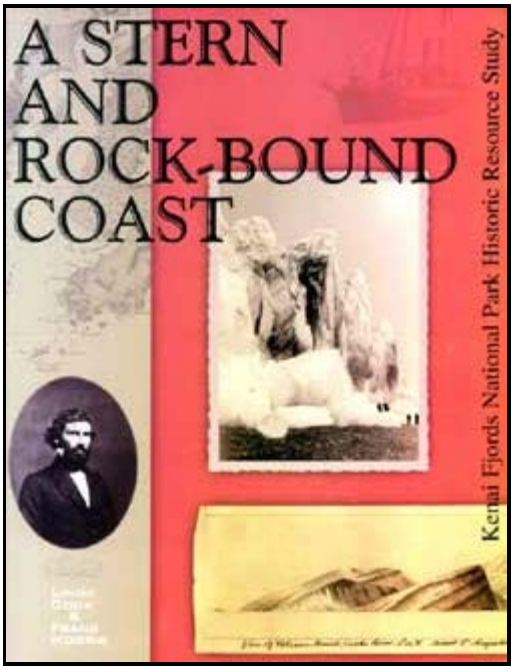
Kenai Fjords

A Stern and Rock-Bound Coast: Historic Resource Study



A STERN AND ROCK-BOUND COAST

Kenai Fjords National Park
Historic Resource Study

Linda Cook
Frank Norris

1998

National Park Service
Alaska Support Office
Anchorage, Alaska

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LIST OF ACRONYMS

ACC — Alaska Commercial Company
ADF&G — Alaska Department of Fish and Game
AEC — Alaska Engineering Commission
AHL — Alaska Historical Library, Juneau
AKSO — Alaska Support Office, Anchorage (NPS acronym)
AMTB — Anti-Motor Torpedo Boat
ANCSA — Alaska Native Claims Settlement Act
ANILCA — Alaska National Interest Lands Conservation Act

APG — Alaska Planning Group
ARC — Alaska Road Commission
ARO — Alaska Regional Office, Anchorage (NPS acronym)
ARLIS — Alaska Resource Library and Information Services
ASA — Alaska State Archives
AWS — Aircraft Warning Service
BCF — Bureau of Commercial Fisheries
BLM — Bureau of Land Management
BSF&W — Bureau of Sport Fisheries and Wildlife
C of C — Chamber of Commerce
DC — District of Columbia
DNR — (Alaska) Department of Natural Resources
EIS — Environmental Impact Statement
EQ — Executive Order
F&WS — Fish and Wildlife Service
FES — Final Environmental Statement
FWLB — Fish and Wildlife Library Base (entries at ARLIS)
GLO — General Land Office
GPO — Government Printing Office
HD — Harbor Defense
HECP — Harbor Entrance Control Post
HIKF — Harding Icefield-Kenai Fjords (proposed park unit)
HPC — Halibut Producers Co-operative
HRS — Historic Resource Study
IFC — International Fisheries Commission
IPHC — International Pacific Halibut Commission
KEFJ — Kenai Fjords National Park (NPS acronym)
NARA ANC — National Archives and Records Administration, Anchorage
NMFS — National Marine Fisheries Service
NNL — National Natural Landmark
NPS — National Park Service
NRA — National Recreation Area
NRPB — National Resources Planning Board
PLO — Public Land Order
RCR — Cultural Resources Division (NPS acronym)
RD — Regional Director
RG — Record Group
SEL — Seldovia (USGS quadrangle acronym)
SHPO — (Alaska) State Historic Preservation Office
UAA — University of Alaska Anchorage
UAF — University of Alaska Fairbanks
USBF — U.S. Bureau of Fisheries
USBM — U.S. Bureau of Mines
USC&GS — U.S. Coast and Geodetic Survey
USGS — U.S. Geological Survey
USO — United Service Organization
WAA — War Assets Administration
WDC — Western Defense Command

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ACKNOWLEDGMENTS

Research successes throughout this study were frequent, unpredictable, and very rewarding. On several instances local residents provided crucial insight and support. We wish to thank the kindness and hospitality of many Nanwalek residents, especially the efforts of Ms. Sally Ash and her family, who provided perspective on local oral history, personal experiences, and family history. Much of this study's historic mining component draws heavily on the fieldwork of the NPS's mining compliance crews, who visited park sites during the summers of 1989 and 1991. Extensive field notes and sketch maps from mining site surveys assisted and greatly supported documentation of historic properties within the Nuka Bay mining district. Archival research and historical narrative provided by AKSO mining historian Logan Hovis established the basis for the Nuka Bay mining district historic context. Other AKSO contributions include the Placer Creek cabin history by architect Mary Tidlow and architectural historian Katerina S. Wessels's expertise on Russian fort construction. Ms. Wessels also assisted with the research and translation of Russian documents.

Many people generously shared their own knowledge of the outer coast and contributed research information. Seward residents Pat Williams, Margaret Deck, Doug Capra, Joe Stanton, and Lee Poleske and other members of the Resurrection Bay Historical Society spent time talking about experiences and giving an overview of research projects conducted on the coast. In addition, many longtime residents from Seward, Halibut Cove, and Homer generously provided the authors with information about the area's fishing, mining, and homesteading history; former federal and state fisheries officials were helpful as well. The names of all these contributors are listed in the bibliography. Michael Stallings's private bibliography of the region, consisting of hundreds of handwritten index cards, provided the authors with an overwhelming first glimpse of how vast, yet fragmented the search for information on the coast would be. Archeologist J. David McMahan with the Alaska Office of History and Archaeology provided photographs and research on the Sather fox farm.

Kenai Fjords National Park Superintendent Anne Castellina and her staff provided excellent support for this project and graciously arranged for both authors to see the park's resources on a firsthand basis. Special thanks go to Jim and Sue Pfeiffenberger, Bill Stevens, and Tony Chapin. At the Alaska Support Office, thanks first go to Senior Historian Sandra Anderson, who wholeheartedly supported our effort and gave us the time to complete this long-delayed project. We deeply appreciate the careful work of proofreaders Bud Rice, Ross Kavanagh, Doug Capra, and Logan Hovis. And finally, for graphics support, we have relied heavily on the assistance and skills of Frank Broderick. Many thanks to you all.

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PREFACE

A perception of wilderness is easily acquired at Kenai Fjords National Park, located on the Gulf of Alaska in southcentral Alaska. This historic resource study challenges the long-held view that the coast has been uninhabited throughout most of the historic period—that it has been nothing more than a forsaken wilderness.

The piecing together of the history of a place called Kenai Fjords drew on a wide range of peripheral sources. Most of the preliminary research concentrated on efforts to locate descriptive material on village and land use sites in order to document evidence of human activity along the coast. These few early sites acted as a thread through which to string together the development of related Russian and American enterprise, including shipping, hunting, commerce, fox farming, fishing, mining and the business of war. Historic contexts evolved from this research, and historic properties were identified as eligible for nomination to the National Register of Historic Places.

Settlement and cultural patterns on the stormy, exposed Pacific coast of the Kenai Peninsula developed primarily in response to activity in surrounding areas. For the most part, Russian trading centers and American development centralized in Cook Inlet and Prince William Sound and only briefly at the head of Resurrection Bay. The Kenai coast, located between these larger centers, was a transitory route for ship traffic and to a lesser degree for fur exploitation, whaling, and seabird feather and egg gathering. Interest in the area grew in the early twentieth century with glacial investigations, fox farming, and mining. The process of trying to place the Kenal Fjords within the history of the region became a principal research theme. Using this approach, the region's appearance and its reputation as an isolated cultural backwater became merely one aspect of a more intricate tapestry of history.

The very nature of the outer Kenai coast, including the terrain, geology, environment, and climate, has consistently discouraged habitation and has constrained resource use. This study addressed a number of paramount questions, including the issues of depopulation and the apparent scarcity of original maps, survey information, and documentation. Many historical sources and first hand accounts that described lands within park boundaries have been lost. Others are redundant because often one explorer simply copied the notes of his predecessor. Also, the ever-changing perception of what constituted an "uninhabited" place muddled the picture of the coast. To geology professor Ulysses S. Grant, who spent many summers in Alaska in the early 1900s with the U.S. Geological Survey, describing a place as uninhabited meant that there were no permanent villages, but not a complete absence of people or activity. In one of his site bulletins he wrote, "aside from these settlements the eastern and southern coasts of the Kenai Peninsula are entirely uninhabited, being visited only by a few prospectors and hunters and by roving parties of Natives during the summer months." [1]

This study is co-authored by National Park Service historians Linda Cook and Frank Norris of the Alaska Support Office, Anchorage. Ms. Cook initiated the study and wrote the first part of the volume through Chapter 4. Mr. Norris then completed the study by writing the last six chapters. Written with two complementary voices, the study develops a broad historic

context for the often-overlooked outer coast, its heroes, and their contributions to the region's history.

