

Like many communities along Alaska's coast, much of the winter-time fraternal and social activities and events involve their members in regular social drinking. For example, the local Elks Lodge and American Legion, both prominant organizations in town, have cocktail facilities. The number of bars (19) and restaurants serving alcoholic beverages (9) is also high, particularly in winter, considering a total population of about 2000. Promotional bar parties and other social celebrations usually involve considerable social drinking. The loss in energy and productivity and family problems related to alcoholism are a concern of many in the community.

Many community organizations appear to be split between an "established" and a "progressive" group. The newspaper and radio currently support a progressive development stance and appear to be widely accepted as community leaders in addition to the City government. One resident stated that while a few people in town appear to be "running things," few disagree with the direction in which they are leading. There is general recognition that Seward needs to develop a strong year-round economy, and this over-arching goal is supported regardless of social position. Less contented Sewardites mentioned that too many people in Seward want to "keep Seward as dead as possible," indicating that resistance to change is also widespread.

In spite of a significant number of older residents, several old-timers with whom we talked mentioned that they support the younger leadership because they know that older people are "too conservative" and they understand that Seward needs an expanded industrial base. While one might expect from the age structure of Seward to find much of the older population opposed to petro-chemical development, opposition stated at public meetings to the City's Alpetco proposal appeared to come, not from older residents (many of whom had raised families but continued to live in Seward) but from a small number of individuals or couples without families who prefer a small town and are active recreationists. One active senior citizen did state his opposition, but others seemed to defer to the wisdom of community leaders.

SOCIAL RANKING

In addition to the social circle surrounding the current city manager, two other groups of prominent business families are distinguished locally as town leaders. Both the Republican and Democratic parties have as their heads here local business leaders who are active in the community and who sponsor visits from Republican and Democratic representatives when they are in town. The Republicans' parties in particular are socially prominent events.

Teachers, university employees, nursing and medical staff at the various institutions, and employees of the Seward Skill Center entertain each other at parties. Fishermen, longshoremen and "the country folk" (at Bear Creek)

stand out as "tight" groups that defend each other and are committed to common concerns. The rest of the town is largely stratified on the basis of interest, participation in one or more cliques, and by age. Senior citizens now have an organization which is quite active locally. High school students and Seward Skill Center students stand out, in part by preference and in part because of town concern with youth drinking and drug use and a generally high level of adult surveillance. Charter boat operators and members of Seward Yacht Club share similar interests and hangouts.

As is true in most of Alaska's more urban places, friends with similar interests and tenure in town tend to work together, entertain each other, and engage in other activities together while at the same time participating with non-clique members in town business, formal organizational activity, or individual and family hobbies and activites. Social distinctions are based more upon leadership of community-wide institutions, community spirit, and political connectedness either locally or within Alaska state politics rather than on wealth or other measures of social status. Land ownership and wealth are somewhat more important outside the predominant government workforce where a few "old families" maintain higher status and privilege in association with reverence for the City's forebearers.

PUBLIC OPINION

Several surveys of public opinion in Seward have been conducted during the 1976-78 period which bear on attitudes toward OCS development,

expansion of port and harbor facilities and other issues relating to growth-inducing industry for Seward. The first survey, conducted by the Anchorage Urban Observatory in 1976, came at the height of anticipation and anxiety associated with potential off-shore oil development near Seward. At that time, too, Seward had little experience with the oil industry, as compared with Kenai and Soldotna. Results of this survey in Seward indicated preferences for off-shore oil support bases (62 percent in favor) and for oil storage and tanker terminal facilities (52 percent in favor) but less support for either petrochemical plants and/or refineries, pipelines or LNG plants (33, 45, 43 percent in favor) (Anchorage Urban Observatory, Table 14: Appendix).

Several other questions asked in this survey also bear on Seward attitudes toward OCS development in mid-1967. Eighty percent of respondents in Seward felt the City and Borough should have a strong role in determining the location and conditions of oil development (Anchorage Urban Observatory, Table 17) Most Sewardites (85 percent) favored jobs that would be of long duration, preferably more than 10 years. (Anchorage Urban Observatory,. Table 4). Over half (54 percent) of Seward residents mentioned that they or a family member would be interested in obtaining a job in "one of the plants, pipelines, support bases or other oil-related facilities" (Anchorage Urban Observatory, Table 24). Virtually all Seward residents favored the use of zoning to establish industrial areas in the Seward area. (Anchorage Urban Observatory, Table 26).

Since this survey was completed, Seward residents have experienced location

of two oil rigs in Resurrection Bay, job opportunities associated with the presence of between 4 and 10 supply boats servicing these rigs, and other benefits of off-shore oil exploratory activity. Trends in political elections, the formation of the Ad Hoc Committee of the City Council and other local actions support newer survey results which indicate a shift away from concern for the negative aspects of development for Seward, and more attention paid to the benefits Seward could achieve from growth.

Table VII.3 shows thetrend in opinion in Seward in 1976 concerning development options for the town. At that time only 42 percent of Seward residents favored petrochemical development for Seward. By 1978, after considerable local discussion, many meetings and public airing of the City Council's proposed bid to Alpetco for location of their petrochemical refinery at Fourth of July Creek, it became clear that much of this opposition had moderated over the 1976-78 period.

TABLE VII.3: PERCENTAGE ENCOURAGING 'ND DISCOURAGING DEVELOPMENT ALTERNATIVES IN SEWARD, 1976

Types of Development	% Encourage	% Discourage
Tourism	87%	13%
Light Manufacturing	90%	8%
Lumber	80%	18%
Petrochemical	42%	57%
Commercial Fishing and Processing	97%	3%
Transport and Storage	89%	9%
Supply Bases	67%	26%
Education/Research	95%	4%
Deep Water Port	99%	1%
Small Boat Harbor	93%	7%
Agriculture	61%	38%

Source: Anchorage Urban Observatory, Profile of Five Kenai Peninsula Towns, 1977, Table M.

The Alaska Department of Transportation and Public" Facilities conducted a "Prince William Sound Transportation Survey" in the summer of 1978. Results of this survey indicate strong support in Seward for increased employment, job opportunities, and increased access between Seward and other parts of the state beyond the Prince William Sound area. Preliminary report findings suggest that Seward residents were most concerned with improving their individual quality of life through more variety in stores, more jobs and lower prices in town. These individual concerns are extremely similar to those expressed in Valdez in 1974 before pipeline construction (Baring-Gould and Bennett, 1976). Final statistical tabulations of the survey have not been released by the Department of Transportation, but preliminary tallies show strong support for construction of a Deep Water Port facility at Fourth of July Creek, expansion of OCS activity locally, and improvements and additions to the small boat harbor and Seward Highway. Table VIII.4 shows selected responses to these and other questions included in this survey.

TABLE VIII.4: RESPONSE TO PRINCE WILLIAM SOUND TRANSPORTATION SURVEY PRELIMINARY TOTALS, 1978, FOR SEWARD

1. Do you favor moving the airport to an area further north of the city?

   yes - 39 percent no - 61 percent

2. Do you want to have a deep water facility to handle industrial activity?

   yes - 86 percent no - 11 percent*

3. Do you want the small boat facility in Seward to be expanded?

   yes - 79 percent no - 14 percent*

4. Do you want more Outer Continental Shelf (OCS) development?

   yes - 77 percent no - 23 percent

5. Do you favor improvements to the Seward Highway?

   yes - 97 percent no - 3 percent

12. What if you paid $100.00 in taxes to improve transportation services to your community, how much of the $100.00 would you spend for improving each of the following?
(First five ranked)

   1. local highway improvements
   2. new regional highways
   3. other
   4. waterborne freight service
   5. passenger ferry service

*Percentage totals do not add up to 100 because of exclusion of "don't know" responses.

Source: Preliminary tabulations by City of Seward based on Prince William Sound Transportation Survey questionaire, July 1978.

THE POLITICAL SYSTEM

Seward is a home rule city incorporated in 1912. It has a City Manager form of government with an elected Council of seven members. The 1978 Council consisted of three small business owners, a plumber, a federal employee, manager of the local lumber mill, and the local hospital administrator who also serves as Council representative to the Kenai Borough Assembly. (Another Borough Assemblyman from Seward does not serve on Council). Recent elections have added a voice for both Native and fishing-harbor interests and small business while reducing somewhat the representation of environmental and older resident opinion.

Like Valdez before pipeline construction began, Seward in 1976 had a relatively small city administration managed by a City Manager of long tenure who conducted much of the city's business personally. With concern for OCS impacts and the City's preparation for impact, the Council decided upon a new City Manager, who had himself been a businessman, was a former Kenai Borough Assembly President and active figure in Kenai Peninsula politics. With this choice, the City of Seward began an accelerated program of preparation for OCS and other potential impacts including the upgrading of sewer, water and electrical capacity, and the preparation for moderate to high growth potential. The choice of Assistant City Manager was a local Seward man who had spent years working for Senator Ted Stevens and was similarly familiar with the State bureaucracy. With the former mayor of Seward now holding a top State post and a former Seward teacher as Borough Mayor, Seward's political linkages

at the state and local level were excellent.

These linkages at the federal, state, regional and Borough level provided the structure within which the community of Seward could act swiftly when an opportunity presented itself. OCS began to provide this opportunity in early 1976 but it was not until mid-1979, with announcement of Danish-Alaska shipyard plans, that Seward's efforts to attract major new development to the community began to solidify. Further discussion of this process, starting in early 1976, can be found in Chapter Nine.

SUMMARY

Seward's population declined slightly from a high in 1950 of slightly over 2000, to between 1900 and 1500 since that time. Housing construction has been slight inside the City encouraging some growth outside the City limits.

Seward boasts a large number of active organizations and clubs, many of which have a continuous history since the City's founding. Sports clubs, fraternal organizations, churches and the celebration of holidays and community events tie individuals into a cohesive social structure in which common values are shared and reinforced. The Seward value system appears to encourage activism, public spirit, ambition, helpfulness and "good works" while discouraging other values. Most people in Seward participate in a family-centered small town lifestyle. Social ranking includes distinctions based on political affiliation and activism

primarily, with a few “old families” also prominent. Changes in the political system indicate a shift toward more active promotion of Seward after more than a decade of relative stability.

IX. SOCIAL CONFLICT AND SOCIAL CHANGE IN SEWARD

INTRODUCTION

This chapter reviews economic and political change in the last few years in Seward focusing on Seward's changing economy and relationships with the Kenai Borough and to a lesser extent with Chugach Region. In addition, a discussion of social stress indicators including police and court statistics and statistics on levels of mental illness and alcoholism are presented as well as measures of successful adaptation to change.

ECONOMIC FORCES

After the 1964 Earthquake, Seward's leaders began the long road toward rebuilding their community and regaining industrial and government employers to again stabilize their economy. The ferry "Tustamena" established Seward as home port in July 1964, only months after the disaster. The Alaska Railroad dock was rebuilt and relocated as were the small boat harbor and related facilities. In 1965, the Coast Guard cutter "Sorrel" located in Seward and in 1968, the research vessel "Acona" of the University of Alaska's Institute of Marine Science selected Seward as home base. The Institute also began expansion of laboratory and marine science programs there. Scallop fishing was also encouraged for a time in the 1960's, involving the migration of several fishing boats from the New England coast.

In 1970, Petersburg Fisheries bought the city-produced Halibut Producer's

Cooperative Cannery which had been built in 1965 to encourage fisheries in Seward. Also in 1970, Seward Skill Center, a new vocational-technical school initiated by the Alaska Department of Education, opened in Seward.

In 1973-74, the Kenai Lumber Company's headquarters were established in Seward providing year-round employment for lumber milling operations and increased dock activity associated with lumber shipments. According to Eckland, in 1976 wood materials accounted for 60 percent of the total tonnage across Seward dock (Eckland, Draft Working Paper Number 2, P.15).

By the mid-1970's, Seward's dock and port began to feel the impact of the trans-Alaska pipeline project, as bulk shipments of mobile homes and other construction materials landed in Seward for rail shipment to pipeline construction sites. (Eckland, P.15-17)

OCS supply base activity began to stimulate the economy of Seward in 1976 and 1977 as it became the service base for an estimated 10 supply boats for off-shore oil exploration in the Northern Gulf and the base for weatherizing the two locally based rigs. As much as 25 percent of the supply boat crews were hired locally, according to local sources. Welding and metal work associated with weatherizing off-shore oil rigs added an additional 12 employees to a local welding shop in 1977. Laundry, fuel and grocery payrolls increased with OCS exploration. Supply boats based in Yakutat stopped in Seward occasionally during 1977 and 1978 for repairs and maintenance. Dresser-Magcobar's barite supply operation employed 10 local residents in 1976-78, according to Dresser's Anchorage office.

Seward Fisheries began expansion of local plant capacity during this period as well, with addition of equipment to handle fish meal production and expanded freezer capacity. Plants in Homer and Ninilchik and additional leases in Seward suggest expansion of plant facilities will keep pace with other growth encouraged by the 200 Mile Limit.

In 1978, the U.S. Forest Service established its largest Y.A.C.C. camp in Southcentral Alaska in Seward, thereby becoming the largest single Federal employer in Seward with an estimated 32 full-time and 16 seasonal employees. (Alaska Consul tants, Working Paper Number 6) This temporary camp facility has capacity for 100 enrollees engaged in trail construction, camp ground maintenance, fishery enhancement, habitat improvement and related activities. (Clay Beal , Chugach National Forest) With the closing of the Cordova Y.A.C.C. camp in February 1979, the Seward facility became headquarters for Chugach Forest Y.A.C.C. activities, rotating crews to Cordova and other sites within the forest. (Ron Quill ium)

Table 9.1 shows the steady growth of total employment and civilian work-force in Seward since 1970, peaking in 1976. The peak unemployment experienced in 1976, according to local sources, led to migration out of the community of some of the unemployed, particularly dockworkers.