The volume's title was suggested due to the region's stormy conditions and rugged topography. It is excerpted from the first stanza of the well known Felicia Hemans poem, "The Landing of the Pilgrim Fathers in New England," first published in 1826. Ms. Hemans "rock-bound coast" was the area in and around Cape Cod Bay, Massachusetts; Alaska's southern Kenai coast, however, offers far more challenging conditions than its north Atlantic counterpart. Considering those conditions, it has been remarkable indeed that the Kenai coast has supported such a varied and multifaceted history as has been alluded to in these pages.

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RESEARCH METHODOLOGY

Purpose and Scope

A Historic Resource Study (HRS) is an NPS management document designed to assess known historic properties and address their eligibility to the National Register of Historic Places, commonly known as the National Register. HRS's also are prepared to meet federal agency requirements set forth in the National Historic Preservation Act of 1966, as amended, and to contribute to and shape park planning, priorities, actions, and decisions that may directly or indirectly benefit, effect, or pose a threat to historic properties. Such a study provides the park with base line historical material on known resources and historic properties, and develops contexts within which these and yet undiscovered resources may have association and meaning. As a result, an HRS integrates cultural resources into the larger scheme of resource management and park identity.

This HRS was researched and written in accordance with the Cultural Resources Management Guideline (formerly known as NPS-28) and sections 101 and 106 of the National Historic Preservation Act. It develops historical themes and contexts for the land within Kenai Fjords National Park and shows how these resources relate to the surrounding areas. It also identifies and evaluates National Register eligible properties for purposes of NPS planning, interpretation, compliance, and natural and cultural resource management directives.

All too often, HRS's have consisted of a historical narrative and little else. This HRS, however, has incorporated known site information when possible. This style of document provides synthesis and analysis of both resource and history; it directly associates historic properties with their appropriate contexts. For example, the study states whether determinations of eligibility to the National Register have been made on specific properties. Each chapter is designed as a National Register historic context for a period of history that affected the park, and can be used to nominate known or yet to be discovered resources. As a result, the study has association with resources rather than being limited to a discussion of historical context.

Most of the buildings and structures in the park are associated with the early twentieth century mining context of the lower Kenai Peninsula. Some contexts (i.e., historical themes) have no related National Register eligible properties. The reason for this is twofold. First, environmental and cultural factors have both limited and defined regional settlement. Second, few existing buildings and other improvements retain the historical integrity necessary for listing on the National Register. Despite the apparent lack of cultural complexity, however, lands in the present park have strong cultural components that tie them into the broader historic contexts of the lower Kenai Peninsula.

Research Methods

Much of the research is based on primary materials. One of the first research venues was the City of Seward Municipal Records room located in the Seward City Hall Building. These records provided information on land use claims, permits, and leases for lands in the park. Most of the permits were related to mining claims at the southern end of the park; also located, however, was a fishing site permit in Aialik Bay and a 1920s-era permit to operate the Nuka Island fox farm. The Resurrection Bay Historical Society and the City Library in Seward provided photographs and a first hand look at historical materials.

The Kenai Fjords National Park headquarters library contained early park memoranda. The internal park correspondence that mentions cultural resources provides information on what properties existed when the park was established.

Archival research concentrated initially on Russian-American Company and Russian Orthodox Church records. Additional Russian language research included the translation of many references to the Kenai Peninsula from the *Russian Orthodox Messenger*, a journal published by the North American Diocese of the Russian Orthodox Church in New York. Further research in Russian records should include review of the *Papers Relating to the Russians in Alaska, 1732-1796* in the collections at the University of Washington Library, Seattle. The collection consists of twenty-one volumes and is a typescript of the original, which is located in the Russian Archives. Archival research also included a review of the collections of the Bancroft Library, the National Archives, the Library of Congress, and the University of Alaska's collections at both its Fairbanks and Anchorage campuses.

American period records from the U.S. Coast and Geodetic Survey, [1] the extensive writings and cartography of George Davidson, and the records of both the Brown and Hawkins Company in Seward and the Alaska Commercial Company contributed to this study. The records of the commercial companies yielded personal information and perspective on individual transactions and gave insight into Native and American hunting practices along the coast in the late nineteenth and early twentieth centuries.

Several park resource reports were crucial to understanding the history. The "Seabird-Marine Mammal Survey and General Reconnaissance of the Southern Kenai Coast," conducted in 1976, provided one of the first opportunities to assess the proposed park's 600-mile shoreline from Point Adam to Cape Resurrection. In 1983, archeologist Georgeanne Reynolds conducted an archeological survey near the Placer Creek Cabin in the Resurrection River Valley. In 1987, J. David McMahan and Charles Holmes with the Alaska Department of National Resources published a site assessment and documentation for the Sather Fox Farm on Nuka Island. NPS archeologist Dr. Jeanne Schaaf's 1988 report, prepared for the Denton site in Aialik Bay, briefly discussed Russian occupation on the Pacific coast to establish a context for a small collection of post contact artifacts. In 1987 Bud Rice, Kenai Fjords National Park Resource Manager, investigated the history of glacial movement within the park and highlighted the cultural component in his early chapters. The Alaska Native Historic Sites Project, managed under the mandate of Alaska Native Claims Settlement Act (ANCSA), surveyed Chugach Alutiiq sites known as 14(h)(1) sites on the outer Kenai Peninsula. These reports provided primarily archeological orientation to the coast, and also incorporated historic resource site information related to Native use.

In 1989, site investigation associated with the *Exxon Valdez* supertanker oil spill contributed to existing NPS, State of Alaska, and Bureau of Indian Affairs site documentation. As a result, more inclusive thematic studies of the cultural history of the region evolved. Site assessment of the Chiswell, Pye, and Nuka Island areas by the Exxon Cultural Resource Program resulted in the analysis of cultural resources. In the summer of 1993, a team of archeologists and other scientists, working as part of the NPS's Systemwide Archeological Inventory Program (SAIP), surveyed areas near the Aialak, Holgate, Northwestern, and

McCarty glaciers. Through a collaborative effort between the NPS, the USGS, the University of Alaska Fairbanks, and the Arctic Studies Center, Smithsonian Institution, the survey team developed a new approach to site identification on the coast. The team tied the region's history of glacial geology to likely sites of habitation.

These studies illustrate some of the methods used to document the region's resources. All of these studies contributed to and shaped the research for this HRS.

Many known historic properties were visited to assess National Register integrity and to understand how the setting defined each resource. These properties were identified from mining compliance files, oral histories, conversations with NPS staff, and many other maps and reports that specified the existence of a built structure in the park.

Architect James Creech and historian Bonnie Houston of the Alaska Support Office's List of Classified Structures program accompanied one of the authors on a 1993 reconnaissance of park coastal areas. More specifically, this trip visited Nuka Island and the various Nuka Bay mining properties. Information obtained on this field visit substantiated earlier fieldwork and provided critical information on both resource and setting integrity.

Despite the research devoted to locating existing historic properties, there are many unanswered questions regarding park resources. The evolution of the village site of Yalik, for example, is still unclear. One cabin remnant exists in Harris Bay near Northwestern Glacier; however, little is known of its history. It is possible that the cabin had an association with an earlier or prehistoric village site. In addition, several cabins appear to have vanished without a trace. These include a cabin on James Lagoon and Skeen's cabin in Nuka Bay. An author's visit to James Lagoon failed to locate the remains of a cabin, and extensive mining survey work never found Skeen's cabin. Lost with these cabins are the events and motivations that led to their construction and what happened to both building and occupant. In all probability, other cabin ruins exist in the park that are not addressed in this study.

Historic Contexts

Historic contexts for this study developed from the recurring theme that environmental conditions produced a landscape that resisted many of the patterns of nineteenth and early twentieth century historic resource use and settlement commonly found in Alaska. As a result, the contexts relate the cultural component through environment perceptions--always coming back to the question of how the landscape shapes the manner in which cultural use and occupation occurred in Kenai Fjords National Park. Recognition of the harsh geographical and environmental regime of the outer Kenai Peninsula is an underlying theme.

TABLE A. Historic Contexts and Associated Historic Properties

HRS Historic Contexts	Possible Eligible Properties	Property Types	Ineligible Properties and Sites
The Stern and Rock-Bound Coast			
Native Lifeways on the Outer Kenai	Yalik Village	Site	

Peninsula			
European Exploration and Russian Settlement Patterns on the Lower Kenai Peninsula	Aialik Bay	cultural landscape	
Shifting Landscape: Demographics, Economics, and Environment on the Kenai Peninsula	Nuka Bay, Yalik and other abandoned village sites on outer coast	cultural landscape	
Developing the Transportation Infrastructure			Moran Camp sign, 1898; McArthur Pass navigation aid; Nuka Pass berm; Summit Creek berm
Living off the Land and Sea	Pete and Josephine Sather Fox Farm, Nuka Island	fox farming landscape, pens, buildings, structures	Mike's Bay moonshine camp; Beauty Bay whiskey still; Bob Evans's cabin at McCarty Lagoon
The Lure of Gold	Nuka Bay Historic Mining District	mines, camps, roads, isolated cabins, landings, scattered equipment	
Resurrection Bay Military Activities	Outer Island Camp	barrack ruins, Kitten Pass stairs, road, iron cart	
Commercial Fish Harvesting and Shellfish			Stream guard station sites at Delight Creek, Nuka Island, Pederson Lagoon, and Beauty Bay
Recreation and Tourism			Spruce Creek trail; Bear Glacier (beginning of 1940 Harding Icefield crossing); Exit Glacier (end of 1968 Harding Icefield crossing)

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INTRODUCTION

> We could not avoid remarking that the whole of this exterior coast seemed to wear a much more wintry aspect than the countries bordering on those more northern inland waters we had so recently quitted. — George Vancouver, 1794 [1]

In 1967, on a flight between Anchorage and Seward, Bailey Breedlove of the NPS gazed out over the glaciated seaboard of the Kenai Peninsula. The coast reminded him of his World War II missions performed in the terrain of the Norwegian fjords. Moved by the striking resemblance between the two subarctic coastlines, Breedlove collaborated with an associate to pen the name Kenai Fjords. [2] Several years later, in 1972, an NPS photographer was asked to capture on film the "new world" of Kenai Fjords following the passage of ANCSA in 1971. Try as he may, however, the man was unable to find Breedlove's Norwegian-like coast on any map. In his published account of the adventure he demands, "...but where-the-hell is Kenai Fjords?" [3]

By the late 1970s, the definition and boundaries of an actual area called Kenai Fjords had evolved as a planning term for the glacial system of the Pacific coast of the Kenai Peninsula in the Secretary of the Interior's 1977 proposal for the Kenai Fjords National Park. In the words of Don Follows, the NPS "keyman" for the proposal, the contrived name identified a place "that collectively described the peninsulas, bays, island stacks, and deep water fjords between the Kenai mountain platform and the wave beaten coast thrusting into the Gulf of Alaska." [4] Follows scrutinized the coastline with the hope of locating some "place" associated with the fjords. After analysis of both USGS maps and bulletins and bibliographies, Follows conceded that he could not find "a single place name there" to generally describe the coastline in this area.

In 1978, President Jimmy Carter conferred national monument status to 652,000 acres of glacial fjord ecosystem on the southeastern flank of the Kenai Peninsula. In 1980 Congress, acting under Section 203 of the Alaska National Interest Lands Conservation Act (ANILCA), Public Law 96-487, established Kenai Fjords National Park as a new unit of the national park system. The park boundaries were drawn to reflect geologic and topographic features resulting from the creation of a glacial ecosystem, and not for any significant archeological or historic resource. [5] Section 201(5) of the law specified that the park be managed "to maintain unimpaired the scenic and environmental integrity of the Harding Icefield, its outflowing glaciers and coastal fjords and islands in their natural state; and to protect seals, seal lions, other marine mammals, and marine and other birds and to maintain their hauling and breeding areas in their natural state free of human activity which was disruptive to their natural processes." The need to protect the area's cultural resources was not specifically mentioned; the presence of humans, as noted above, was specifically cited as being detrimental to the park's goals.

In 1984 the park's *General Management Plan* identified historic resources and created historic zones. As described, these zones "are designated for the preservation, protection, and

interpretation of cultural resources." The plan specified the establishment of a historic zone around abandoned mining properties in the Shelter Cove area of Nuka Bay, which constitutes one concentration of historic properties in the park. [6]

Several towns and villages outside the park have long had a role in the use of park resources. Seward is the principal gateway to the park. Located at the head of Resurrection Bay three miles east of the park boundary, the town has approximately 3,100 residents. Situated to the west of Seward on the tip of the Kenai Peninsula are the Alutiiq villages of Nanwalek, formerly called English Bay, [7] and Port Graham. These two villages are close to parklands and have cultural and ancestral affiliation to lands within park boundaries. The village of Seldovia, on the peninsula's western coast, also has historic association with cultural patterns within park boundaries.

Josephine Sather at her Home Cove residence. *Anchorage Museum of History and Art.*

The predecessors to the residents of Nanwalek and Port Graham have been living in the area for hundreds if not thousands of years. Relatively little is known of the Unegkurmiut, an independent relation of the Alutiiq Pacific Eskimo, who inhabited the Kenai coast prior to and concurrent with early Russian period contact. At a later date the coast may have been settled by an amalgam of people from Kodiak Island, Cook Inlet, and Prince William Sound,

in addition to the original inhabitants at the time of Russian contact.

Archeological evidence of Pacific Eskimo village sites in the outer protected bays of the peninsula indicates a pattern of habitation that was shattered by Russian acculturation and control. The fate of these villages likely followed a pattern of depopulation, disease, consolidation, and relocation that was also inflicted on the coastal village communities of Kodiak Island, the Alaska Peninsula, and Prince William Sound in the early and mid-nineteenth century. In the 1930s, American anthropologist Frederica de Laguna conducted archeological site surveys in the area; most were in Prince William Sound with general reference to the people of the Kenai Coast. In 1954, Danish ethnographer Kaj Birket-Smith collaborated with de Laguna to compile anthropological information on Prince William Sound.

Many sources have suggested that Native inhabitants of lands within the park moved away by the end of the nineteenth century. Others have indicated that the Kenai Mission of the Russian Orthodox Church supported the relocation of the last villages in Nuka and Aialik bays around the turn of the century to the more populated villages of Port Graham and English Bay. This initiative by the Russian Orthodox Church may have been aggravated by a collapse in fur prices and the consolidation of fur companies at Seldovia, English Bay, and on Kodiak Island, requiring hunters to pool resources. But summer and seasonal occupation of village sites, hunting and fishing grounds, and the use of trade routes continued. Local Native place names provide reference to land use areas. The same analogy holds true for Russian, English, Spanish, and American names of sites, landforms, passes, and waterways in and adjacent to parklands.

The exploration of the coast by Europeans is poorly documented. Russian, English, and Spanish mariners regularly shared information on the coastal areas of Alaska, especially those areas that were the most treacherous. As a result, many personal accounts are generalizations of what others had seen. Many who wrote about the outer Kenai Peninsula never actually saw it. Therefore, most accounts have little historical value because the date of a publication usually had little connection to when the information was originally recorded. This practice perpetuated what can only be called myths about the outer Kenai coast. Also, several original reports have been lost. Russian governor, surveyor, and cartographer Mikhail D. Teben'kov reported in the accompanying *Notes* to his *Atlas of the Northwest Coasts of America* [1852] that of the five Russian surveys conducted of the coast since the 1790s, three had already been lost. [8] These lost surveys may well have had more detail than the larger coastal descriptions that have survived.

In several accounts, rough seas and fog settled in as eastbound ships passed Nuka Island. The fog stayed until Montague Island and the waters of Prince William Sound appeared on the horizon. For those who dared to venture close to shore, hidden rocks seemed to lay in wait, ready to snag the hulls of the large wooden ships. Naturally wary of a coast that was difficult to navigate and formidable in appearance, George Vancouver in 1794 noted that the coast was colder and had a more "wintry aspect" than the surrounding areas. [9]

Settlement along the coast was sparse. The Pacific Alutiiq probably migrated to the area from neighboring regions; few of them, however, settled along the outer coast. The Russians built the Voskresenskii Redoubt in Resurrection Bay only after exhausting other possibilities in Cook Inlet and on Kodiak and Afognak islands.

With no established ports or villages along the coast, and with ice flow from tidewater glaciers a constant threat, Russian, European, and American traders depended on Native crews to hunt close to shore. These crews navigated the coast in fleets of small skin boats. Kodiak Island served as the primary headquarters. Many of the furs obtained from the outer

Kenai Peninsula fell into Russian, European, and American hands by barter and trade.

Nineteenth century Russian fort settlements occupied the more temperate climates and harbors of Cook Inlet, and forested islands from Prince William Sound to southeastern Alaska. Although Grigorii Shelikhov's chief administrator, Aleksandr A. Baranov, supervised the construction of a fortified settlement and ship building yard in Resurrection Bay in 1793-1794, subsequent Russian governors ordered the dismantling of the *artel* and moved its residents to a site west of Cook Inlet, near Iliamna Lake. The move, made after 1820, reflected a change in Russian demographics and economics that favored a more centralized approach to settlement.

Since 1900 the Kenai coast has been influenced by a variety of cultural agents. Americans who traveled to the area in the late nineteenth and early twentieth centuries endured many of the same challenges faced by the Natives and Europeans. Local traders and hunters, for example, continued to exploit land and marine mammals. In 1903 railroad speculators established the town of Seward, one of the first planned cities in Alaska. Mining and fur farming activities have had an important, if temporary, impact on the open and wild lands fronting the Gulf of Alaska. First in the mid-1850s, and then later in the early twentieth century, geologists and gold miners tenaciously explored the peninsula in the hopes of finding economically productive claims. They found little, however, and by World War II most activity had ceased. After the war, use of the peninsula remained opportunistic, and in many ways sheltered from view. Only in recent years have sport fishers, sightseers, and other outdoor recreationists brought a previously-unforeseen level of exposure to the area's coastal and glacial resources.