TABLE IX.1: CIVILIAN WORKFORCE TOTAL EMPLOYMENT AND UNEMPLOYMENT LEVELS, SEWARD LABORMARKET AREA. 1970-77

	CIVILIAN WORK FORCE	EMPLOYMENT	UNEMPLOYMENT	UNEMPLOYMENT RATE
1970	1001	841	160	15.0
1971	1110	932	178	15.0
1972	1149	959	190	15.5
1973	1231	1028	203	16.5
1974	1022	876	146	14.3
1975	1325	1212	113	14.3
1976	1669	1449	320	13.2
1977	1539	1326	213	13.8
1978				
Jan.	1426	1159	257	18.0
July	1683	1479	204	12.1
Nov.	1639	1369	270	16.5

Source: Neal Fried, Alaska Department of Labor, Research and Analysis Section, Anchorage, telephone conversation of January 29, 1979, based on revised Labor Force estimates by area and Employment by Industry 1970-77.

RESPONSE TO OCS EXPLORATION

In May 1976, a local resident and Mayor Don Gilman of the Kenai Borough traveled to Yakutat to attend an OCS Impact meeting attended by representatives of other coastal communities. Local discussion of this meeting focused on three issues significant to Seward's preparedness: annexation of industrial land suitable for OCS development at Fourth of July Creek,

increasing the City's water capacity, and preparing for impact in approximately two years (Seward Phoenix Log, May 13, 1976). In June, Dresser Industries began negotiations with the city to lease land at the Seward dock for a barite mill and OCS service facility. Also in the fall of 1976, Dresser Industries hosted the visit of six Seward residents to the barite milling facilities in Texas to acquaint the group with Dresser plans for a comparable plant in Seward should exploration in the Gulf prove successful (Seward Phoenix Log, June 17, 1976).

In August the city tried to annex areas north of the city against heated objections by local residents. Statements during the discussion indicate the city's thinking with regard to OCS development:

> Annexation is the most sensible route to proceed. It allows for planning so the ultimate cost does not go up five to ten fold because of lack of planning...We have examples of positive planning in Valdez. I think this is where we are at. We're going to be impacted by off-shore oil. It is slowly descending on us. Property values have gone up and you know where it's going to 1 cad. So Council decided the best thing we could do is prepare for this growth. That's what we are attempting to do. (Statement by Mayor Neve, quoted in the Seward Phoenix Log, August 12, 1976.)

In November, Exxon representatives came to talk with a local Chamber of Commerce audience detailing their 30 acre lease south of town and outlining their plans to use two 210 foot workboats in supplying the Alaskan Star rig soon to begin drilling operations in the Gulf (Seward Phoenix Log, November 18, 1976).

In December 1976, Kenai Borough Mayor Don Gilman testified in Washington D.C.

before the House Oceanography Committee in favor of the CEIP program to plan and prepare for coastal impacts. Two Anchorage-based banks planned additions in Seward in 1976, and accounts of Seward's supply base potential were the subject of state-wide speculation concerning potential airport and dock expansion and land leases (Seward Phoenix Log, November 18, 1976) .

In January 1977, the City of Seward hired a new City Manager stating in part: "We need someone who is familiar with the Borough, state and municipal government. . . someone who understands the problems of growth impact." (Seward Phoenix Log, January 6, 1977.)

By March 1977, the Alaska Legislature had authorized Seward's annexation of Fourth of July Creek industrial area, and in April 1977, Seward Skill Center began offering an Oilfield Utility Technology program to meet the growing need for oil-related technicians ("Alaska Skill Center," Alaska Economic Trends, May 1977).

By this time, the Kenai Peninsula Borough had formed a Rural Development Council, Mayor Gilman was actively involved as a member of the Coastal Policy Council in coastal planning, and the Kenai Peninsula Borough - through assistance from the National Oceanographic and Atmospheric Administration and the National Coastal Management Program - had undertaken population and housing surveys and community profiles in each of the five towns of the Kenai Borough as the basis for planning for potential OCS development.

By mid-1978, most of the OCS activity which had occurred during 1976 and 1977 had crested. Dresser's lease was still in effect although plans to construct their barite mill had been postponed. Exxon still stored drilling pipe on land leased north of town. Other oil company land leases continued as well. The extent of impact on the community, as measured by assessments from various members, appeared to have been noticeable but certainly not excessive. City water delivery to supply boats was stressed while laundry, fuel, food and other services to the supply boats had been relatively easily accommodated.

Surprise at the low level of impact associated with exploration in the Gulf reinforced community sentiments in favor of increased growth for Seward, encouraging other promotional activities in other industries. In 1977, hotel and motel owners joined together in promoting further tourism for Seward, and by 1978, the Ad Hoc Committee had been formed and the Council and the community began the active promotion of Seward as a Gulf port and service center along with plans for expansion of service, boat maintenance and repair facilities. The community bid on the potential site for the Alpetco refinery and cooperation gained from the Alaska Railroad on this project has since encouraged city thinking about other projects in which the railroad's role in Seward's economy might be expanded.

By the fall of 1978, Alpetco had narrowed the choice to Kenai and Valdez, and a level of despondency settled over Seward. The Antiquities Act withdrawals and RARE II planning process further added to uncertainty surrounding land decisions in the Prince William Sound area which would

affect local timber resources. Mill operation and uncertainty about potential success in further Northern and Western Gulf OCS activity was heightened by the lack of success in 1976-78 exploration in the Northern Gulf. According to several residents, when the final rig left Resurrection Bay in December 1978, few noted its departure until weeks after it had left. Some typical comments were:

> "We lost a little more when the oil was gone, that's all."
>
> "The impact was more visual than anything economic."
>
> "Seward needs to grow. The things Seward has don't seen to pan out."
>
> "People realized after the last boat left how much work had left. They became despondent. "

LOCAL FISHERIES

For a number of reasons, Seward has long had a relatively stable but small fishing fleet. Through the years, competition with sport fishing enthusiasts has kept the port largely a sport fishing center while still providing room for halibut boats from Seattle and Canadian waters. According to the local Alaska Fish and Game representative, himself an employee of the Sport Fishing Division, Resurrection Bay yields an average of 20,000 silver salmon yearly in sport fishing and another 2,000 in mature King salmon. Salmon enhancement activities both by the University's Institute of Marine Science and the Alaska Department of Fish and Game should add to local salmon stocks in the future, but are not expected to approach catch levels in either Prince William Sound or Kachemak Bay (T. McHenry).

While Seward's share in the Alaska salmon fishery is still relatively small, its share of the halibut fishery is greater. This fishery, regulated by the International Halibut Commission is, however, relatively independent of other fisheries and provides little need for interaction with fishermen more specialized in the salmon fishery. Fishermen in Seward appear to have limited contact with salmon fishermen based out of Cordova or Cook Inlet-Kachemak Bay for example. There are no local fishermen on either the Prince William Sound or Cook Inlet Aquiculture Corporation's boa rds. On the other hand, Seward has one of the few groundfish sport fisheries in Alaska. As estimated 20,000 man-days of groundfish caught in 1978 is equal to the Seward Salmon Derby's sport fishery (Gulf of Alaska Groundfish Plan, 1978, P.126).

The Seward share of Alaska halibut cannot be precisely determined since Seward and Kodiak fishing statistics are combined, yet the Gulf of Alaska Groundfish Plan published in early 1978 indicates that "The greatest proportion of halibut taken by U.S. and Canadian nationals in the northeast Pacific and eastern Bering Sea came from the Gulf of Alaska. During the period 1955-75, between 65 and 80 percent of the total halibut landed came from the Gulf of Alaska." (Gulf of Alaska Groundfish Plan, 1978, P.19)

The American halibut fishery has been undergoing a relatively steady decline in catches since the mid-1940's. With declining catches, the Alaskan portion of all halibut caught has increased; however, with increased foreign trawling for bottomfish species, among other factors, even Alaskan halibut catches have declined. According to Sea Grant's report, in 1932 Alaska halibut

represented 40 percent of all halibut caught. By 1976, Alaska halibut were 48 percent of all halibut caught (Alaska Sea Grant, Working Paper Number 3, Volume 1, Table 9)

In spite of Alaska's share of halibut caught, the actual Alaska catch since 1961 has declined from 51 million pounds to 17 million in 1977 according to Alaska Department of Fish and Game statistics (Alaska Sea Grant: Table 14).

RESPONSE TO THE 200 MILE LIMIT

The passage of the 200 Mile Limit law in 1976, while not ignored in Seward, was probably overshadowed there by news of potential OCS development along the Gulf and the presence in Resurrection Bay of off-shore rigs. In these early years of change in fisheries management, Seward was preparing its sewer, water and electrical system for potential expansion, reducing mill rates to encourage housing expansion, and preparing for development of the Fourth of July Creek site recently annexed by the city. Revisions to the zoning ordinance and an update of the current land use plan were also initiated. Public opinion was slowly shifting toward the benefits of the oil development already enjoyed in Kenai and Soldotna. Local participation in OCS activity, although relatively slight, still encouraged plans for further participation should major oil finds accelerate development.

With the disappointing results of early OCS exploration, Seward's Ad Hoc Group and the city administration began the active promotion of Seward as

a site for light industry, bottomfish development, dock and port services. Contacts with the Port of Portland were initiated, a study of other southcentral port rate structures was undertaken and additional meetings and discussions were held with state agencies, industry representatives and others concerning Seward's growth potential. A growth strategy study was authorized along with other feasibility studies and improvements in preparation for increased growth.

With increasing state and industry discussion and activity involved in the emerging Alaska-based bottomfishery, Seward's potential as a port became more prominent. Icicle Seafoods, Inc. of Petersburg, parent company of Seward Fisheries, has been at the forefront of processor interest and activity in the expanding bottomfishing industry with a demonstration project underway at their Kodiak Cannery (Kodiak Mirror, August 17 and 29, 1978). Seward Fisheries' initial halibut processing plant in Seward has since expanded to handle larger quantities of frozen fish and has added equipment to convert fish wastes to fish meal. Dockside leases, obtained in 1979 show interest in additional plant capacity to process bottomfish once demand warrants.

Danish consultants involved with the state in a Danish-Alaska Bottomfishing Task Force group toured Seward Fisheries facilities and Seward in mid-1978 as part of a study of potential sites for Danish-Alaska cooperation in on-site development of Alaska bottomfishing capacity. Following these site visits, a Danish Consultant's report indicated that Seward"was one of five Alaska sites favored by the Danes as having the best potential for future

expansion of the bottomfish industry.

By mid-1979 this report and subsequent negotiations with state industry and Danish officials led to announcement of a major shipyard to be built in Seward. Plans call for a dry dock for servicing and repair of OCS and fishing vessels by the early 1980's. Conversion of present fishing vessels to bottomfishing capacity and new vessel construction are both planned as are satellite operations for on-site emergency repairs at Dutch Harbor, along the Aleutian chain.

Present plans by the city provide for addition of sewer, water and electricity to the Fourth of July Creek site. Planning for the development of the small boat harbor facilities authorized by the fall 1978 state elections includes possible location close to the shipyard site as well as planned berths to accommodate the large bottomfishing vessels anticipated.

As in the case with early OCS planning, the Seward Skill Center plans to provide training for shipyard employees, with technical assistance from Danish firms involved in developing the shipyard facility.

Seward's plans for the development of a shipyard by the early 1980's shows interest in accomodating both the fishing and OCS industries. Provision for support of OCS supply boats and expansion in keeping with development of off-shore oil in the Gulf appear to be consistent with the city's current growth strategy.

The local newspaper's discussion of Governor Hammond's announcement of plans for the shipyard clearly indicate the cultural and historical context in which this decision is viewed locally:

> "The first ship built on the West Coast of North America was the Phoenix, launched by Russian shipwrights at Tonsina Point. That date was 1794, before there was a town on the shores of Resurrection Bay. But ships will once again be built along Resurrection Bay in the 1980's with the announcement of a major ship-building facility to be located here." (Seward Phoenix Log, June 28, 1979)

KENAI BOROUGH CONTEXT

Seward's decision to bid on the Alpetco refinery and its increasing assertiveness in fighting for inclusion in port and harbor facility siting studies planned for the Cook Inlet harbors may have altered an older image of the town in the context of the Kenai Peninsula Borough. At the same time, the growing populations and economies of Kenai, Soldotna and Homer and the unincorporated areas surrounding these towns add to the competition between them and Seward in Kenai Borough politics. The limited powers of the Kenai Peninsula Borough and Seward's own isolated location tend to encourage a degree of home rule sentiment locally which spurs efforts in obtaining grants, programs, and other benefits for the city above and beyond those available solely through the Kenai Peninsula Borough, its staff or the local political process.

On the other hand, Seward's linkages to Borough and State government have no doubt facilitated a number of utility and public facility expansion projects for Seward which might not have been possible outside the Borough

context. School construction and road paving projects completed in Seward were completed under Borough auspices. CEIP funding, administered at the Borough level, has benefited all the towns of the Borough with planning tools for facility and utility expansion. OCS planning studies were completed for all of the major towns of the Kenai Borough with funds provided under the federal Coastal Zone Management program.

The political sophistication of current Seward leaders provides the necessary balance for the home rule sentiments of a locally isolated population which is nevertheless dependent upon Borough, State and Federal agencies and departments for many of its daily needs. An appreciation, too, of Seward's interdependence with Anchorage is clear from announcement that one of the individuals most pleased by Seward's shipyard plans is Anchorage Mayor George Sullivan. (Seward Phoenix Log, July 26, 1979)

CHUGACH REGIONAL CONTEXT

In 1976, Chugach Natives, Inc. acquired close to 150 acres of residential land in Seward and made known their intention to develop some of this residential property in a series of newspaper advertisements and appearances before Council. A marine motel, townhouse development and lots in a local subdivision were all planned in 1976. By 1978, none of these projects had been developed and there was some disagreement as to why. A change in leadership at Chugach Natives, Inc. was part of their decision to sell lots formerly considered for development, once city zoning restrictions concerning the extent of development before sale was known. The townhouse development

is still stalled, although it too was sold by Chugach Natives to another developer after obstacles to completion were encountered. The marine motel was developed by another party, presumably after obstacles to the land purchase were encountered by Chugach Natives, Inc. While the Corporation still ownssubstantial land in Seward, and while there is interest in developing land within the Region, these and other setbacks tend to encourage investment in Anchorage at the expense of local development that might be of benefit to the community.

The recent difficulties encountered by Chugach Natives, Inc. are part of a changing land use pattern in Seward that has encouraged a rethinking of land use boundaries, zoning decisions and other issues relating to City and Borough zoning powers.