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Chapter 1:
THE STERN AND ROCK-BOUND COAST

> The whole coast between Cape Saint Elizabeth in the west and the mouth of Copper River in the east is deeply indented with coves and fiords, and towering peaks rise abruptly from the sea. Nearly every valley and ravine has its glacier, some of the latter being among the most extensive in the world. [1] — Ivan Petroff, 1880

Geographic Overview

Kenai Fjords National Park is a sequestered glacial landscape of ice, tidewater glaciers, deeply chiseled fjords, and jagged peninsulas formed by the forces of the Harding and Grewingk-Yalik icefields as they plunge into the sea. Located on the southeastern or seaward coast of the one hundred and seventy-mile-long Kenai Peninsula, the park abuts the Kenai Mountains to the north and west. These lofty mountains, part of the Chugach and St. Elias ranges, bisect the peninsula close to the southeastern coast and extend to Kodiak and Afognak islands. Only the mountain peaks (*nunataks*) are visible above the permanent mantle of ice and snow of the icefield. Along the coast, the summits of the same mountain range surface as offshore island stacks. As the glaciers recede the fjords deepen, enlarging and exposing peninsulas that indent the coast and disappear into the sea.

Map 1-1. Kenai Fjords National Park. *(click on imasge for an enlargement in a new window)*

The setting is dynamic. The park is located on an active tectonic shelf of the Pacific Ocean Plate that follows the coast from Port Dick (west of Nuka Bay) to Day Harbor (east of Seward) in one of the most seismically erratic regions of the United States. During the 1964 earthquake lands within the Kenai Fjords National Park subsided. The tremor dropped the coastline from three to six vertical feet in most areas and attempted to counterbal-ance the force by raising it in others. As the shifting plate moves and grates against the continental landmass, the coast submits to the sea. This process is believed to have begun after the last major period of glaciation, 20,000 years ago.

Glaciers and deep fjords in the southwestern portion of the Kenai Fjords radiate from the colossal snow pack of Harding Icefield. In 1950,

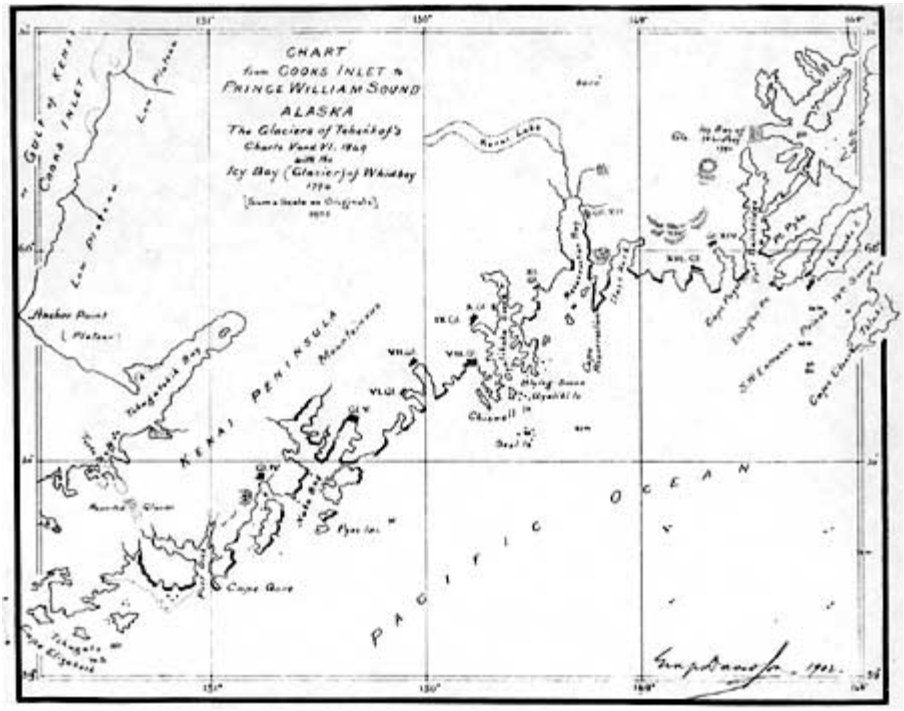
Sea stacks are a common feature along the Kenai Fjords coastline. *M. Woodbridge Williams/NPS photo in Alaska Regional Profiles, Southcentral Region, July 1974, 36.*

the USGS officially named the icefield for President Warren G. Harding who died in 1923, soon after the first presidential visit to Alaska (see chapter 10). Ten of the thirty-four tidewater and hanging glaciers that emanate from Harding Icefield are included within the park. [2]

The mile-high Harding Icefield is a glacial vestige of the 10,000-year-old Pleistocene period when an expansive ice sheet blanketed southcentral Alaska. The icefield may also be a remnant of the massive Truuli Icefield, recorded by the naturalist Ilia G. Wosnesenski in 1842 that comprised both the Sargent and Harding icefields. Heavy winter snow loads feed the glaciers at higher altitudes as moist air settles above the mountains. Snowfall occurs primarily in the winter months though summer storms are not uncommon; the icefield accumulates as much as 400 inches of snow annually. Warming winds off the Gulf of Alaska temper winter weather creating a maritime climate. Glacial runoff feeds the streams and lakes that drain into the comparatively milder terrain and lowland component of the peninsula. Glacial till and moraines covered in vegetation constitute most of the low-lying lands. Landing beaches are few. Deep snow on the mountainsides increases the likelihood of avalanches in these lower areas. [3]

The park includes Bear and Exit glaciers in the vicinity of Seward. The parklands then proceed south and west on the Kenai Peninsula to Petrof Glacier west of Nuka Island. The park's northern boundary bisects the Harding Icefield. All coastal areas between Bear and Petrof glaciers are part of Kenai Fjords National Park.

Park boundaries exclude almost all offshore features: open sea, channel water in the fjords, pinnacle rocks, and islands. The signing of ANILCA in 1980, transferred most of the offshore islands to the Alaska Maritime National Wildlife Refuge. Significant island groups fall under this category; they include the Pye and Chiswell islands, which are major bird conservation habitats.



George Davidson's illustration of glaciers on outer coast in 1902. *Bancroft Library.*

In 1867, English-born George Davidson, a geodesist with the U.S. Coast and Geodetic Survey (USC&GS), supervised what many consider the first American coastal assessment of Alaska under a directive from Congress. Relying heavily on the cartography of Teben'kov and his navigators, other Russian ship captains, and Vancouver, Davidson compiled a descriptive account of coastal positions and natural resources from Sitka to the Pribilof Islands which he submitted to Congress in the 1869 USC&GS annual report. In it, Davidson offered the following introductory description of the vicinity:

> From Cape Puget to Cape Elizabeth the shores have been very well explored by the Russian navigators, searching for good harbors and shelter for the Russian whalers. Their reports show that the line of coast is broken by bays and coves, but none offering good anchorage; there being very close to shore not more than thirty to fifty fathoms of water. The coast is very rocky, steep and mountainous, yet covered with wood, while the ravines and gorges between the mountains contain in many places, glaciers which stretch back from the heads of the bays even to the gorges descending towards Cooks inlet. [4]

Many descriptions of the coast in later years followed Davidson's version; most of them presented an equally rugged portrait of the land and its glaciers.

George Davidson portrait. *Bancroft Library.*

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Kenai Fjords

A Stern and Rock-Bound Coast: Historic Resource Study

Chapter 2:
LIVING ON THE OUTER KENAI PENINSULA

> The east coast of Cook Inlet is called the Kenai Peninsula, a land with a backbone of glaciers sliding icy spines into the Gulf of Alaska where Eskimo once occupied the fjords facing the open sea. [1] — Cornelius B. Osgood, 1937

The Chugach and Unegkurmiut

Map 2-1. Historic Sites-Nativge Lifeways. *(cick on image for an enlargement in a new window)*

The Kenai Peninsula's earliest inhabitants were a people in transition. Living on a narrow strip of land between the edge of the Kenai Mountains and the surge of the Pacific Ocean, the Natives of the outer coast constituted one of the easternmost groups of Pacific Eskimo. The archeological data suggest that most of the sites known today are about 800 years old. [2] Only some of these villages were still inhabited at the time of Russian contact; even fewer existed until the twentieth century. Many speculate that these coastal people migrated to the coast from Kodiak Island or the Alaska Peninsula and traded along the length of the Pacific coast.

The Native inhabitants of the Pacific coast of the Kenai Peninsula region are called the Alutiiq Chugach. Variants of the name Chugach occur in Russian, American, and European ethnographic studies and is generally inclusive of Pacific Eskimo who lived from Cape Elizabeth to the eastern coastal areas of Prince William Sound. By some historical accounts, the name Chugach is a derivative of the Russian-Eskimo name for Prince William Sound and the Chugach Islands near Kachemak Bay. Traveling between the two regions, the Natives crossed a portage through one of the fjords to arrive in Kachemak Bay near the Chugach Islands. The prolific, though not always reliable, Russian chronicler Ivan Petroff stated that the name "Chugach" was a Russian version of the tribal name of Sh-Ghachit Shoit (the latter word means simply "people"). [3] The scientist and naturalist William Dall called them Chugachmiut, placing a "miut" at the end of the word to imply "dwellers of."

Many anthropologists maintain that the Eskimo of the outer Kenai Peninsula, the Unixkugmiut or Unegkurmiut, were a separate people from the nine Chugach subtribes of the larger Prince William Sound island region. It is presumed that the Unegkurmiut's affiliation lay more with the inhabitants of Kodiak Island. The Unegkurmiut are believed to have once

inhabited a larger portion of the Kenai Peninsula and may have been one of several other unknown Pacific Eskimo subtribes. [4] Frederica de Laguna, who visited the region in the 1930s and documented a dozen sites, contended that Kenai Peninsula inhabitants, whose range extended from Puget Bay to Cook Inlet, were not tribesmen of the Chugach. [5] Historical references, in part, support this view. Baranov referred to the Natives in his charge at Resurrection Bay as *inovertsy* meaning "men of other faith." [6] Carl Merck, the naturalist on Captain Joseph Billing's 1790 expedition, met local inhabitants in the vicinity of Nuka Bay and learned they were called Chugachi. These inhabitants made a point of warning Merck of other Natives who had the same name. [7] Davydov, who visited the area shortly after 1800, made a connection between the Kenai coastline and the name and territory of the Native inhabitants:

> In Voskresensk (Resurrection) Bay, where the Chugaches live, there is also an *artel*; further on is also one in Chugatsk Bay, or Prince William Sound, on Nuchek Island. From time to time the inhabitants of the Copper River come here in huge boats to see the hostages that have been taken away from them, and to sell the furs and raw copper which they have brought with them. [8]

A woman of Prince William Sound Alaska Purchase Centennial Commission. *Alaska State Library, photo PCA 20-249.*

In the 1830s Ferdinand Wrangell wrote on the ancestral lineage of the Chugach, drawing an association between the people of the outer Kenai coast and Kodiak Island. Wrangell maintained that the Chugach were descendants of the people living on Kodiak Island.

The Chugach were driven from the island of Kadiak after internal strife there and eventually reached the site of their present settlements on the shores of Prince William Sound and west as far as the entrance to Cook's Inlet. It is certain that they are of the same tribe as the Kadiaks. [9]

Wrangell also noted that the residents of both Kodiak Island and the Gulf Coast had similar clothing in contrast to other Alaska Natives he had encountered. He observed, "they do not dress in reindeer skins, like the other tribes of these regions, but make their parkas (winter garments) from birdskin and their kamleis (summer garments) from the intestines of whales and seals." [10]

The following observations, published in 1836, support Wrangell's views and give insight into what people knew and recorded about the region.

> Two tribes are found, on the Pacific Ocean, whose kindred language, though exhibiting some affinities both with that of the Western Eskimaux and with that the Athapascas, we shall, for the present, consider as forming a distinct family. They are the Kinai, in and near Cook's Inlet or River, and the Ugaljachmutzi (Ougalachmioutsy) of Prince William Sound. The Tshagazzi, who inhabit the country between those two tribes, are Eskimaux and speak a dialect nearly the same with that of the Konagen of Kakjak [Kodiak] Island. [11]

Petroff thought that the origin of the people was evident in their preference for skin boats

rather than wooden dugouts. Wood was the technology so preferred by the Tlingits, who were the southern neighbors of the Chugach. Petroff's observations are worded in such a way as to suggest that he reached these conclusions almost by a process of elimination. He noted, "The exclusive use of the kaiak or bidarka in this Alpine region, with dense forests and dangerous beaches, can only be explained by the emigration of the people from other regions devoid of timber." [12]

Finally, Birket-Smith stated that his informant in the 1950s would call himself a name meaning "Eskimo of Prince William Sound", drawing a marked distinction between he and those from Seward, Nuka Bay, and points west. [13]

Other anthropologists, however, present a different lineage for the people of the outer coast. Hassen suggests that the Chugach were kinsmen of the Unegkurmiut of Resurrection Bay, Nuka Bay, and Port Graham, implying a marked regional and perhaps ethnographic distinction. [14] There is also the speculation that the Unegkurmiut lived well into the southern portion of Cook Inlet only to be pushed back by the Koniag. [15] At the time of Russian and European contact, the territory of the Dena'ina included all of Cook Inlet except for the southern end of the Kenai Peninsula and outer coast. [16] Captain James Cook met Natives near North Foreland, which lies south of present day village of Tyonek, and there he observed a resemblance to others whom he had encountered on the Gulf of Alaska coast. He noted that "I could observe no difference between the persons, dress, ornaments, and boats of these people, and those of Prince William's Sounds, except that the small canoes were rather of a less size, and carried only one man...." [17]

The above statements suggest that there is little consensus and even less descriptive material on the people who inhabited the remote Kenai coast. Many agree that the Unegkurmiut were an obscure people. [18] Oswalt epitomized what scant information existed by stating, "They were Suk-speaking Eskimos whose roots were shallow and whose success was moderate." [19]

Despite these different viewpoints, many observations can be made about the Kenai coast inhabitants from the records of the Russian, English, and Spanish mariners and traders and the history of the of the Dena'ina, Koniag, Chugach, and Tlingit. Looking at the outer coast inhabitants from the perspective of their neighbors gives an insight into the identity of these people. Most of the ethnographic research for this context is based on the Chugach, for whom there is more documentation. From general prototypes of Chugach land use and subsistence, some inferences can be made about the lifestyle of the Unegkurmiut.

Kenai Fjords

A Stern and Rock-Bound Coast: Historic Resource Study

Chapter 3:
EUROPEAN EXPLORATION AND RUSSIAN SETTLEMENT PATTERNS ON THE LOWER KENAI PENINSULA

> Investigate possible resources, make necessary descriptions and then continue the journey as long as summer makes it possible.... — Grigorii Shelikhov, 1785

Map 3-1. Historic Sites-European Exploration/Russian Settlement. *(click on image for an enlargement in a new window)*

In the late 1700s Russian and European interests centered on southcentral Alaska. During this period, outside adventurers pursued economic opportunities on Kodiak Island, Cook Inlet, and Prince William Sound. These regions had comparatively warm microclimates, ice free protected bays, accessible forests, and pasture lands suitable for hunting and agriculture. For the most part, however, they avoided Kenai Peninsula's seaward coast. Tidewater glaciers at the mouths of deep fjords alternating with narrow jetties of rocky mountainous outcrop, as is found along the Kenai Peninsula, had few redeeming features for the development of permanent harbors, trading posts, or settlement. Fort Voskresenskii, the Russian fortified redoubt and shipyard constructed on the lowlands at the head of Resurrection Bay in 1794, [1] was abandoned after the construction of only one vessel. In the early 1800s the Russians relocated their shipbuilding industry to Kodiak and Sitka. By 1820 the Russians had begun to remove Fort Voskresenskii. As Russian investment eventually moved into other regions of Alaska, there appears to have been little regret at leaving the Kenai coast.

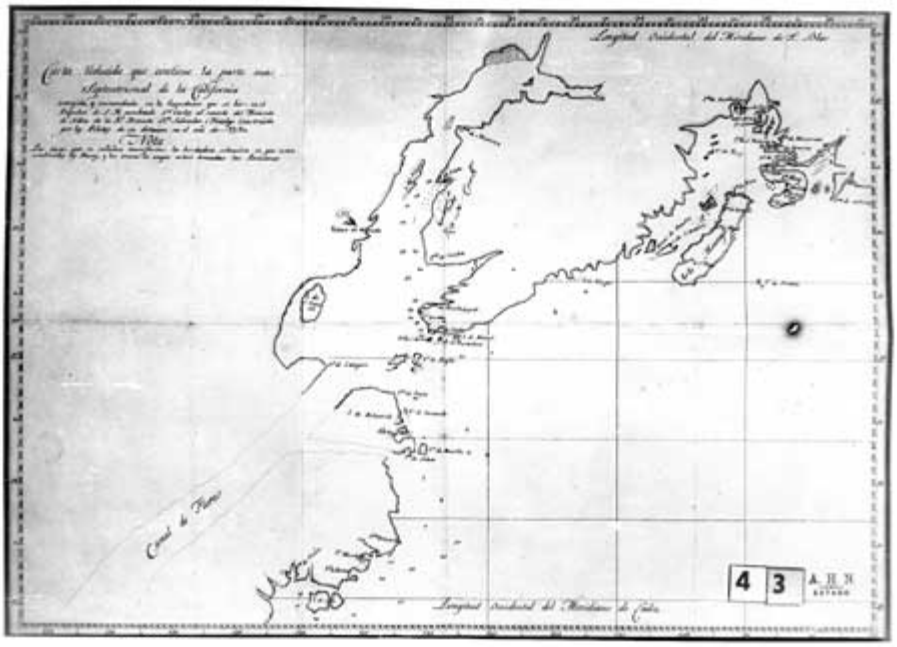
European Exploration and Trade on the Kenai Peninsula

By the late 1700s, European interest and trade in southcentral Alaska increased despite Russian settlement and enterprise (see Table 3-1). Surely attracted by Russian commitment to the area's resources, English and Spanish ships entered southcentral waters in search of new routes, fame, and trade. In 1778 Captain James Cook ranked among the most noted of these first explorers. [2]

When Cook returned to England in 1780, his lucrative trade in Alaska sea otter pelts received no public attention. Mindful that the price sea otter fur brought on the Chinese market would

only heighten European rivalry, Britain, then at war with the American Colonies, hoped to keep the news secret until it could afford to monopolize the fur trade. Spain, in turn, attempted to employ a similar tactic of concealment in their land claims north of California. Spain withheld official published accounts of its three expeditions in the 1770s, a move that later undermined the Spanish claims of exclusivity. [3]

The English, who protested the Spanish claims, argued that Native habitation pre-dated Spanish exploration and that the Spanish had made little attempt to establish any type of permanent settlement. [4] According to the accounts of the Russian sponsored expedition of Joseph Billings in 1790, Spanish frigates annually visited villages and forts in the vicinity of Cook Inlet trading hardware, beads, and linens for sea otter pelts. [5] Otherwise, most of the Spanish exploration originating from forts in California ventured only as far northwest as Prince William Sound (see Table 3-1).