At issue in part is the expansion of the city to accommodate new industrial development while at the same time maintaining the compact historical townsite and central business district. Opposition to multiple unit development, concern over commercial "strip" development and related land use issues surfaced in recent meetings to discuss revisions of Seward's land use plan. (Susan Brody, Tom Small, CH2MHill)

LAND STATUS CHANGES WITHIN THE BOROUGH

Another land issue which may prove significant to Seward is changing land status within the Kenai Peninsula Borough. At the present time, the State of Alaska owns 5.2 million hectares (2.1 million acres) in the Kenai

Borough of which the Borough is entitled to 384,932 hectares (155,780 acres). According to newspaper accounts, approximately 61,775 hectares (25,000 acres) of land to be nominated by the Borough is in the Moose Pass, Cooper Landing, Hope, and Seward areas (The Peninsula Clarion, ''November 30, 1978 and January 11, 1979).

According to State Division of Lands representatives, land in the immediate Seward area open to State selection from Chugach National Forest is 21,784 hectares (8,816 acres) while Seward is entitled to select 647 hectares (562 acres) from state lands surrounding Seward. Some of this land is not suitable for development which may create potential conflict (S. Heikala). Seward has also nominated 1,976 hectares (800 acres) at Fourth of July Creek from land presently controlled by both the Bureau of Land Management and the Borough. Recent newspaper accounts suggest that the state, Borough and Cook Inlet region may soon exchange lands to permit acquisition of additional lands in the Fourth of July Creek area, for harbor siting (The Peninsula Clarion, March 23, 1979).

Other Land Issues

Land issues are by far the most controversial issues now facing communities within and surrounded by Chugach National Forest. This report only touches on the impacts already evident from land conveyances and conflicts associated with Native land claims, and to a lesser extent, Borough and Municipal land selection issues. Beyond these areas of potential and actual conflict looms the issue of settlement of National Interest Lands (D-2) now before Congress, including final decisions concerning President Carter's National

Monument Decisions, announced in late 1978.

The controversy surrounding these measures all over the State of Alaska is now widespread and is beyond the scope of the present analysis. At the time field work was completed, Seward residents were unwilling to discuss National Monument designations or RARE 11 designations without more information. There was still a state of shock evident in fleeting discussions which did occur. The federal presence was keenly felt and deeply resented by most of the people who would discuss these issues at all. In deference to these feelings, little discussion was attempted.

The U.S. Forest Service recently released a Final Environmental Impact Statement concerning lands in Chugach National Forest classified under the pending Roadless Area Review and Evaluation (RARE II) designation. This comprehensive review initiated nationally in June 1977, has classified over 3 million acres within Chugach National Forest as either wilderness, non-wilderness or proposed for further study. In the Seward area, approximately 617,750 hectares (250,000 acres) northwest and northeast of Seward are classified non-wilderness, while the remaining land within the RARE II classification system around Seward is proposed for further planning.

Under National Interest Lands (D-2) legislation now before Congress two land areas bordering Seward are being considered for their recreational or wilderness value. One proposal would designate most of the land north of Resurrection Bay from the Russian River to Paradise Valley, and including lands surrounding the communities of Moose Pass and Whittier as

a National Recreation Area. The other would designate the Nellie Juan glacier in Prince William Sound a wilderness area.

SOCIAL AND INDIVIDUAL STRESS INDICATORS

Individual Stress

One of the indicators of a city's adaptability to potential rapid growth is its present level of social and individual stress. Tables 9.2 and 9.3 show the most current mental health and alcoholism rates for Seward. For its size, Seward has a rather high rate of admissions -toAlaska Psychiatric Institute - the state's only psychiatric institution. According to talks locally, this may in part be due to a relatively low level of tolerance in Seward for strong deviation from community norms. The rate of admission to community mental health facility-sponsored counseling programs is also quite high. A total of 153 cases were seen at this facility in 1978. Of these cases, 54 (or 34 percent) were diagnosed as alcoholics, with marriage and teenage counseling consuming another substantial caseload (transient situational disturbances and social maladjustment without psychiatric disorder).

According to the Alcoholism Center, talks in the local high school in 1978 suggest that about 25 percent of local high school students admit to a drinkin problem. Among adults, the number of social functions involving alcohol consumption contributes to the problem. The Center estimates that most families in Seward are touched by alcohol ism. There are four local Alcoholics Anonymous groups as well as an Alanon group. (G. DeGoorer) As in other

small towns in Alaska, winter and times of rising unemployment are especially conducive to heavy drinking. Statistics on youth alcoholism do suggest that Seward's alcohol problem is becoming more serious. While none of the alcoholism cases in 1976 or 1977 were in the 6-18 age levels, in 1978, four cases were treated in this age group and two additional cases had alcoholism as a second diagnosis. In fall 1978, an additional counselor was hired for the Center. While additional staffing no doubt contributes to better reporting, the real need in Seward appears evident.

Social Stress

In contrast to rather high individual stress indicators, social stress in the form of police and court cases is not particularly high in Seward, compared with other communities of its size. In part because of fairly strict law enforcement locally, arrests have increased from 260 in 1974 to 511 reported in 1977, an increase of 96.5 percent. An examination of Court records for January and July 1977, indicate minor property offenses and alcohol-related crime are common arrests in Seward. A local ordinance against drinking alcoholic beverages from an open container resulted in many young adult arrests. Negligent Driving and Operating a Vehicle While Intoxicated were the two most frequent adult crimes. During both January and July 1977, however, no felonies were reported.

Separation of Skill Center students in particular from the rest of the community may contribute to drinking problems and is the source of some community concern. The lack of a formal entry process into the community, as would be the case with "initiation" rites during the freshman year of

TABLE IX.2: A.P.I. ADMISSIONS, SEWARD, 1976-1978

YEAR	RACE			AGE				SEX		
	W	N	O	5 & Under	6-18	19-60	61 & Over	M	F	TOTAL
1976	8	6	0	0	0	9	1	13	1	14
1977	14	6	0	0	2	18	0	13	7	20
1978	18	4	0	0	0	20	2	16	6	22

Source: Tabulated from special computer tabulations provided by Alaska Department of Health and Social Services, Mental Health Information System, October 4, 1978.

TABLE 1X.3: COMMUNITY MENTAL HEALTH ADMISSIONS, SEWARD, 1976-78

Y EAR	RACE			AGE				SEX		
	W	N	O	5 & Under	6-18	19-60	61 & Over	M	F	TOTAL
1976	25	12	3	0	8	33	1	18	22	43
1977	93	12	0	2	29	79	0	56	55	112
1978	115	37	0	1	29	115	1	73	72	153

Source: Tabulated from special computer tabulations provided by Alaska Department of Health and Social Services, Mental Health Information System, October 4, 1978

TABLE IX.4: ARRESTS IN SEWARD 1974-1977, BY MONTH

	1974	1975	1976	1977
January	17	13	21	35
February	14	3	11	31
March	32	16	26	46
Apri 1	32	33	18	52
May	28	35	65	64
June	22	26	44	46
July	16	38	75	67
August	19	49	46	38
September	28	33	32	53
October	23	20	16	26
November	17	20	16	26
December	12	26	30	21
Tota 1s	260	312	410	511

Source: Chief Bencardino, Seward Police Department, July 11, 1978.

high school for example, may promote greater feelings of alienation between the town and the students than would otherwise be the case.

Talks with Mt. Marathon Association members and staff and students at the Skill Center suggest that the six month period of most Skill Center programs is insufficient to promote more active involvement in the community's social life. Programs at the Center tend to provide sufficient recreational outlets for students and course work is quite extensive. Since most of the Skill Center students come under subsidized programs aimed at providing workable skills to otherwise disadvantaged students, there may be a slight stigma attached to students themselves which strains community-student interactions.

Like workers in a camp setting, there is a social distance which has developed over time between the town and the students at the Center that is not volatile, yet tends to encourage separate recreational and bar activity. Members of Mt. Matathon look forward to a separate Teen Center and community identity due, at least in part, to the slight stigma associated with too close association with the Skill Center and its predominantly village Native population group.

DISINTEGRATIVE FORCES

Like other small towns along Alaska's coast, Seward has a history of drinking behavior and alcoholism that concerns many in the community. The number of bars per capita, while balanced by at least as many churches, is quite high. Elements of the social structure of Seward also tend to

encourage social drinking which in turn encourages excessive drinking by some. Other mental health diagnoses and local youth and adult crime appear to be related to alcohol consumption. While Seward is certainly not unique in its high alcohol consumption, many in the community appear concerned-about this problem.

With the increased growth anticipated should construction of a shipyard take place in Seward, residents could experience a heightened period of stress related to increasing noise, community disruption and reduced tranquility commonly associated with major construction projects. While this stress would no doubt alter long established patterns of small town interaction, shopping and other daily routines, the stimulus to the economy and reduced unemployment could also encourage reduction of current high levels of alcohol consumption by providing alternatives to heavy alcohol use.

SUMMARY

In 1976, with anticipations associated with OCS leasing in the Northern Gulf, Seward began planning for impacts. A new City Manager and Assistant City Manager were hired, both of whom were politically sophisticated and able to respond to rapid growth, should it occur. With anticipations associated with the 200-mile Limit law, the community also responded by actively promoting development for Seward. Recent announcement of a Danish-Alaska shipyard project may be the result of these efforts. Shifts in public opinion and recent Council elections indicate wide-spread support for increased growth and development.

Land issues in Chugach National Forest with RARE II designations and President Carter's Antiquities Act withdrawals affect Seward. No village selections under ANSCA directly affect Seward.

Seward's value system appears to support an activist, public-spirited ethic. Unemployment, relative inactivity in winter and strong community norms and values all contribute to relatively high individual stress levels, particularly alcoholism. Social stress in the form of crime or delinquency are not high.

APPLICATION OF SOCIOCULTURAL CATEGORIES TO SEWARD

In the introductory chapter, 15 sociocultural categories were presented as part of a methodology for the impact assessments. The following discussion focuses on the application of these categories to the Seward case, as detailed in Chapters seven, eight, and nine.

1. Community Isolation - Seward's relative isolation is a central factor in its present seasonal economy, and yet these economic constraints are balanced by a quiet small town lifestyle highly prized by Seward residents.

2. Coastal Location - Seward's location on the coast is necessary to both the OCS and fisheries-related growth it seeks.

3. Wilderness Setting - While Seward's population is not heavily dependent upon subsistence activities, the wild and scenic environments surrounding Seward sets the community apart from more urbanized places of Southcentral Alaska. Pending wilderness designations

on either side of Seward are a cause of community concern, primarily for their assumed negative economic consequences.

4. Cultural Heterogeneity - In Seward, the founding of the town by migrants and the relative recency of these migrations provides a cultural context favoring assimilation of distinct cultural groups. A common value system which has maintained itself over time appears to reflect this strong assimilationist tendency In the community.

5. Community Size - Seward's size appears to have fluctuated little over the last two to three decades, while other towns in the Kenai Peninsula Borough and metropolitan Anchorage have both grown substantially.

6. Cohesiveness - The cohesiveness of Seward is a central characteristic of the town.

7. Openness of Communication Channels - Seward's leaders act as "gatekeepers" to incoming communication, as is common in communities of this size.

8. Degree of Political Integration with Higher Levels of Government - Seward is well-integrated with Borough, State and Federal government. Yet this integration cannot compensate for economic forces outside the community's control.

9. Degree of Economic Integration with Regional and State Economy - Seward has a diverse government and recreation-based small town

economy. Yet without the dynamic growth-producing industries that have stimulated other towns and cities in Southcentral Alaska, Seward's economy remains seasonal with considerable winter-time employment.

10. Level of Local Unemployment - Unemployment levels are an incentive in Seward encouraging a community-wide growth and development sta rice.

11. Community Age Distribution - Seward's older residents value their quiet small town lifestyle, yet the cohesiveness of Seward appears to inhibit opposition to the community's growth and development stance.

12. Educational and Skill Levels - Seward's high government work force and many small businesses provide a ready management resource locally. Assessability to Anchorage and programs of the Alaska Skill Center also provide a ready labor force for non-managerial occupations.

13. Child-rearing Practices - This category does not appear in the analysis of Seward.

14. Community Conflict Resolution Methods - Seward's cohesiveness appears highly related to its present style of conflict resolution and community decision-making.

15. Community Mental Health - Seward's current mental health profile appears to selectively emphasize alcoholism and personal stress while showing few major crimes or instances of violence.

x. NON-OCS BASELINE FOR SEWARD

INTRODUCTION

This chapter reviews and summarizes the major themes evident in earlier discussions of Seward's economy, political system and social organization. It reviews the impacts on Seward associated with Lease Sale 39 and looks to the future without further direct OCS development impacts.

METHODS OF FORECASTING

Sociocultural Categories Applied to Seward

In the earlier description of the methodology used in this sociocultural systems analysis, 15 sociocultural categories were utilized as a framework guiding the analysis of the sociocultural systems of Cordova-Eyak and Seward. Some of these categories became more prominant in the analysis of Seward. Some of these categories were prominent in the analysis of Cordova-Eyak. Those categories which were utilized as variables in the analysis of Seward's social organization are implicit in the non-OCS forecast which follows. They are:

- Community isolation
- Wilderness setting
- Cohesiveness
- Community conflict resolution methods
- Degree of political integration with higher levels of government
- Degree of economic integration with regional and state economy
- Level of local unemployment

- Community age distribution
- Community mental health

Community isolation and wilderness setting define the environmental constraints for the community of Seward, yet these environmental constraints are mediated by greater access to the community by road and rail links not found in more remote communities along Alaska's coast. Seward's linkages to both political and economic structures within the Southcentral region also cushion the stresses on individuals and groups of outside forces when they impinge.

Unemployment, community age distribution and community mental health are three variables dependent upon the environmental, political and economic constraints of the community, yet mediated by its cohesiveness and its ability to constructively resolve conflict. These three variables pull the community back in the direction of its more static, stable influences while political and economic change in particular are drawing the community in the direction of growth.

Because of the importance of growth management and response capacity to an understanding of Seward's future, this topic is the first addressed in the following baseline case.