Spanish Map of Cook Inlet and Kenai Coast Region, 1790. Archivo-Historico Nacional. *Library of Congress.*

Table 3-1. Chronological Summary of Russian, Spanish, and English Exploration and Survey of the Kenai Coast and Prince William Sound Regions

1741	Alexsei Chirikov on board the *Sv. Pavel*, and Vitus Bering in the *Sv. Petr*, set out on the Second Kamchatka Voyage and the Great Northern Expedition. In August, Chirikov sited the Kenai Peninsula and Kodiak and Afognak islands.
1778	In May 1778 James Cook arrived in Sandwich Sound [Prince William Sound] and then sailed west along the Kenai Peninsula to Cook Inlet. Cook surveyed the inlet in hopes of finding a Northwest Passage between the Atlantic and Pacific oceans.

View of Prince William Sound (Snug Harbor) and Captain Cook's ships, 1778. John Webber artist. Alaska Purchase Centennial Commission. *Alaska State Library, photo PCA 20-137.*

1779 The third Spanish expedition set sail to the Northwest under the command of Naval Lieutenant Ignacio de Arteaga with F. Quiros y Miranda of the royal armada. Arteaga performed ceremonies at Port of Santiago on Hinchinbrook Island and at the entrance to Cook Inlet to claim land for Spain. The expedition traded with the Chugach.

1781 Evstratii Delarov, Dmitrii Polutov, and Potap Zaikov explored Prince William Sound. Russia looked to expand fur outposts and hunting expeditions to the Alaska mainland as Aleutian fur resources disappeared. Navigator Stepan Zaikov visited Prince William Sound in the vessel *Aleksandr Nevskii*, belonging to the Lebedev-Lastochkin Company.

1783 Filipp Mukhoplev and Potap Zaikov sailed to Prince William Sound from a trading station on Umnak Island. They remained until 1784 despite attacks from the Chugach.

1785 Grigorii Shelikhov sent a crew of fifty-two Russians and 121 Aleuts and Koniags to Kenai and Prince William Sound on a reconnaissance to "investigate possible resources, make necessary descriptions and then to continue the journey as long as summer makes it possible."

1786 James Strange, joined by William Tipping, anchored in Prince William Sound in search of furs to market in Canton, China. Tipping's ship, the *Sea Otter*, last seen in Prince William Sound, was lost at sea or attacked and destroyed.

1786 John Meares sailed to Chugach Bay from Kodiak via Cook Inlet in the *Nootka* and wintered in Snug Harbor Cove.

1786-7 Nathaniel Portlock and George Dixon traded with Natives at Port Graham and explored Prince William Sound in the ships *King George* and *Queen Charlotte*. Portlock and Dixon had visited the coast eight years earlier as mates on Cook's expedition.

1788 Captain Esteban José Martínez in the ship *Princesa* claimed Montague Island

in Prince William Sound for Spain, as Russian and English exploration encroached on Spanish claims in the Pacific Northwest.

Under orders from Shelikhov, Evstratii Delarov instructed Gerasim Izmailov and Dimitrii Ivanovich Bocharov to explore Prince William Sound in the ship *Three Saints*. The navigators surveyed the coast as far south as Lituya Bay, placing plaques and crests at several locations to establish Russian territory.

1789 Gerasim Izmailov surveyed the southeastern coast of the Kenai Peninsula after a voyage to Lituya Bay.

1790 Captains Joseph Billings and Gavriil Sarychev sailed along the southeast coast of Kenai Peninsula on an expedition to assess Russia's possessions. At Nuka Bay they encountered two Natives in a *baidar*. The ship attempted to enter the bay, but was forced to return to open waters before siting a village.

Spanish sea captain Salvador Fidalgo sailed north from Mexico trading for sea otter pelts. He anchored in Prince William Sound and at Port Graham. Fidalgo encountered Russians at Port Graham and later on Kodiak Island.

1791 Alejandro Malaspina and José Bustamente y Guerra visited Prince William Sound on an around-the-world voyage of exploration.

1791 Lebedev-Lastochkin Company seized control of Shelikhov posts at Kenai on Cook Inlet and in Kachemak Bay.

1792 Hugh Moore repaired the British East India Company ship the *Phoenix* (namesake of the Russian-American Company *Phoenix*) in Prince William Sound where he met Aleksandr Baranov.

1792-9 Orekhof Company in operation. Named for a Russian trader in Prince William Sound, the company was a rival of both Shelikhov and Pavel Lebedev.

1793 Lebedev-Lastochkin Company established first trading post in Prince William Sound. It was Fort Constantine, at Nuchek on Hinchinbrook Island.

1794 George Vancouver as commander of the *Discovery,* surveyed Cook Inlet and Prince William Sound en route to Nookta Sound. He had first sailed to Alaska in 1772-1780, with Cook on his second and third voyages.

1797 James Shields, first commander of the *Phoenix*, mapped ship routes along the American coast, 1793-1797, and described Resurrection Bay.

1804 A navigator named Bubnov thoroughly surveyed the eastern coast of Kenai Peninsula to Prince William Sound.

1849 Russian Governor Mikhail Dmitrievich Teben'kov commissioned Illarion Arkhimandritov to survey and map Cook Inlet, the eastern peninsula coastline, and Prince William Sound.

This list is meant to be representative, not conclusive. American exploration and trade are entirely omitted. Also, descriptions of trade and travel along the coast continued after 1849.

Soon after the 1783 Treaty of Paris, British trade routes developed between the northwest American coast and Canton, the only Chinese port open to international vessels. The first expedition of King George's Sound Company, also known as the London Company, navigated along the southeastern shore of the Kenai Peninsula. [6] In July 1786, company representatives Nathaniel Portlock and George Dixon left Cook Inlet, crossed Kachemak Bay and entered the narrow harbor of Port Graham. In search of a route to the Pacific, the captains assumed the harbor was an inland channel and named the small island at the entrance Passage Island. According to Portlock, Russian occupation at Port Graham appeared to be a seasonal and temporary encampment manned by twenty-five Russians and a crew of Natives from Unalaska and Kodiak islands. The Russians slept in a canvas tent while the Native crew took shelter under overturned boats pulled up on shore. There were no signs of trade with local Chugach, and Russian hunters depended on their crews to trap and hunt furs. While scouting the inner shores of the harbor, Portlock and Dixon observed several large Native huts that appeared to be recently abandoned. On the northern shores of the harbor they recorded the location of two veins of coal on the surface of the rocky hillside. Portlock wrote:

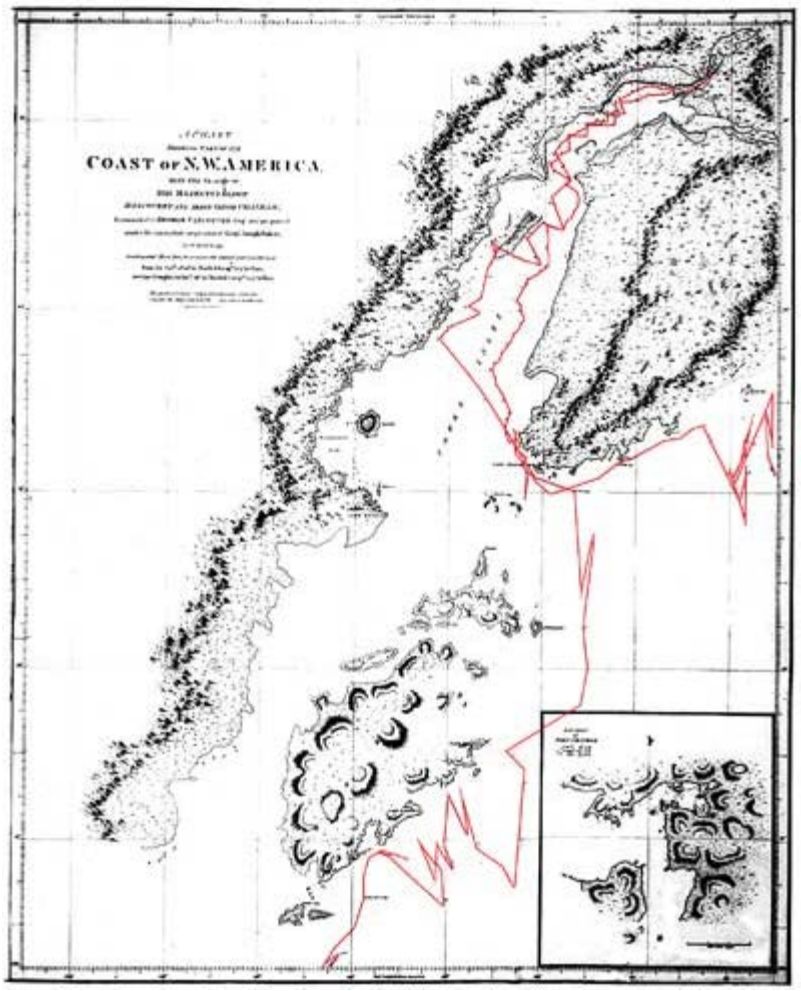
> We landed on the west side of the bay, and in walking around it discovered two veins of kennel coal situated near some hills just above the beach, about the middle of the bay, and with very little trouble several pieces were got out of the bank nearly as large as a man's head.... In the evening we returned on board and I tried some of the coal we had discovered and found it to burn clean and well. [7]