COMMUNITY RESPONSE CAPACITY

Response to the 1964 Earthquake

Beginning shortly after the 1964 Earthquake which virtually destroyed

Seward's economy, community leaders began the slow but steady effort to rebuild their economy and provide needed employment for the town. Docks and harbor facilities were rebuilt, tourism was encouraged, state government employment was encouraged. The community rebuilt over a period of approximately 10 years steadily adding new jobs and new employers. Yet there was still dissatisfaction with the loss of the preeminence of Seward's Dock in favor of the growing Port of Anchorage as well as resentment of the growth occurring along the Kenai Peninsula with the discovery and development of oil and gas resources.

The site of Seward had been chosen as a gateway to the rich agricultural and population centers of Southcentral Alaska. It had been the site of the first shipyard on American soil during the Russian domination of Alaska. But the devastation caused by the Good Friday Earthquake dealt a serious blow to Seward's economy and its preeminence as a port and transportation hub. With this devastation and with the growth of Anchorage which occurred and accelerated after 1950, former ports along the Gulf became increasingly dominated by the Port of Anchorage and, to a lesser extent, Whittier. Consequently employment levels and structure of employment reflected this change.

Seward's economy began to specialize more and more in recreation and tourism; first in response to military demand and later as a sport fishing and sailing capital for Southcentral Alaska. Government employment grew with the addition of University Marine Science programs, the Alaska Skill Center, U.S. Forest Service Y.A.C.C. Camp, Coast Guard facilities and ferry personnel.

As this specialization in government and tourism continued on the community level, less skilled local residents and young people in the community were often forced to leave or suffered long periods of winter unemployment. For those who stayed wintertime often meant a time of forced inactivity and, consequently, a time to socialize, drink and pass the time. Alcoholism became more of a problem. The population also began to age as young people left the community to find year-round work, and older residents stayed because of housing costs and their commitment to the community. By 1976, Seward had the longest mean length of residence of the five towns in the Kenai Peninsula Borough--slightly over 13 years.

The compactness of the central business district and strong community norms often discouraged more innovative and/or progressive business or union practices. City government was also maintained on a small scale. The lack of outside economic stimulus had a dampening effect on social and political life favoring tendencies within the community preferring order, the small town and a relatively static economy.

Seward is an "urban" small town. Of all the towns on the Kenai surveyed in 1976, Seward had the lowest subsistence score. Sixty percent of Seward residents surveyed stated that they obtained no food from subsistence pursuits. The remaining 40 percent obtained less than 25 percent from subsistence. Dependence upon a money economy, with relatively high unemployment created strong pressures on individuals and families. (Anchorage Urban Observatory, 1977: Table Appendix 98)

Fisheries and lumber milling operations began again in the early 1970's adding basic industry back to a largely government and service economy. Community leaders bid on the site for the trans-Alaska pipeline terminus, but the decision favored Valdez; however, Seward did benefit with the construction of the trans-Alaska pipeline. Its dock again was busy with unloading mobile homesfor sites along the pipeline and with handling other bulk cargoes destined for this huge construction project.

It was into this setting that off-shore oil discovery was first introduced in Seward--into an already expanding economy and a population long held back from earlier expectations by isolation from the oil and gas resources that had stimulated growth along the western Kenai, and were adding to the population of Anchorage as well.

Economic Impacts Associated With Lease Sale 39

During 1976 and 1977, the economy and population of Seward grew slightly in response to service demands associated with Lease Sale 39 in the Northern Gulf of Alaska. Dockside boat servicing businesses, city water, a laundry business, fuel, and to a lesser extent, groceries, were all provided to at least ten supply boats using Seward as their supply base. Rig weatherization for locally based off-shore exploratory rigs was done in a Seward shop. Diving services were provided locally by a firm which opened offices in Seward. Dresser-Magcobar, Inc., a large firm specializing in off-shore oil services with offices in Anchorage, began leasing land in Seward in anticipation of major service demands

should finds in the Northern Gulf lead to an off-shore oil development phase. During 1977-78, Dresser employed an average of 10 Seward residents in their barite supply operation. Local estimates suggest that perhaps 50 local jobs were created by OCS activity during the 1976-78 period. By 1978, most of this activity had slowed. In early 1978, only four supply boats were still based out of Seward and by the end of 1978 all these boats had left as had the two rigs used during unsuccessful exploration.

Social Impacts Associated with Lease Sale 39

In contrast to the relatively small economic impacts associated with Lease Sale 39, social impacts coupled with growth management decisions and the opportunities presented by the 200 Mile Limit Law and expanding bottomfishing industry in Alaska are perhaps more substantial. Seward's economy had long been tied to the tourism, government, military and federal economy of southcentral. Yet another component long absent in Seward but becoming dominant in the rest of the region - oil and gas - was absent. With OCS exploration, Seward residents were to experience contacts with the oil industry, the visual presence of oil rigs in their harbor, and a relatively benign growth impact. While many residents had feared the impacts associated with OCS development and reflected these fears in surveys conducted in 1976, by 1978 they had moved away from these fears toward a more positive attitude toward the oil industry.

These positive attitudes and experiences with OCS encouraged an

unsuccessful bid for the Alpetco refinery in mid-1978 now planned for construction in Valdez. They also encouraged further planning and promotion of Seward in the direction of boat servicing and repair both in anticipation of further OCS activity and to accommodate expansion of the fishing industry.

THE FUTURE OF FISHING

Although OCS anticipations provided the impetus for expansion of City services and planning in preparation for major growth, passage of the 200 Mile Limit Law may well provide a larger impact on the community than did OCS exploration. Seward's early specialization in the halibut fishery and the interest and involvement of Seward Fisheries in the expanding bottomfishery in Alaska bode well for Seward. The interest of the Danes in constructing a comprehensive shipyard-drydock facility in Seward suggests major development to come.

If Danish-Alaska negotiations are successful, plans to construct a major drydock capable of handling vessels up to 2,000 tons is planned. This dock would accommodate both OCS and fishing vessels in need of repairs and maintenance. Plans for vessel construction could add as many as 200 to 250 permanent workers to the Seward labor force. Related services and industries would also be encouraged. If these plans are successful, Seward could face a substantial construction labor force within two to three years, with additional permanent labor force to man the facility added later. Seward Skill Center is discussing training programs to train local Seward workers for these permanent jobs.

Local fishery expansion into bottomfishing has already begun with addition of a fish meal plant to process fish wastes. Expansion of processing depends upon an expanding fishing fleet with capability to handle bottomfish. With the interest and expertise of Danish consultants and firms and local Alaska interest, Seward could add to its economy and population from this expansion within 5 to 10 years.

Seward's cultural ties to the Aleutians could encourage transportation and other linkages to Dutch Harbor and other ports along the Aleutian Chain close to prime bottomfishing grounds. At the present time, some repair and maintenance work is already being performed in Seward for fishing boats out of Kodiak.

On the other hand, competition between Alaska ports for first consideration in an expanding bottomfishingindustry may slow Seward's initial growth from this source. Without a major shipyard or other growth stimulus encouraging related expansion of dock, servicing and transportation industries, Seward's economy and population may actually decline slightly until fishing industry expansion begins to add to the local economy and population.

FEDERAL EMPLOYMENT

The U.S. Forest Service's present Y.A.C.C. camp in Seward has added new federal employees and a significant camp population to the economy of Seward. Plans to construct a permanent facility north of Seward might reduce somewhat the beneficial impacts associated with this camp. On the other hand, the new facilities planned north of Seward would still

tie the camp to Seward for some shopping and after-hours recreational activity.

Park management associated with designation of Kenai Fjords National Monument could add a few new Park Service employees to the economy of Seward. Completion of improvements to the Seward Highway and increased interest in and publicity about this new national monument might add to the number of recreationists attracted to Seward. Pending D-2 and RARE **II** wilderness designations could also attract recreationists to Seward.

TOUR ISM

Tourism is likely to continue and increase with Federal monuments, recreation areas and wilderness designations, expanded boat harbor facilities and other services currently planned or available in Seward. Improvements to the Seward Highway during the summer of 1979 should improve access to the community, encouraging continued expansion of tourism out of Anchorage. Other plans by the City could increase Seward's tourist potential over the next 5 to 10 years. These expansions should maintain a relatively stable population dependent upon this industry.

OTHER EMPLOYMENT

Seward could continue to benefit from steady employment provided by its local lumber mill if present negotiations with the State to encourage local timber processing are successful. Current negotiations center on timber logged from Native-held lands permitting round log

export. Current Federal land decisions could also effect timber harvesting in Prince William Sound which could reduce available timber supplies. If these negotiations are not successful, it is likely that employment provided by this lumber mill would decline.

Seward should continue to benefit from the steady employment provided by the Coast Guard, Seward Skill Center, University Marine Science programs, commercial employment, local government and the ferry "Tustamena". In the absence of a major growth stimulus, such as the Danish-Alaska shipyard project, or further OCS development, these employers should maintain a steady population. Slight expansion of any of these employers would assure slow steady growth for Seward.

IMPLICATIONS

Ifa major shipyard is built in Seward over the next two to three years, there could be substantial growth in the economy, in housing and related services needed to expand Seward's current population and infrastructure. While political and economic infrastructure are presently prepared for this growth, some dislocations of the quiet lifestyle of current Seward residents could be anticipated. Older residents in particular might experience additional stress from construction noise, community disruption and crowding of community facilities.

Like the OCS scenarios discussed in the following chapter, growth anticipated for Seward with construction of a major shipyard could significantly reduce Seward's attractiveness to recreationists during the

peak construction associated with the facility. Expansion of housing to accommodate a potential permanent workforce of 250 employees might also disrupt the quiet lifestyles of Seward residents during peak construction. Expansion of community utilities might also cause some community disruption.

Expansion into bottomfishing might involve the community in on-shore processing to a greater extent than has been the case to date. With planned expansion of the Seward Small Boat Harbor to accommodate larger bottomfishing vessels, Seward might become a much more significant fishing port than is presently the case. While plans by the City appear to encourage cooperative relationships between fishery, OCS and sport fishing interests, management of these competing interests might be expected to increase.

TIES ALONG THE COAST

Seward's cultural ties to Seattle can be expected to continue, and could increase with increased fishing out of Seward. Ties to the Aleutians may also increase with expansion of bottomfishing along Alaska's coast. Relationships with lumbering interests in Southeast Alaska and government ties to Juneau would continue, as would ties to other communities along the route of the ferry "Tustamena".

REGIONAL TIES

Seward's ties to other communities within the Kenai Peninsula Borough should continue, in spite of competition associated with expansion of

Alaska's bottomfishing industry and a general decline in local economies associated with completion of the trans-Alaska pipeline project. Seward's status within the Borough with pending reapportionment may effect relationships with residents outside its city limits, encouraging new efforts to annex these areas.

Seward's close ties to Anchorage should continue and might actually increase with expansion of fisheries, construction of a shipyard or federal expansion. Seward's road ties to Anchorage, for example, could encourage expansion of local fish processing if truck and air transportation of fish become more common. On the other hand, if local expansion of commercial and professional services increase and become more competitive with Anchorage services, one might expect an increase in use of available local services.

As land status changes begin to approach resolution, tourism generated by federal designations and related developments elsewhere in the state might encourage expansion of the railroad's role in the Seward economy. As in the case of the trans-Alaska pipeline project, similar major construction projects in the state could include dock activity in Seward as well. On the other hand, if this activity does not increase, one might anticipate efforts by the city to take over control of the railroad's interests in Seward, particularly the dock and related leases.

SUMMARY

Seward's present economy combines federal, fisheries, government and recreation-related commercial and other services associated with Seward's

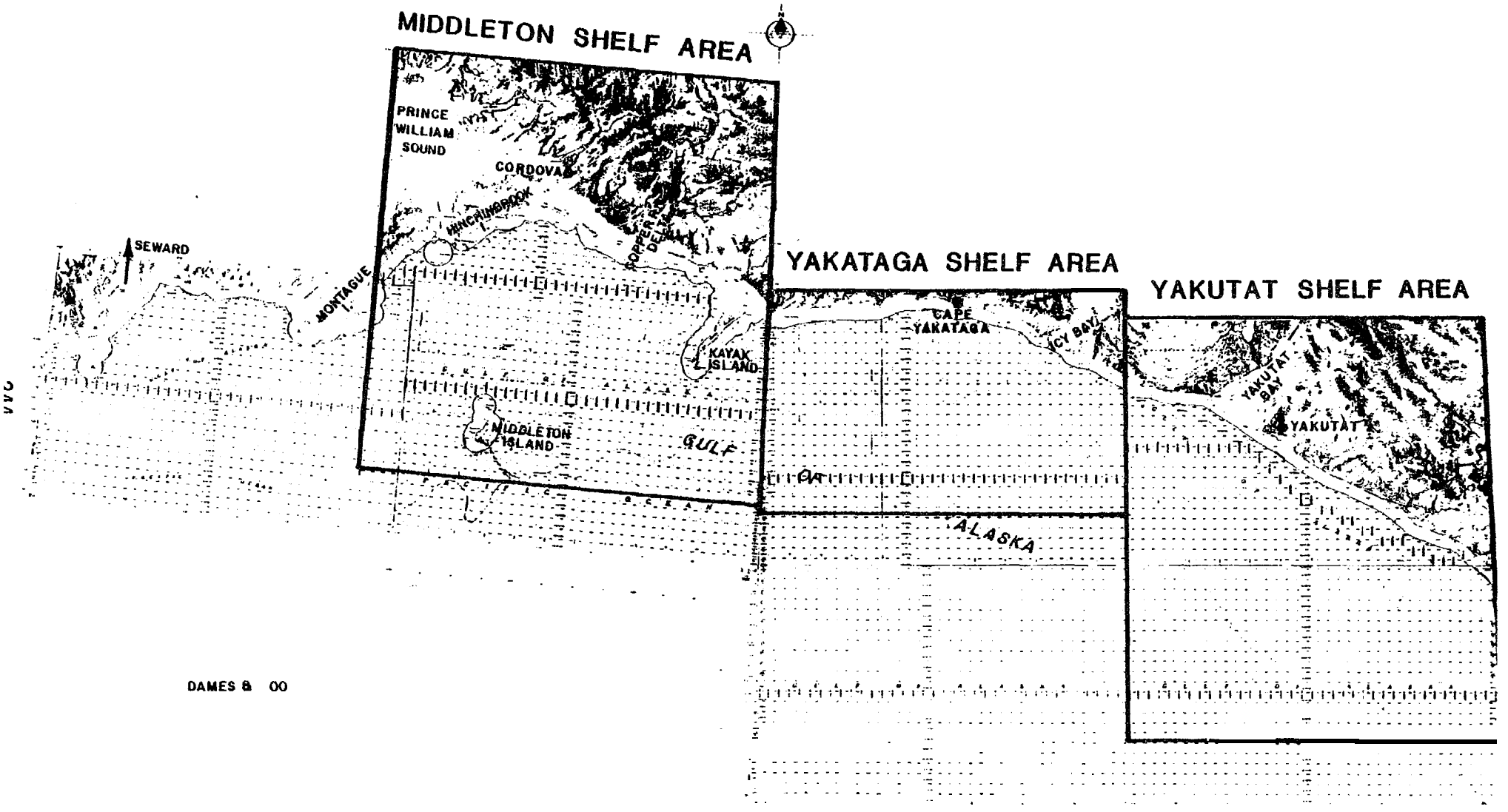
location as a sport and recreation center within the Southcentral economy and recreation system. Without further OCS development its most likely growth appears to come from expansion of a local bottomfishery and potential Danish-Alaska development of a major shipyard-drydock for boat servicing and repair and possible vessel construction. In the absence of a major growth stimulus, it appears Seward's economy and population will remain stable or grow slightly over the next twenty years. If the shipyard project is constructed in Seward, its population, economy and local infrastructure would be temporarily stressed but could accomodate this growth without long-term community disruption. As in the case of OCS development, short-term dislocations during peak construction years could be anticipated, with individual stress, particularly to older resident's perhaps the most likely short-term concern. As in the case of other projections, however, it is anticipated that the growth associated with a major shipyard would encourage other community efforts mitigating some of the negative impacts.

XI.. THE (ICS SCENARIOS FOR SEWARD

INTRODUCTION

This chapter presents the detailed methodology and projections of potential sociocultural impacts associated with three Outer Continental Shelf (OCS) petroleum development scenarios on the community of Seward. These scenarios were developed by Dames and Moore, based on oil and gas reserve estimates derived from the U.S. Geological Survey for gas reserves on the Middleton, Yakataga and Yakutat Shelves. These areas have been identified as the proposed basin for the Gulf of Alaska Lease Sale No. 55, currently scheduled for June of 1980. This sale is a second generation lease sale, having followed earlier exploratory drilling on leases sold in April 1976, as part of Gulf of Alaska OCS Lease Sale No. 39.

Based on U.S. Geological survey estimates, Dames and Moore project that under the 95% probability case (low case) no oil or gas reserves are anticipated in this basin. The high (5% probability) indicates 4.4 billion barrels of oil and 13.0 trillion cubic feet of gas reserves for the basin. Statistical means for both oil and gas reserves indicate 1.4 billion barrels of oil and 5.0 trillion cubic feet of gas reserves. Out of these resource estimates, three scenarios are presented for the study area: 5% probability, statistical mean resource levels and the 95% probability of no commercial discoveries resulting in exploration only.



MAP FOUR

LOCATION OF STUDY AREA

The resource estimates on which these scenarios are based are listed below:

	95% Probability	Statistical Mean	5% Probability
Oil (billions of barrels)	0	1.4	4.4
Gas (trillions of cubic feet)	0	5.0	13.0

Source: Dames and Moore, March 1979

In addition to the scenarios constructed by Dames and Moore, the socio-cultural systems analysis of Seward is dependent upon the additional analysis by Alaska Consultants, Inc., of the socioeconomic and physical systems of these two communities. Utilizing the Dames and Moore scenarios as their guide to on-site construction and other characteristics associated with differing levels of OCS development, Alaska Consultants produced labor force and population forecasts for each of the three scenarios. These forecasts provide a framework for assessing the magnitude of community sociocultural impacts to be anticipated with each separate scenario, and in conjunction with projections about types of development expected and timing of exploration and development by Dames & Moore are the core constraints around which the analysis is ordered. Simultaneous changes occurring which might influence sociocultural response (question 5 below) are provided by the assumptions used in the ISER statewide and regional

impacts analysis which provide a logical basis for projecting non-local development which might in turn add to population and economy in this town.

To summarize the different levels of analysis which lead to sociocultural projections for each of the three scenarios, five questions need to be asked. Each of these questions can be answered within the constraints of the set of assumptions and standards used by the sociocultural systems analysis itself or by other studies within the socioeconomic studies program to logically project sociocultural change associated with each of the three OCS scenarios and the non-OCS case. The five questions are as follows:

1. What are the most important changes likely to occur in the sociocultural system as a result of different levels of anticipated development?

This question directs attention to the earlier analysis of the on-going sociocultural system provided at the beginning of this report and the identification of key sociocultural variables for each town.

2* What are the resources of the sociocultural system which it can use to respond?

This question also directs attention to the earlier analysis of the on-going sociocultural system and the identification of key sociocultural variables for Seward.

3. What are the obstacles or limitations within the sociocultural system which inhibit successful response?

This question too finds its response in the earlier analysis of the on-going sociocultural system and identified key sociocultural variables (see

discussion below).

4. What are the major constraints outside the sociocultural system which, however, influence sociocultural response?

For the purposes of this study, these constraints are delimited by the ISER state-wide and regional projections, the Alaska Consultants population and labor force projections and the Dames and Moore scenarios for the proposed Lease Sale 55 in the Northern Gulf of Alaska.

5. What simultaneous changes occurring with OCS or without OCS development may influence response?

Again, for the purposes of this study, only those simultaneous changes treated in ISER assumptions which are the basis for state-wide and regional economic projections are used in the present analysis.

For each of the scenarios which follow, each of these five questions will be asked and answered within the limits of the standards and assumptions of studies used within the socioeconomic studies program and the analysis of the sociocultural system which has already been completed. The reader must keep in mind that the scenarios and subsequent analyses dependent upon them are in many senses hypothetical cases around which planning decisions need to be made within a logical framework of potential occurrence. Particularly with regard to sociocultural response, one at best attempts to project the range of responses the community is likely to experience in the process of responding to each hypothesized level of development. Yet the earlier analysis and the methods and standards used in projecting the non-OCS case for each community provide a framework for logical analysis of

each of the three OCS cases.

METHODS OF FORECASTING

Sociocultural Categories Applied to Seward

In the earlier description of the methodology used in this sociocultural systems analysis, 15 sociocultural categories were utilized as a theoretical framework guiding the analysis of the sociocultural systems of Seward. Some of these categories became more prominent in the analysis of the on-going sociocultural system of Cordova-Eyak, others were more prominent in the discussion of Seward's sociocultural system. Therefore, in the process of projecting the non-OCS case for each of these communities, only the most critical categories utilized in the on-going analysis of these two towns were actually used in assessing a non-OCS case. The process of understanding that occurred during field work and analysis of the on-going social organization of each town focused attention of a few key variables for each town which were critical to an understanding of its most recent response to OCS Lease Sale 39 and to other recent changes which have impacted each community. Utilizing this understanding of the key variables critical to each community, a projection was made of a most likely future for the community without further OCS development. This process will be repeated for each of the three OCS scenarios.

THE OCS SCENARIOS

The Ninety-Five Percent Case (low case)

Dames and Moore define this scenario as the "exploration only" scenario in which a high level of exploration activity is followed by no major finds sufficient to support a development phase. This scenario projects that 28 wells would be drilled with most interest centered around the Yakutat Shelf and a lesser number of wells drilled on the Middleton and Yakataga Shelves.

Population

Alaska Consultants project the population and employment of Seward under this scenario from 1981 to 1984. (Table 1) Their projections indicate an additional 32 jobs would be added to the Seward economy at peak exploration in 1982, with smaller additions to employment in 1981 and 1983. Population would increase from 2,736 in 1981 to 2, 912 in 1984. As in the case for Cordova, population and employment after 1984 would then be the same as for the base case forecast (Table2) which shows an anticipated growth in Seward area population from 2,896 in 1984 to a projected 4,393 in the year 2000. During peak employment and population growth in the early 1980's, Alaska Consultants anticipate an add-on population of about three persons for every job in Seward, while over the 1984-2000 period their projections assume a gradual decline in add-on population until 1992 after which it is assumed only 2.5 people per job would be added until the year 2000.

TABLE X1.1

FORECAST OF EMPLOYMENT AND POPULATION
95 PERCENT PROBABILITY RESOURCE LEVEL SCENARIO
SEWARD AREA
1981 - 2000

INDUSTRY" CLASS I F ICATION/YEAR	1981	1902	1983	1984	1985	1986	1987	1900	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	20
COMMODITY PRODUCING INDUSTRIES	256	258	279	324																
Agriculture, Forestry and f isheries	103	(104)	(120)	(140)																
Mining	3	(4)	(4)	(4)																
Manufacturing	121	(101)	(125)	(150)																
Cent rac t Construct ion	29	(49)	(30)	(30)																
DISTRIBUTIVE INDUSTRIES	522	539	548	549	1985 - 2000 is same as Non-OCS Case															
Transport at ion. Com- mun ica t ions and Public Util ities	81)	(91)	(89)	78)																
Trade	238)	(240)	(247)	253)																
Finance., insurance and Real Estate	(22)	(24)	(23)	(24)																
Service	(181)	(184)	(189)	(194)																
GOVERNMENT	414	423	431	438																
TOTAL EMPLOYMENT	1,192	1,220	1,250	1,311																
TOTAL POPULAT ION - SEWARD CI TY	2,058	2,103	2,135	2,191																
SEWARD ARCA	2,?36	2,796	2,038	2,912																

Source: Alaska Consultants, Inc. Table 67, March, 1979

TABLE X1.2

FORECAST OF EMPLOYMENT AND POPULATION
SEWARD AREA
NON-OCS CASE
1978 - 2000

INDUSTRY CLASSIFICATION/YEAR	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
COMMODITY PRODUCING INDUSTRIES	242	247	254	255	256	278	324	387	392	398	407	486	559	566	572	578	585	591	597	604	610	616	623
Agriculture, Forestry and Fisheries	(100)	(101)	(102)	(103)	(104)	(120)	(140)	(152)	(156)	(160)	(160)	(184)	(204)	(216)	(218)	(220)	(222)	(224)	(226)	(228)	(230)	(232)	(234)
Mining	3	3	3	3	4	4	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	8	9
Manufacturing	(121)	(121)	(121)	(121)	(100)	(125)	(150)	(200)	(200)	(200)	(200)	(252)	(304)	(307)	(310)	(313)	(316)	(319)	(322)	(325)	(328)	(331)	(334)
Contract Construction	(18)	(22)	(28)	(28)	(48)	(29)	(30)	(31)	(32)	(33)	(34)	(45)	(46)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)
DISTRIBUTIVE INDUSTRIES	487	493	498	505	512	526	542	559	575	592	608	62a	647	680	716	754	793	034	877	922	969	1.018	1,070
Transportation, Communications and Public Utilities	(63)	(64)	(65)	(67)	(69)	(71)	(73)	(75)	(77)	(79)	(81)	(83)	(85)	(88)	(91)	(94)	(97)	(100)	(103)	(106)	(109)	(112)	(115)
Trade	(230)	(232)	(234)	(236)	(238)	(245)	(252)	(260)	(268)	(276)	(283)	(293)	(302)	(317)	(333)	(350)	(368)	(386)	(405)	(425)	(446)	(468)	(491)
Finance, Insurance and Real Estate	(20)	(21)	(21)	(22)	(23)	(23)	(24)	(25)	(25)	(26)	(27)	(28)	(29)	(30)	(32)	(34)	(35)	(37)	(39)	(41)	(43)	(45)	(47)
Service	(174)	(176)	(178)	(180)	(182)	(187)	(193)	(199)	(205)	(211)	(217)	(224)	(231)	(245)	(260)	(276)	(293)	(311)	(330)	(350)	(371)	(393)	(417)
GOVERNMENT	388	396	404	412	420	42a	437	446	455	464	472	482	492	502	512	522	532	543	554	565	576	5s38	600
TOTAL EMPLOYMENT	1,117	1,136	1,156	1,172	1,188	1,232	1,303	1,392	1,422	1,454	1,487	1,596	1,698	1,748	1	,800	1,854	1	,910	1,968	2,028	2,091	2,155	2,222	2,293
AATIO OF POPULATION TO EMPLOYMENT	3.03	3.00	3.00	3.00	3.00	2.95	2.90	2.05	2.80	2.75	2.10	2.65	2.60	2.55.	2.50	2.50	2.50	2.60 "	2.50	2.50	2.50	2.50	2.50
TOTAL POPULATION - SEWARD CENSUS DIVISION	3,392	3,408	3,468	3,516	3,564	3,634	3,779	3,96?	3,082	3,998	4,015	4,229	4,415	4.451	4,500	4,635	4.775	4.920	S,070	5,228	5,388	5,555	5,732
CITY OF SEWARD	1,956	1,965	2,000	2,028	2,055	2,096	2,179	2,288	2,296	2,305	2,315	2,439	2,546	2,570	2,595	2,673	2,753	2,837	2,924	3,01S	3,107	3.203	3,305
SEWARD FRINGE	644	647	660	658	677	690	717	753	756	759	762	803	838	846	854	880	907	934	963	993	1,023	1,055	1,088

Source: Alaska Consultants, Inc. Table 26, March 1979

As in the case of Cordova, continued exploration under this scenario would provide a few new jobs for the Seward economy in 1981-1983 without significantly altering either the population or employment structure of the town as a whole. As in the case of Lease Sale 39 exploration only, Seward's economy would experience a slight stimulus during initial exploration, followed by a levelling off of activity and the continuation of the predominance of other employers in influencing employment and population forecasts to the year 2000.

Structure of Employment

Under the 95 percent scenario for Seward, Alaska Consultants assume that the employment increases projected for Seward in 1981-1983 are largely the result of increased employment at Seward as a temporary service base for supply boats servicing rigs drilling along the Middleton and Yakataga Shelves. This assumption essentially equates the 1981-83 period with the most recent exploration activity and resulting service-base employment generated by drilling activity in the Northern Gulf under Lease Sale 39. As such, the level of impact anticipated should be quite small, since Seward relatively easily accommodated service based demands under Lease Sale 39.