Overturned boats typically served as shelters. *Bancroft Library.*

In 1788 the British sea captain John Meares collaborated in a joint trading venture known interchangeably as the Associated Merchants of London and India, the United Company of British Merchants, and the South Sea Company of London. The company concentrated its trading efforts between the Queen Charlotte Islands and Prince William Sound. In 1789, Captain William Douglas received orders to trade as far as the Sound, then to turn back. The land to the west of the Sound, including Kenai Peninsula and Cook Inlet, had less potential as

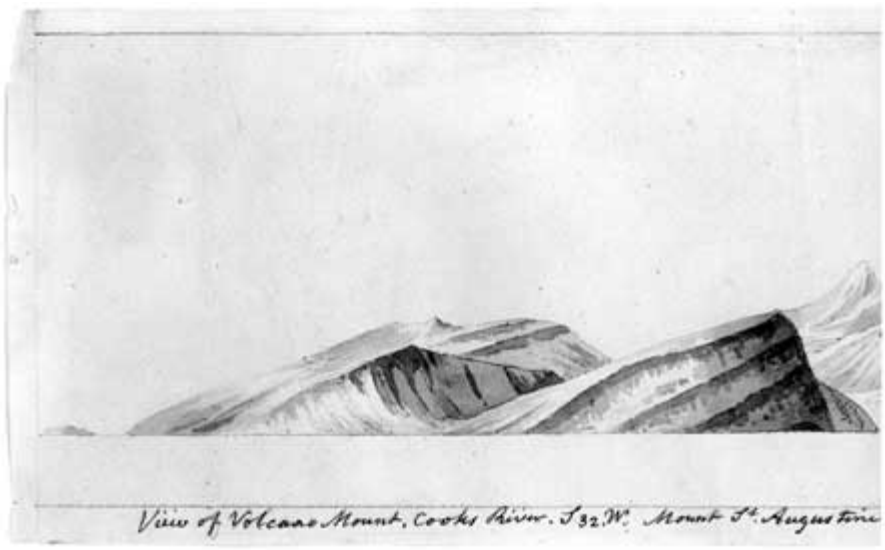
trading zones as "it is so totally possessed by Russians that proceeding there would be only [a] waste of the most valuable time." [8]

In 1790 British naval officer George Vancouver commanded his ships the *Discovery* and *Chatham* to the Pacific Northwest to reconcile British interests at Nookta. Four years later, Vancouver arrived in Alaska from Hawaii and surveyed the waters of Cook Inlet and Prince William Sound. Russian contacts in Cook Inlet led Vancouver to believe that he could bypass the Pacific coast of the Kenai Peninsula through an inland waterway at the head of Turnagain Arm. This waterway supposedly led to the Passage Canal in Prince William Sound. Learning that the waterway did not exist, Vancouver circled the outer peninsula and dismissed a survey of the coast as too time consuming. He preferred to "examine the shores of the peninsula, so far only as could be done from the ship in passing along its coast." [9] Vancouver noted the abrupt mountainous shoreline and long valleys "buried in ice and snow, within in a few yards of the wash of the sea; whilst here and there some of the loftiest of the pine trees just ‘shewd' their heads through the frigid surface." [10] From the maps of his ship route, he obviously steered clear of the bays and rocky outcrops along the Kenai coast. He recorded the Pye and Chiswell islands. He described the Chiswells as a "group of naked rugged rocks, seemingly destitute of soil, and any kind of vegetation." [11] Eighty years later, George Davidson proposed that Vancouver mistook the Chiswells for several "islets and the broken and numerous points of the long, low, wooded promontories stretching southward and forming Ayalik [sic] Bay, off which lie the Chiswell Islands." [12]



Tracing of Vancouver's route (in red highlight) around the Kenai Peninsula. *Alaska State Library, photo PCA 62-126.*

Thomas Heddington, a midshipman on the *Chatham* and the youngest member of the expedition, was one of three illustrators on Vancouver's voyage. [13] The two others were Henry Humphreys and John Sykes. Heddington prepared several surveys and drawings of the coast between Cape Elizabeth and Prince William Sound. Once back in London, Heddington submitted his work to the Hydrographic Office, but later in 1808 requested that his work be returned. The Admiralty honored the request only to lose all record or trace of the drawings. [14] One, entitled *The Coast from Cape Elizabeth to the Western Entrance of Prince Williams Sound- with Elizabeth Island, Pyes Islands and Chiswells Islands off the Coast*, would have been among the earliest known renderings of the coast. [15]



Etching of Cook Inlet and environs, by John Sykes, Bancroft Library. Etching style similar to views that Humphreys produced of Outer Kenai Coast.

Etching of Cook Inlet and environs, by John Sykes, Bancroft Library. Etching style similar to views that Humphreys produced of Outer Kenai Coast.

At Port Dick, a deep bay at the southern tip of the Kenai Peninsula, Vancouver encountered a large party of Natives in two-man boats. The men approached the English ships with a

willingness to trade. Their number impressed Vancouver; he estimated a party of over four hundred men. Archibald Menzies, the botanist on board, described the men as being of "low stature, but thick and stout made with fat broad visages and straight black hair ... and their canoes are equally neat having their seams sown so tight as not to admit any water...". [16] In the 1930s, anthropologist Frederica de Laguna explained this encounter as one of the large inter-regional sea otter hunting expeditions that traveled along the coast. [17] Aleksandr Baranov, in a letter to Grigorii Shelikhov, recounted that Vancouver met a 500-*baidarka* hunting fleet of Kodiak and Chugach Natives led by Russians from the Kenai and Resurrection Bay areas in April and later again in Yakutat Bay. [18] The fleet stopped at the shipyard in Resurrection Bay to pick up five Russians, including G. Prianishnikov and Konstantin Galaktionov, and arrange for repairs and supplies of cannons, guns, and ammunition for the trip south to Icy Bay. [19]

Henry Humphreys prepared a sketch of the Port Dick encounter. In the margin of the drawing, Humphreys penciled in explanatory notes to the engraver back in England. He directed the engraver to add to the image "many canoes ... going into the Creek [sic] each carrying 2 people ... sight. Indian holding up Skins for traffic ... some going in at that place." [20] The final drawing, unlike Humphreys's original, shows the bay full of Native vessels.

Vancouver had anticipated a layover at the Russian shipyard in Resurrection Bay, but stormy seas and fog set in west of the Chiswell Islands. Apprehensive of the rocky coast and lacking accurate charts, Vancouver cancelled the stop and sailed the *Discovery* past Port Andrews (Blying Sound) into Prince William Sound. The route and the weather probably accounted for the poor delineation of the bay and coast in his atlas. However, his route as traced on his maps shows the wide clearance he gave to the coastline.

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Kenai Fjords

A Stern and Rock-Bound Coast: Historic Resource Study

Chapter 4:
SHIFTING LANDSCAPE: DEMOGRAPHICS, ECONOMICS, AND ENVIRONMENT ON THE OUTER KENAI COAST

> This country is settled by Innuits, who have peopled the east coast of the peninsula, and from there eastward along the mainland nearly to the Copper River. Two of the trading stations in the Kenai district are located among these Innuits at English Bay and Seldovia. [1] — Ivan Petroff, 1884

Map 4-1. Historic Sites-Shifting Landscape. *(click on image for an enlargement in a new window)*

Abbot Nicholas, the Russian Orthodox priest in residence at Kenai since 1845, died in 1867, the same year that the U.S. government purchased Alaska. With the abbot's death, the Kenai Mission lost its first missionary and priest at a time of transition and uncertainty. Village parishes experienced the same sense of loss. The transfer of Fort St. Nicholas [Fort Kenai] from Russian hands to the U.S. Army occurred in 1869 with little provision for the continuation of services to the villages. In 1870, the Americans abandoned the fort. The closing of Fort Kenai affected trade on the Kenai Peninsula and on Kodiak and Hinchinbrook islands.