Sociocultural System Variables

The factors discussed in the earlier methodology section of this report were utilized in the base case for Seward in a dynamic analysis of conflict and change in Seward over the last few years. Seward's baseline forecast depends on the understanding of the social structure and change

forces operating in Seward during the last few years. The analysis of the social organization and social change in Seward indicated that the following sociocultural variables were central to an understanding of sociocultural change in Seward:

- Community isolation
- Wilderness setting
- Cohesiveness
- Community conflict resolution methods
- Degree of political integration with higher levels of government
- Degree of economic integration with regional and state economy
- Level of local unemployment
- Community age distribution
- Community mental health

As in the case of Cordova, community isolation and wilderness setting define the environmental constraints for the community of Seward, yet these environmental constraints are mediated by greater access to the community by road and rail links not available to Cordova-Eyak. Seward's linkages to both political and economic structures within the Southcentral region also cushion the stresses on individuals and groups of outside forces when they impinge.

Unemployment, community age distribution and community mental health are three variables dependent upon the environmental, political and economic constraints of the community, yet mediated by its cohesiveness and its ability to constructively resolve conflict while at the same

time being influenced by both these factors. The scenario of "exploration only" does not alter the basic structure of these interdependent variables, and without alteration, this sociocultural system appears to be maintained as in the baseline case.

MEAN OCS SCENARIO

Dames and Moore define this scenario as the "statistical mean-resource level scenario" in which an estimated 1.4 billion barrels of oil and an estimated 5.0 trillion cubic feet of gas are discovered and developed. These resources are allocated to the Middleton Shelf, Yakataga Shelf, and Yakutat Shelf areas as follows:

	Oil (MMbbl)	Gas-Associated (BCF)	Gas-Non-Associated (BCF)
Middleton Shelf	350	250	1,000
Yakataga Shelf	---	---	---
Yakutat Shelf	1,050	750	3,000
	1,400	1,000	4,000

The resources are distributed on the assumption that five oil fields will be discovered and developed on the Yakutat Shelf; one oil field and one gas field are discovered on the Middleton Shelf and no commercially developable resources are discovered on the Yakataga Shelf. For Middleton Shelf resources, development on the southwestern end of Hinchinbrook Island near Cordova includes an oil terminal and LNG plant for shipment to the U.S. West Coast. (Dames and Moore, March 1979).

TABLE X1.3

FORECAST OF EMPLOYMENT AND POPULATION
MEAN PROBABILITY RESOURCE LEVEL SCENARIO
SEWARD AREA
1981 - 2000

INDUSTRY CLASSIFICATION/YEAR	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
COMMODITY PRODUCING INDUSTRIES	256	257	239	326	030	444	401	441	553	567	571	574	579	506	592	598	60S	611	617	624
Agriculture, forestry and fisheries	103	104	[illegible]	140	152	156	160	168	184	204	216	218	220	222	224	226	228	230	232	234
Mining	3	4	4	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	8	9
Manufacturing	121	100	125	151	202	201	201	201	254	306	300	310	313	316	319	322	325	328	331	334
Contract Construction	29	49	30	31	472	83	35	67	110	52	41	40	40	41	42	43	44	45	46	47
DISTRIBUTIVE Industries	515	526	552	571	619	631	651	699	792	801	720	755	721	808	049	092	937	984	1,033	1,085
Transportation, Communications and Public Utilities	75	81	92	97	100	121	127	154	215	211	161	123	113	110	113	116	119	122	125	128
Trade	237	239	247	254	273	274	281	291	308	315	325	336	352	369	387	406	426	447	469	492
Finance, Insurance and Real Estate	22	23	24	25	28	26	27	29	31	32	32	33	34	35	37	39	41	43	45	47
Service	181	183	189	195	210	210	216	225	238	243	252	263	278	294	312	331	351	372	394	418
GOVERNMENT	413	421	431	440	463	463	471	483	502	510	512	516	525	534	545	556	567	578	590	602
TOTAL EMPLOYMENT	1,184	1,204	1,262	1.337	1,912	1,538	1,523	1,623	1,847	1,878	1,853	1,845	1,881	[illegible] g2B	1,986	2046	2,109	2,173	2,240	2,311
Employees Resident in Construction Camps	--	--	--	--(--)(436)	49	--(--)	29	50	--(--)(--)(--)(--)					.--	--(--)	--	(..-)	--	[--)(--)	
TOTAL POPULATION -																				
SEWARD CITY	2,046	2,079	2,141	2,230	2,414	2,397	2,409	2,476	2,729	2,817	2,720	2,662	2,714	2,781	2,939	2,951	3,042	3,134	3,230	3,332
SEWARD AREA	2,720	2,764	2,046	2,964	3,209	3,186	3,202	3,291	3,628	3,744	3,626	3,539	3,607	3,696	3,907	3,923	4,044	4,166	4,294	4,429

Source: Alaska Consultants, Inc. March, 1979, Table 112.

TABLE X1.4

ESTIMATED DIRECT ONSHORE ONSITE EMPLOYMENT BY TASK
MEAN PROBABILITY RESOURCE LEVEL SCENARIO
NORTHERN GULF OF ALASKA - SEWARD AREA
1981 - 2000

Year	Service Dose	Helicopter Service			Service Oase Construction	Onshore Pipeline Construction	Oil Terminal Construction	LNG Plant Construction	Pipe Coating	Oil Terminal Operations	LNG Plant Operations	Total Onshore Onsite
		Exploration	Development	Production								
1901	8											8
1992	11											11
1983	20											20
1984	23											23
1985	21				436							463
1986	41				34				15			90
1987	44											44
19(M3	65								29			94
1989	119								58			177
1990	115											115
1991	67											67
1992	2N											28
1993	16											16
1994	10											10
1995	10											10
1996	10											10
1997	10											10
1998	10											10
1999	10											10
2000	10											10

Source: Alaska Consultants, Inc., March 1979, Table 113.

TABLE X1.5

ESTIMATED OFFSHORE ONSITE EMPLOYMENT BY TASK
MEAN PROBABILITY RESOURCE LEVEL SCEI'4AR10
NORTHERN GULF OF ALASKA - SEWARD
1981 - 2000

Year	Survey	Rigs	Platforms		Supply/Anchor/'Tug Boats			Platform Installation	Offshore Pipeline Construction	Total Employment Offshore Onsite
			Development Drilling	Operations	Exploration	Development	Production			
1981	17				21					38
1982	21				33					54
1983	35				55					90
? 984	37				65					102
1 985	40				78					118
1986	31				65	14				110
1907	23				22	22				67
1988	17					37	7			61
1989	10					71	7			88
1990	4					56	7			67
1991						14	13			27
1992							13			13
1993							13			13
1994							13			13
1995							13			13
1996							13			13
1997							13			13
1998							13			13
1999							13			13
2000							13			13

Source: Alaska Consultants, Inc., March 1979, Table 114.

Population

Under the Mean OCS Scenario, the population of the Seward area would grow from a 1981 base of 2,720 to 2,964 by 1984. In 1985, with construction of a service base at Seward, the population of the area would increase to 3,209, then fall back to more moderate growth through 1989, with population in that year reaching 3,628. Service base employment during 1989 and 1990 would also add over 100 workers to the economy of Seward, effecting total population during these years (Table 3).

Structure of Employment

For the most part, this scenario would add a small number of service base jobs to the Seward economy, with a larger number of construction jobs added during the peak year of service base construction (1985). With the exception of this one year, the level of impact would appear to resemble that already experienced with Lease Sale 39. In addition to this on-shore impact, off-shore employment during exploration, development and production would also add to Seward's economy and swell its population somewhat. Table Five indicates that particularly during the years 1984 through 1986 approximately 100 jobs would be located off shore near Seward. If recent experience is a guide, one would expect that at least some of these jobs would go to local Seward residents.

Sociocultural System Variables

The analysis of the social organization and social change in Seward indicates that the following sociocultural variables are central to

an understanding of sociocultural change in Seward:

- Community isolation
- 'wilderness setting
- Community conflict resolution methods
- Degree of political integration with higher levels of government
- Degree of economic integration with regional and state economy
- Level of local unemployment
- Community age distribution
- Community mental health

Each of these variables will be considered below, taking into account the Dames and Moore scenario projections and population and structure of employment characteristics of the scenario provided by Alaska Consultants.

Community isolation - Under this scenario, Seward's degree of isolation will not differ significantly from that experienced during Lease Sale 39 except for the year 1985 when a substantial construction workforce would be added to the economy to construct permanent service base facilities. During this one year, the town's isolation would drop significantly, however. While this number of additional workers (436) would definitely impact the local economy, services and other parts of the social system of Seward, their assumed housing in temporary workcamps and Seward's current experience with camp and institutional populations should mitigate some of the sociocultural impacts. Impacts on police services and public facilities could be expected. Seward's proximity to Anchorage

and the likelihood that most construction workers relocating from Anchorage would commute rather than move their families to Seward during this period also reduce somewhat the social impacts to be anticipated.

Wilderness setting - Construction of a permanent service base in Seward would alter the physical environment of Seward. Particularly during the construction period, Seward's attractiveness would be impacted and one could anticipate a drop in recreational visitors, recreational boating activity and other summer recreation activities during this period. Research in Valdez suggests these declines occurred there during construction of terminal facilities (Baring-Gould and Bennett, 1975).

Once additional construction was completed, however, the service base itself and supply boat and other demands on dock and harbor facilities do not appear to be sufficient to interfere significantly with recreational activities ongoing in Seward, or to permanently alter Seward's attractiveness for the majority of its population. While statements about the physical attractiveness of a setting to its permanent residents are risky, it appears that the majority of Seward residents support construction of a service base in their town. Pride in community and a desire to improve the community's regional standing as a port are strong socio-cultural factors influencing attitudes toward Seward's wilderness setting. Because so few engage in subsistence activities, attitudes toward their community's social standing appear more influential than wilderness setting per se in influencing community sentiments toward growth and development.

Cohesiveness - Seward's cohesiveness should mitigate negative impacts associated with construction activity during the peak construction season of this scenario. It is likely that members of the community would withdraw somewhat from facilities that are impacted, adjust time schedules or make other accommodations that would reduce personal impacts while encouraging development they support.

Community conflict resolution methods - Current methods of conflict resolution in Seward appear to be well adapted to the demands of this scenario. Since Dresser Industries has already leased substantial land in Seward in anticipation of potential construction of a permanent service base, much of the stress normally placed on municipal governments facing new industry has already been accommodated during exploration under Lease Sale 39. The experience gained during this period should assure comfortable response to further OCS activity. Community support for OCS is high in Seward and should assure support of community leadership in meeting the challenges which do arise.

Degree of political integration with higher levels of government - Seward's position in the Kenai Borough and access to federal and state technical expertise should encourage successful response to any difficulties encountered in this scenario.

Degree of economic integration with regional and state economy - Seward's functional interdependence with Anchorage and, to a lesser extent with other Kenai Peninsula communities, should assure this community the labor

force for the demands of service base construction. Other demands of this scenario are modest compared with Seward's capacity to accommodate them.

Level of local unemployment - Seward's unemployment levels and community cohesiveness should assure the community high levels of participation in any economic activity occurring in the community, under this scenario.

Community age distribution - Older residents of Seward might experience some difficulty during peak construction of the service base under this scenario. Their appreciation of Seward's tranquility would be disturbed. Particularly for retired persons, economic scarcities, extensive community noise and other characteristics of boom construction might be difficult to adjust to. Yet the community's cohesion might reduce complaint levels. In Seward's case, one would expect any disturbances in the community that create serious disruptions to be experienced on the individual rather than the community level--i.e. in increasing mental health rates rather than in community conflict.

Community Mental Health - Seward's drinking rates might increase under boom construction, with a transient workforce, yet Valdez' experience with declines in drinking during construction suggest that perhaps a similar experience in Seward might occur (Baring-Gould and Bennett, 1975). While rates may increase with rising population, the drinking by community residents may decline once community facilities are impacted. Another factor influencing drinking behavior in small towns in Alaska is lack of

employment in winter. Little change will occur during this scenario to reduce this pattern, however. It is doubtful this scenario will have a significant impact on community mental health in Seward except perhaps during peak construction season of the permanent service base.

Summary of Sociocultural Impacts

It appears that none of the sociocultural variables analyzed would be seriously disturbed by impacts associated with this scenario. Population and economic impacts are minimal with the exception of three years in the mid-1980's. Several factors within the social system of Seward suggest that the community would respond well to the stimulus. Any negative impacts would be absorbed by individuals themselves with the help of a cohesive social structure, proximity to Anchorage, and political and economic support systems on the regional, state and federal levels.

FIVE PERCENT SCENARIO (HIGH CASE)

This high scenario revolves around assumptions based on highly favorable initial findings of oil and gas on the Yakutat, Yakutaga and Middleton Shelves which promote extensive exploration and development in these areas. The following quantities of oil and gas are projected under this scenario:

	Oil (MMbbl)	Gas-Associated (Bcf)	Gas-Non-Associated (Bcf)
Middleton Shelf	700	650	2,600
Yakataga Shelf	400	---	---
Yakutat Shelf	3,300	1,950	7,800
'Totals	4,400	2,600	10,400

Source: Dames and Moore, March 1979.

This scenario projects development of eight oil fields and four non-associated gas fields on the Yakutat Shelf, a single oil field discovered and developed on the Yakataga Shelf and three oil fields and two non-associated gas fields developed on the Middleton Shelf (Tables 6 and 7).

Like the Mean OCS scenario, the predominant impacts occur under this scenario to the community of Yakutat. Yet the changes implied in this scenario for the communities of Cordova-Eyak and Sewardare also substantial.

Population

Tables 8, 9, and 10 show Alaska Consultants estimates of the population and employment impacts for Seward under this scenario. As they indicate, the projection for Seward is similar to that anticipated under the Mean Scenario but the number of jobs projected and the growth impacts implied are sooner, stronger and last longer than under the Mean Scenario. Primary impacts are felt during the 1988-1991 period. During this period, close to 750 residents are added to the population of Seward, encouraging a

5% PROBABILITY RESOURCE LEVEL SCENARIO: OIL AND ASSOCIATED GAS PRODUCTION

Shelf	Field Size: oil (MMBBL)	Field Size: Gas (BCF)	Production System	Platforms No./Type[1]	Number of Production Wells	Peak Production: oil (MB/D)	Peak Production: Gas (MMCF/D)	Water Depth Meters (feet)	Distance to Shore Terminal* Kilometers (miles)	Pipeline Diameter (inches): Oil	Pipeline Diameter (inches): Gas
Yakutat	1000	1000	Steel and concrete platforms, shared trunkline to shore terminal.	2s 1 C	120	288	288	122-152 (400-500)	56-81 (35-50)"	32-34 Trunkline from Group I fields to shore terminal with 612 MB/D peak throughput.	36-[3]
Group 1	500	950	Steel platforms, shared trunkline to shore terminal.	2 s	80	192	364.8	122-152 (400-500)	56-81 (35-50)		
	350	--	Steel platforms, shared trunkline to shore terminal.	1 s	40	96	--	122-152 (400-500)	56-81 (35-50)		
	250	--	Steel platforms, shared trunkline to shore terminal.	1 s	40	96	--	122-152 (400-500)	56-81 (35-50)	--	--
	400	--	Single concrete platform with storage offshore loading.	1 C	40	96		152-183 (500-600)	--	--	--
	250	--	Single steel platform with storage buoy. offshore loading.	1S	40	96		152-183 (500-600)	--	--	--
	300	--	Single concrete platform with storage buoy, offshore loading.	1 C	40	96		122-152 (400-500)	--	--	--
	25o	--	Single steel platform, no storage, offshore loading.	IS	40	65		61-91 (200-300)	--	--	--
Yakataga	400		Single concrete platform with storage, offshore loading.	1 C	4 0	96		152-183 (500-600)	--	--	--
Middleton	350	650	Single steel platform with gas & oil pipelines to shore terminals.	1 s	4G	96	178	91-122 (300-400)	48-64 (30-40)	14-16	24[4]
	150		Single steel platform, no storage, offshore loading.	1 S	30	72		61-91 (200-300)	--	--	--
	200		Single steel platform, storage buoy, offshore loading.	1 s	40	96		61-91 (200-300)	--	--	--
TOTAL	4,400	2,600		15	590	[5]	[5]				

[1] S = Steel, C = Concrete
[2] Yakutat Bay and Hinchinbrook Island area.
[3] Gasline Lied-inwith non-associated gas: 2.0 BCF/D peak throughput.
[4] Gasline Lied-inwith rwn-associated gas: 826 MMCF/D peak throughput.
[5] These fields will not peak at the Mine time. The time and level of overall peak is not yet determined.

Source: Dames & Moore, March, 1979.

TABLE X1.7

5% PROBABILITY RESOURCE LEVEL SCENARIO
NON-ASSOCIATED GAS PRODUCTION

Shelf	Field Size (BCF)	Production System	Platforms No./Type[1]	Number of Production Wells	Peak Production (MMCF/D)	Water Depth Meters (feet)	Distance to Shore Terminal[2] Kilometers (miles)	Pipeline Diameter (inches)
Yakutat	3000	1-24 well steel platforms & shared pipeline to shore	1 S	24	576	122-152 (400-500]	56-80 (35-50)	36-38 Gasline tied-in with associated gas production
	2000	1-16 well steel platform & shared pipeline	1 s	16	384	122-152 (400-500)	56-80 (35-50)	
	1800	1-16 well steel platform & shared pipeline	1 s	16	384	122-152 (400-500)	56-80 (35-50)	
	1000	1-8 well steel platform & shared pipeline	1 s	18	192	122-152 (400-500)	56-80 (35-50)	
Yakataga	--	--	..	--	--	--	--	--
Middleton	1600	1-16 well steel platform & shared pipeline	1 s	16	384	61-91 (200-300)	56-80 (35-50)	24" gasline tied-in with associated gas production
	1000	1-8 well steel platform	1 s	8	192	61-91 (200-300)	56-80 (35-50)	
TOTAL	10,400		6	88	4			

Source : Dames & Moore, March, 1979

[1] S = Steel, C = Concrete

[2] Yakutat Bay; Icy Bay

NOTES :

1. Yakutat LNG plant peak input = 1.344 BCF/D non-associated gas plus .653 associated gas = 1.997 BCF/D; trunkline to handle 2.0 BCF/D = 36''-38"
2. Middleton LNG plant peak input = 826 MMCF/D total associated and non-associated; trunkline to handle 826 MMCF/D = 24"
3. [economically recoverable gas in the Gulf of Alaska must be converted to LNG. Thus, onshore impacts from gas discoveries are identical for either maximum or minimum onshore impact cases under existing technology.

TABLE X1.8

FORECAST OF EMPLOYMENT AND POPULATION
5% PROBABILITY RESOURCE LEVEL SCENARIO
SEWARD AREA
1981 - 2000

NDUSTRY CLASS IF ICATION/YEAR	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	20
OMMODI TY PRODUCING INDUSTRIES	256	257	200	600	503	410	405	466	531	604	502	581	587	587	594	599	606	612	618	6
Agriculture, forestry and F isheries	103	104	120	140	152	156	160	168	184	204	216	218	220	222	224	226	228	230	232	2
Mining	3	4	4	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8	8	
Manufacturing	121	100	126	152	201	201	202	203	256	308	311	312	315	316	320	322	325	328	331	3
Contract Construct i (On	29	49	30	392	46	49	38	90	86	87	49	45	46	42	43	44	45	46	47	
II STRIBUTIVE INDUSTRIES	518	534	550	.601	610	629	720	900	942	952	991	092	876	863	885	923	960	1,015	1,064	1.1
Transportation. Communications and Public utilities	78	87	97	113	113	121	184	319	330	333	342	235	185	158	142	141	144	147	150	1
Trade	237	240	248	264	266	273	287	308	321	329	344	348	365	372	390	409	429	450	472	4
Finance, Insurance and Real Estate	22	23	24	27	26	26	28	33	34	35	36	35	37	36	38	40	42	44	46	
Service	181	184	189	203	205	209	221	240	249	255	269	274	289	297	315	333	353	374	396	4
OVERNMENT	413	423	432	4 5 3	454	462	479	507	520	528	539	533	542	530	549	560	571	582	594	t
OTAL EMPLOYMENT	1,187	1,214	1,270	1,740	1,567	1,501	1,604	1,873	1,993	2,084	2,112	2,006	2,005	1,988	2,020	2,082	2,145	2,209	2,279	2.3
Employees Resident in Construction Camps	--	--	--	36?)	112)	15)	--	44	29	29	--	--	--	--	--	--	--	--	--	"
OTAL POPULATION - SEWARD CITY	2,051	2,094	2,153	2,311	2,303	2,392	2,531	2,829	2,993	3,083	3,118	2.905	2,900	2,871	3,002	3,005	3,096	3,188	3,285	3.
SEWARD AREA	2,726	2,784	2,862	3,012	3,167	3,180	3,364	3,761	3.970	4,098	4,144	3,861	3,855	3,816	3,991	3,995	4,116	4.230	4.366	4.

Source: Alaska Consultants, Inc. March, 1979, Table 154

TABLE X1.9

ESTIMATED DIRECT ONSHORE ONSITE EMPLOYMENT BY TASK
5% PROBABILITY RESOURCE LEVEL SCENARIO
NORTHERN GULF OF ALASKA . SEWARD AREA
1981 - 2000

Year	Service Base	Helicopter Service			Service Base Construction	Onshore Pipeline Construction	Oil Terminal Construction	LNG Plant Construction	Pipe Coating	Oil Terminal Operations	LNG Plant Operations	Total Onshore Otisite
		Exploration	Development	Production								
1981	10											10
1982	17											17
1983	25											25
1 984	35				351							392
1985	35				112							147
I 986	40								15			55
1 987	96											96
I 988	215								44			259
1909	231								29			262
1990	223								29			252
1991	229											229
1992	128											128
1993	78											78
1994	53											53
1995	34											34
1996	30											30
1997	30											30
1998	30											30
I 999	30											30
2000	28											28

Source: Alaska Consultants, Inc. March, 1979, Table 155

TABLE X1.10

ESTIMATED OFFSHORE ONSITE EMPLOYMENT BY TASK
5% PROBABILITY RESOURCE LEVEL SCENARIO
NORTHERN GULF OF ALASKA . $~AR~" ..
1981 - 2000

Year	Survey	Rigs	Platforms		Supply/Anchor/Tug Boats			Platform installation	Offshore Pipeline Construction	Total Employment offshore Onsite
			Development Drilling	Operations	Exploration	Development	Production			
1981	21				26					47
1982	35				46					81
1983	46				70					116
1984	54				110					164
1985	50				102					152
1986	31				32	32				95
1987	25				32	57				114
19fi8	23				11	151				185
1989	15					133				148
1990	4					136	19			159
1991						113	32			145
1992						43	39			82
1993							39			39
1994							39			39
1995							39			39
1996							39			39
1997							39			39
1 998							39			39
1999							39			39
							35			35

Source: Alaska Consultants, Inc. March, 1979, Table 156

fairly substantial boom cycle. Earlier construction of a marine service base in 1984-85 would add a briefer boom but less impact with construction workers housed in construction work camps.

-structure of Employment

Seward would experience a substantial increase in waterfront activities associated with a marine service base, services and logistical support for OCS drilling operations. While similar to services provided during exploration under Lease Sale 39, the extent of these demands on Seward's waterfront would increase and the jobs created would be substantial. This scenario projects a peak population from these workers of about 750 residents, after which the population declines to almost the base-line case.

Sociocultural System Variables

Community Isolation - This scenario is essentially similar to the Mean OCS scenario. Interdependence with Anchorage would probably increase, with resulting declines in community isolation during the operation-of the service base. Without a substantial airport of its own, Seward residents might find their road usage and usage of Anchorage International Airport might increase during the period. Water-based recreation might be adversely affected during construction of the service base, and recreational users might decline during this time period.

Wilderness setting - As in the Mean OCS scenario, Seward's wilderness setting would be altered during construction of facilities, but community sentiment in favor of OCS and Seward's urban lifestyle should assure the

likelihood that any longstanding conflicts associated with alteration of the environment would be borne by individual residents rather than by the social system itself. The demands of housing expansion under this scenario could disrupt the tranquility of the town for a number of years, which might result in a reduction of the quality of life during this period.

Cohesiveness - The rapid addition of close to 750 additional residents to the Seward area, with accompanying housing demands and potential service disruptions, particularly in the case of electrical capacity, might upset the degree of cohesiveness of Seward. On the other hand, the inter-locking structure of organizational memberships and the ability of the town to absorb newcomers into this web of group affiliations would seem to bode well for Seward's ability to expand under the demands of this scenario. With community leadership in support of this expansion, one would anticipate extensive attempts to welcome newcomers to town and assure them a comfortable place within the social system of Seward.

Community Conflict Resolution Methods - This scenario would require extensive additions to housing stock in a relatively short period of time, as well as expansion of electric capacity. It appears that the community's methods of handling these challenges are adequate to the task. As in the Mean scenario, disruption which did occur would be absorbed primarily by community residents on an individual basis.

Degree of political integration with higher levels of Government - This scenario would demand slightly more of local officials than has been experienced to date and would increase the demands on both the State and

Kenai Borough in assisting the community with local needs. It appears these demands could be handled by the present system of relationships.

Degree of economic integration with regional and state economy - Seward's economy is now well integrated into the southcentral economy, and addition of further OCS development would tie it further to Anchorage-based and Kenai Peninsula-based social, political and economic relationships, increasing this interdependence.

Level of local unemployment - Seward's current unemployment 1 evels should assure the community relatively high participation in the job creation of this scenario, with resulting higher unemployment at the end of the period.

Community age distribution - Seward's older population and the demands of this scenario might conflict in certain instances resulting in higher stress on this population subgroup. Attempts would need to be made to provide ameliorative actions to compensate for the levels of disruption in community tranquility and noise attendant to rapid expansion of housing and services in the downtown area and other community disruptions close to long-established residential areas. If expanded housing occurred primarily outside this downtown area, which the community may currently favor, these noise and tranquility-related issues might not cause difficulty.

Community mental health - While the community of Seward appears to be well suited to the expansion needed to support this scenario's projected growth, the tendency for community residents to individually absorb stress

may create additional stress-related illness in Seward during peak construction activities. Hospital and social services to support increases in these areas, should the demand warrant, appear capable of the expansion needed.

Summary of Sociocultural Impacts

While this scenario produces the greatest economic stimulation and impact for the community of Seward, it appears that its local infrastructure and social system are well adapted to meet these demands with a minimum of disruption. Community support for further development and community cohesiveness behind its leadership should minimize disruption.

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CORRESPONDENCE

Letter from Bob Blake, C.D.F.U. , Cordova. November 26, 1978.

Letter from Heidi Boucher, administrative assistant to Mike Gravel, U.S. Senate. August 22, 1978.

Letter from Ted Stevens, U.S. Senate. August 22, 1978.

Letter from Don Young, U.S. House of Representatives, September 6, 1978.

LIST OF PERSONS CONTACTED

Cordova

Cathy Anderson, member Chugach Regional Corporation, Vice-President Eyak Village Council, October 1978.

Lillian Anderson, President of Eyak Village Council, October 12, 1978.

Bob Arvidson, fisherman, October 1978.

Rose Arvidson, Local member, Alaska Humanities Forum, October 14, 1978.

Bill Barnes, fisherman, October 1978.

Cecil Barnes, Ex-President of Chugach Natives, Fisherman, October 1978.

Cy Barnes, Eyak board member, October 1978.

Jerry Barnes, fisherman, October 1978.

Kenny Barnes, construction worker, fisherman, October 1978.

Pat Barnes, President Eyak Corporation, October 9, 1978.

Xenia Barnes, mother of the Barnes family, October 1978.

Bob Blake, chairman Cordova Fisheries Union, October 12, 1978.

Dick Branshaw, Seattle fisherman, July 21, 1978.

Chamber of Commerce, meeting notes, August 22, 1978.

Carol Cheat, newspaper reporter, October 13, 1978.

Ms. Cole, Don Shelhorne's daughter, August 22, 1978.

Fuller Cowell, Cordova Times editor, August 23, 1978.

Jack Daneen, Daneen's Market, August 22, 1978.

Gary Davidson, minister - Assembly of God, October 1978.

Julia DeMott, Eyak Corporation board member, October 1978.

Sharon (DeMott), waitress, October 1978.

Corrine Erickson, librarian, July 20, 1978.

Eyak Corporation, October 9, 1978.

Patience Faulkner, Eyak Youth Center, August 21, 1978.

Keith Gordaoff, fisherman, Eyak Corporation member, October 1978.

Dick Groff, U.S. Forest Service, August 22, 1978.

Millie Fox, Cynthia Fox and George Fox, Cy Barnes' children, October 1978.

R. Everett Harris, Jensen & Ross, Attorneys for City of Cordova, January 3, 1978.

Hollis Henrichs, city councilman, July 22, 1978.

Gary Holthaus, Executive Director, Alaska Humanities Forum, November 17, 1978.

Susan Huey, telephone conversations from Cordova, September 26, 1978, October 9, 1978, October 12, 1978.

Malcom (Pete) Islieb, member Coastal Policy Council, fisherman, birder, July 23, 1978.

Bud Janson, member Harbor Commission, former Council member, July 22, 1978.

Beth Komkoff, cannery worker, October 1978.

Mary Komkoff, Vice-President Chenega Corporation, October 1978.

Nick Komkoff, President Chenega Corporation, October 1978.

R.J. Kopchak, Executive Director, Eyak Youth Center, July 21, 1978.

Larry Krichen, sells and trades animal hides and native crafts, October 1978.

Perry Lovett, City Manager, July 21, 1978.

Glen Mast, city councilman, October 12, 1978.

Mrs. Glen Mast, kindergarten teacher, October 12, 1978.

Warren Matthews, attorney for Cordova Fisheries Union, December 12, 1978.

Ross Mullins, attorney for C.A.M.A., October 13, 1978.

Agnes Nichols, Health Outreach Worker, North Pacific Rim, October 1978.

Peggy Parker, Sea Grant secretary, August 23, 1978.

Martin Parsons, fisherman, Eyak Corporation member, October 1978.

Jim Payne, Coordinator of Alternatives for Cordova Survey, August 28, 1978.

Jim Poor, Mayor of Cordova, Superintendent, St. Elias Cannery, July 22, 1978.

Judy Reynolds, C.A.M.A. secretary, October 11, 1978.

Brian Saylor, Cordova Hospital Administrator, July 20, 1978.

School Board, special meeting, July 22, 1978.

Donna Sherby, City Clerk, July 20, 1978.

Pam Shulstedt, previous secretary of Eyak Village Council, October 1978.

Gil Smythe, Alaska Consultants, Inc., numerous conversations.

Ton Van Brocklin, Assistant Hospital Administrator, July 22, 1978.

Robert Varnum, Baptist minister, October 1978.

Chugach Region

Bob Anderson, President, Chugach Region, Inc., December 4, 1978.

Robert Heasley, Planning Director, North Pacific Rim, Inc., numerous conversations starting August 8, 1978.

Joe Josephson, former attorney for Eyak Corporation, January 3, 1979.

Carl Probes, Land Manager, Chugach Region, Inc., numerous conversations December 1978 through April 1979.

Derenty Tabios, Executive Director, North Pacific Rim Inc., January 3, 1979.

Federal and Alaska State Government

Jim Andregg, C.E.I.P. coordinator, Alaska Department of Community and Regional Affairs, August 16, 1978.

Judith Andregg, Alaska Coastal Zone Management Program, August 16, 1978.

Clay Beal, Chugach National Forest Supervisor, Anchorage, March 3, 1978.

Charley Carter, Bureau of Land Management, Anchorage, January 3, 1979.

Mike Deigner, Alaska Department of Fish and Game, Anchorage, November 30, 1978.

Dick Eakins, Director of Division of Economic Enterprise, August 16, 1978.

Jim Edenso, Governor Hammond's bottomfish coordinator, August 18, 1978.

Neil Freid, Alaska Department of Labor, Research & Analysis Section, January 1979.

Larry Kimbell, Director of Planning, Alaska Department of Community and Regional Affairs, August 17, 1978.

Susan Heikala, Alaska Division of Lands, January 1979.

Alaska Department of Labor, Research & Analysis Section, Juneau, August 17, 1978.

Dick Reynolds, bottomfish expert, Alaska Division of Economic Enterprise, August 17, 1978.

Commissioner Skoog and Deputy Commissioner Rosier, Alaska Department of Fish and Game, August 18, 1978.

Dan Timm, Waterfowl Biologist, Alaska Department of Fish and Game, Anchorage, January 2, 1979.

Alaska Division of Tourism, August 17, 1978.

Kevin Waring, former Director of Community Planning, Alaska Department of Community and Regional Affairs, December 20, 1978.

Rick Wright, National Oceanic and Atmospheric Administration, State Liaison, August 11, 1978.

Seward

Hank Anderson, counselor, Skill Center, January 1979.

Louis Bencardino, Police Chief, July 1978.

Keith Campbell, Hospital Administrator, City Council, Borough Assembly, July 1978.

Jackie Deck, Head Librarian, June 1978.

Gene DeGoorer, Executive Director, Mental Health and Alcohol Program, July 1978.

Bev Dunhan, Editor, Phoenix Log, July 1978.

Garth, Cabdriver, former Seward Skill Center Student, January 1979.

Pam Goodall, Librarian, June 1978.

Hans Hafemeister, Senior Citizen, July 1978.

Ralph Hoard, General Manager, Seward Fisheries, Seattle, March 13, 1979.

Bernard Hulm, former City Councilman and Borough Assembly Member, June 1979.

Ben Ikerd, Admissions, Seward Skill Center, July 1978.

Iris Johnson, Acting Magistrate, July 1978.

Johnnie Johnson, City Manager, June 1978-August 1979.

Mrs. Johnson, Seward Hardware, July 1978.

Mr. Kawabe, Kawabe's Market, January 1979.

Lydia Kingegak, student, Seward Skill Center, January 1979.

Fannie Koontz, Mt. Marathon member, January 1979.

Donna Kowalski, U.S. Forest Service, Land Management, January 1979.

Al Lamberson, counselor, Seward Skill Center, July 1978 and

Pete Larson, Meal Plant Supervisor, Seward Fisheries, Anchorage, February 21, 1979.

Mike Logue, student, Seward Skill Center, January 1979.

Don McCloud, Borough Assembly, January 1979.

Judy McDonald, University Marine Science Zoologist, June 1978.

Ted McHenry, Alaska Department of Fish and Game, Seward, January 1979.

Harry Mitchell, Seward area fisherman, Anchorage, April 6, 1979.

Larry Potts, Ad Hoc Group, Kenai Lumber Co., January 1979.

Ron Quillium, Seward Y.A.C.C. Camp Director, March 30, 1979.

Shirley Reynold, Seward Job Service, July 1978.

Mrs. Roach, Chamber of Commerce, July 1978.

Esther Ronne, Social Worker, Mt. Marathon Association member, January 1979.

Marilyn Rowby, News Director, KRXA Radio, July 1978.

Darrell Schaefermeyer, Assistant City Manager City Hall, June 1978.

Roger Seibert, Dresser-Magcobar, Inc., Anchorage, April 4, 1979.

Ellen Setters, Mt. Marathon Association member, January 1979.

Joanne Shanley, Seward City Clerk, July 1978.

Tom Small and Susan Brody, CH2M Hill Anchorage, April-August 1979.

Fred Steves, Steel Fabrication Co., Seward, January 1979.

Karen Swartz, Seward Phoenix Log, City Councilman, January 1979.

Caroline Toloff, Chairman of Mt. Marathon Association, Seward, January 1979.

Steve Tuthill, Seward Ambulance Corps, July 1978.

Len Weimer, Bear Creek Fire Department, **July 1978.**

Brent Whitmore, Radio Station KXRA, July 1978.

Luella Wilfong, Seward Hardware, July 1978.

Round Table Discussion, members of Mt. Marathon Association, January 1979.

Kenai Borough

Mick Brogan, OEDP Division, Kenai Borough Planning Department, January 1979.

Don Gilman, Kenai Borough Mayor, January 1979.

Jeff Otteson, Planning Department, Kenai Borough, June 1978.

Ike Waits, Planning Department, Kenai Borough, June 1978.

NEWSPAPER ARTICLES CITED

Cordova Report

Alaska Advocate. December 13, 1978. Mr. Tashiro goes to Kodiak.

Anchorage Daily News. June 28, 1978. Natives dispute fish closure.

_____. July 8, 1978. How mother earned my tuition; Tales Alaskans told me.

Anchorage Daily Times. September 7, 1978. Four Alaskan coastal cities get federal grants.

Cordova Times. February 19, 1976. Editorial.

_____. February 19, 1976. Chamber and City Council resolutions asking for conveyances of Eyak land.

_____. February 19, 1976. OCS lease sale.

_____. February 26, 1976. Eyak Corporation purchase of Banta Boatyard.

_____. March 11, 1976. C.D.F.U. and city of Yakutat joined State of Alaska in asking for delay of OCS leases - editorial in disagreement.

_____. March 18, 1976. Call for OCS council on the order of one proposed by Kodiak Borough.

_____. March 18, 1976. Keith Arnold and Max Beasley, Gulf of Alaska operators committee in Cordova at Chamber meeting to discuss OCS.

_____. April 15, 1976. Phillips Petroleum exploration of Icy Bay agreement.

_____. May 2, 1976. State buys back OCS leases.

_____. May 6, 1976. Pete Komkoff goes to D.C. for O.M.A.R.

_____. May 6, 1976. Gravina Point is one of selections of Eyak Corporation.

_____. May 20, 1976. C.N.I. and Kotzebue Village Corporation buy stores and shops (Sunshine Mall).

_____. May 27, 1976. Hunting spots jeopardized.

_____. June 3, 1976. Eyak summons regarding gravel.

_____. June 24, 1976. Icy Bay-Bomhoff contract - Corps of Engineers permit.

_____. June 24, 1976. Regarding archaeology of Prince William Sound by University of Alaska.

_____. June 1976. Cordova receives $22,000 grant for study of ANCSA.

_____. February 17, 1977. Blake gets appointment.

_____. March 17, 1977. City manager resigns.

_____. April 14, 1977. Doug Bechtel elected to term in O.M.A.R.

_____. July 7, 1977. Cordova, Alaska - July 4, 1977.

_____. December 1, 1977. Land selection discussed at forum.

_____. December 8, 1977. It's time for a move of C.N.I. headquarters.

_____. November 9, 1978. Forest land is officially conveyed to Eyak Corporation.

_____. December 14, 1978. Cordovans express concerns to District 5, Representative Margret Branson.

_____. December 14, 1978. Article on President Carter's National Monuments.

_____. January 18, 1979. Closed for further study.

_____. January 25, 1979. Chugach National Forest set aside for further planning; meeting here in February.

_____. January 25, 1979. UFA selects two from PWS to tour Denmark.

Kodiak Mirror. October 23, 1978. A.F.N. bottomfish workshop opens.

Tundra Times. November 8, 1978. Chugach Natives re-elect President Bob Anderson.

_____. November 22, 1978. Eyak Village Corporation received title to 63, 622 acres.

_____. March 1979. Chugach Natives buy Orca Cannery.

Seward Report

Alaska Journal of Commerce. March 26, 1979. Bottomfish demonstration set.

Alaska Daily News. July 15, 1978. New Alpetco battle: Seward versus Kenai.

_____. November 21, 1978. Alpetco to build refinery at Valdez.

_____. January 27, 1979. Dilemma over the rail lands.

_____. February 28, 1979. D-2 bill mark-up set to begin today.

The Peninsula Clarion. October 26, 1978. Alpetco offers no surprises.

_____. November 26, 1978. Alpetco silver lining.

_____. November 29, 1978. Borough continues efforts to draw new industry.

_____. December 5, 1978. Valuable lessons for the future.

_____. March 23, 1979. Borough swaps acreage for harbor site.

Seward Phoenix Log. May 13, 1976.

_____. June 17, 1976.

_____. August 12, 1976.

_____. November 18, 1976.

_____. 1976. Putting the pieces together progress edition.

_____. January 6, 1977.

_____. December 14, 1978. Carter withdrawal creates National Monument here.

. June 28, 1979. Major shipyard to be located at Fourth of July 'industrial site.

Kodiak Mirror. August 17, 1978. Kodiak fish may go to Japan.

_____. August 29, 1978. New England eyes new fish line. .

TABLE A

ROKEACH VALUE SCALE

A comfortable life -- a prosperous life
An exciting -- a stimulating, active life
A sense of accomplishment -- lasting contribution
A world at peace -- free of war and conflict
A world of beauty -- beauty of nature and the arts
Equality -- brotherhood, equal opportunity for all
Family Security -- taking care of loved ones
Freedom -- independence, free choice
Happiness -- contentedness
Inner harmony -- freedom from inner conflict
Mature Love -- sexual and spiritual intimacy
Public Spirit
Pleasure -- an enjoyable, leisurely life
Salvation -- saved, eternal life
Self-respect -- self-esteem
Social recognition -- respect, admiration
True friendship -- close companionship
Wisdom -- a mature understanding of life
National security -- protection from attack
Ambitious -- hard-working
Broad-minded -- open-minded
Capable -- competent, effective
Cheerful -- lighthearted, joyful
Clean -- neat, tidy
Courageous -- standing up for your beliefs
Forgiving -- willing to pardon others
Helpful -- working for the welfare of others
Honest -- sincere, truthful
Imaginative -- daring, creative
Independent -- self-reliant, self-sufficient
Intellectual -- intelligent, reflective
Logical -- consistent, rational
Loving -- affectionate, tender
Obedient -- dutiful, respecful
Polite -- courteous, well-mannered
Responsible -- dependable, reliable
Self-controlled -- restrained, self-disciplined

ACKNOWLEDGEMENTS

I would like to thank a number of people who helped me in completing this report: Tom Lonner, Dean Yoesting, Dick Schmidt, Robert and Susan Heasley, Jack Heesch, Northrim, Michael Baring-Gould, Susan and Jerry Huey, Vivian Erwin, Peter Hardy, and Peter Bennett. Thanks especially to all the people in Cordova-Eyak and Seward, or connected in some way to these towns, for their insight and willing cooperation.

The report is dedicated to Margie and Mary -- one who grew up with racism, one who grew up with alcoholism. Both showed me early and throughout their lives, that these problems can be overcome.