The years after 1870, however, brought some positive changes. Once the Alaska Commercial Company (ACC) established itself in southcentral Alaska, a lucrative fur market resumed. In 1881, after years of neglect, the Kenai Mission reinstated a new priest. With this new appointment, a church presence returned to the villages in the Chugach region. These two actions triggered a brief period of prosperity on the outer coast in the late 1870s to early 1880s. When fur prices fell in the late 1880s and the economy of the outer Kenai Peninsula collapsed, the Russian Orthodox Church intervened. The church attempted to stabilize life in the villages, but its success in that endeavor was both incomplete and temporary.

Fur Trading After the Alaska Purchase

Like the Russians before them, the Americans depended on an economy tied to hunting and fur exports. The high price of fur on the American market encouraged Natives and Euro-Americans to hunt along the outer Kenai coast. Initially, the Americans carried out their

business from the same stores and warehouses. The newly formed Alaska Commercial Company acquired the Russian trading post at Alexandrovsk (English Bay). The company hired Native crews to hunt between Seldovia and Nuchek. These two trade centers also supported Russian Orthodox parishes. As Golovin noted in his 1860 survey of the colony, the placement of Russian Orthodox churches was linked to economic centers. He wrote, "For the most part they have been built in areas where there are many Natives, or in places where the natives dispose of their furs." [2]

Both the Russian Orthodox Church and the rise of American fur companies reshaped village demographics on the Kenai Peninsula in the late 1800s. One observer remarked that "The moment you leave Sitka and steer northward, you enter the realm of the North American Commercial and the Alaska Commercial companies: Kodiak, Nuchek, Kenai, Unalaska, with a host of Native Settlements, are completely in their hands...." [3] Both the church and the commercial companies sought to centralize services in larger villages. The Kenai Mission strategically supported the establishment of local churches in villages that had the potential to serve neighboring areas. In addition, the Alaska Commercial and Western Fur companies, as well as smaller independent companies with regional stations, preferred to buy and warehouse fur pelts from crews of Native hunters that operated from one central location.

The availability of Native crews was critical to commercial success; by law only residents and Natives could hunt for furs in the new American territory. In a reactionary ruling of the new government, Section 6 of the Customs Act of July 1868 originally prohibited the killing of any fur-bearing animals within the waters or territory of Alaska. [4] Within two years, the Secretary of the Treasury revised the law to allow Alaska residents to hunt sea otter. [5] By 1879 only Alaska Natives, or whites with Native wives, had the legal right to hunt animals for furs. In yet another radical turnaround, the law changed again in 1893, banning the taking of pelts within territorial waters. The law also limited the use of larger ships–except Revenue Cutters–for transporting hunters. [6]

This succession of laws directly affected crews trying to reach distant hunting grounds and the villages where they traded. The larger ships replaced the smaller *baidarkas* and *bidars*, a practice that eventually led to dramatic changes in the use of coastal areas. Larger ships avoided the smaller coastal harbors and beach landing sites. They also had no need for temporary layover spots or shelters during storms. Hunters had fewer opportunities to visit the smaller coves and bays. In addition, as fewer boats traveled from village to village, communication decreased, as did populations.

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Kenai Fjords

A Stern and Rock-Bound Coast: Historic Resource Study

Chapter 5:
BUILDING THE TRANSPORTATION INFRASTRUCTURE

During the mid-to-late 1890s, a series of interconnected events–the Hope and Sunrise gold strikes, the Klondike gold rush and U.S. Army Capt. E. F. Glenn's expedition–brought dramatically increased attention to Alaska in general and the Kenai Peninsula in particular. The prosperity brought on by the gold rush, moreover, spawned scores if not hundreds of proposed railroad lines. Of those, the only major line that was actually constructed was the White Pass and Yukon Route, built from Skagway, Alaska to Whitehorse, Yukon Territory from 1898 to 1900.

The Alaska Central Railroad and the Founding of Seward

Map 5-1. Historic Sites-Transportation Development. *(click on image for an enlargement in a new window)*

As the twentieth century dawned, the vast interior region of Alaska remained inaccessible. Even though the interior was still largely devoid of non-Native settlement, a number of dreamers were convinced that the interior would grow and prosper if a railroad route could be constructed there. Several of these entrepreneurs organized development companies. Between 1900 and 1903 a total of nine railroad companies selected Valdez, at the northeastern end of Prince William Sound, as their ocean terminus; several of these companies, including the prominent Morgan-Guggenheim syndicate, backed up their plans by sending in survey crews. [1] Other development interests trumpeted the advantages of rival ports including Katalla, Nelson (later Cordova), and Portage Bay (later Whittier). Off to the west, activity centered around Iliamna Bay, on the west side of Cook Inlet. The Trans-Alaska Company, led by a Seattle engineer named Norman R. Smith, laid out a sled trail (a predecessor to a railroad) from Iliamna Bay to Nome during the winter of 1901-02. Three years later, the Alaska Short Line and Navigation Company surveyed a route from Iliamna Bay to Anvik. Several of the companies aiming toward Alaska's interior went so far as to grade several miles of right-of-way; inland from Katalla, rails were actually laid for a short distance. But none of these companies was successful in building an intercity railway. [2]

The Alaska Central Railroad Company was different. It was the brainchild of Seattle

businessman John Ballaine, who had had a long political and military career in Washington state. In 1900, Ballaine began to study ways to develop a railroad on a new frontier, and in that pursuit he searched for "an all-American route through all-American territory to develop all of Alaska." He concluded that the easiest route for a railway connecting an ice-free port and the interior lay across the Kenai Peninsula and up the Susitna Valley to the Tanana River valley. His search for a harbor led him to the future site of Seward. In March 1902, he helped organize a company to further his goals, and three months later he sent two survey parties to the area to reconnoiter the proposed townsite and right-of-way. After their return, Ballaine wrote that "Resurrection Bay alone, opening directly to the ocean on the south side of the Kenai Peninsula, answered all my requirements to perfection." [3]

A year later, Ballaine proceeded to put his plans into action. The company purchased Mary Lowell's homestead (the only private land in the area) and filed a townsite plat in order to gain title. Company officials then began constructing a dock and roughing out a street grid. That summer, Ballaine and his settlement party left Seattle on the steamer *Santa Ana*, piloted by Capt. E. E. Caine. On board were 25 company employees, 35 other passengers, 14 horses, a pile driver, a sawmill, and tons of provisions. The ship arrived at the new townsite on August 28, 1903–a date that has since been celebrated as Seward's founding date–and the party began to improve the area. The following April, company officials met on the dock and drove the first spike for the newly christened Alaska Central Railroad. By July 4 of that year, rails had been extended seven miles to the north.

Construction proceeded by fits and starts. By the end of the 1904 construction season, tracks extended 20 miles north of Seward, and a year later, tracks had been built into Placer River valley, another 25 miles up the line. (By August 1905, work had progressed to the point that steamers were being employed to move men and materials between Seward and Turnagain Arm. [4]) But after the 1905 season, work slowed due to the physical and financial difficulties involved in constructing the bridges and tunnels that constituted the so-called "Loop District." Two other events compounded Ballaine's difficulties: first, President Theodore Roosevelt's November 1906 decree withdrawing Alaska's coal lands from development, and second, the financial panic of 1907. Despite those blows, construction proceeded apace, and by November 1909 rails had been completed to Kern Creek (near present-day Portage), 71.5 miles north of Seward. [5]

By then, Ballaine's luck had run out. A year before, in September 1908, the railroad had gone into receivership, and without prospects for an immediate financial turnaround, the company was sold during the winter of 1909-10. The new Alaska Northern Railroad, however, was even less successful than its predecessor had been. The new owners, hoping to cut their losses, built no new track; they offered minimal service and allowed the line to deteriorate. [6] Seward's economy during its first decade of existence was almost completely dependent upon railroad construction activities and ancillary port functions. The town, built on speculation, was thus healthy and growing during its first several years of life. After the railroad went into receivership, however, dull times predominated for the next several years.

Seward's fortunes were revived in August 1912, when the U.S. Congress passed the so-called Second Organic Act for Alaska. Among its provisions, the bill created an Alaska Railroad Commission to investigate the railroad situation. Five months later, the commission concluded that a system based on private capital combined with government land grants was an unworkable way to construct a railroad into the Alaskan interior. (This system had been highly successful in the development of railroads in other western territories. Grim experience, however, showed that it fell short in areas where population and resources were largely absent.) The commission, therefore, recommended that the government purchase the existing Copper River and Northwestern Railroad (which ran from Cordova to Chitina and on to Kennicott), then construct a railroad from Chitina north to Fairbanks. But before that

plan could be carried out, Woodrow Wilson defeated incumbent William Howard Taft and another challenger in the 1912 presidential election.

Shortly after Wilson took office in March 1913, he appointed a new team, called the Alaska Engineering Commission, to study the Alaska railroad problem. While the Commission was deliberating, Congress passed a bill, in March 1914, which authorized the construction of a railroad connecting interior Alaska to an ice-free port. No decision had yet been made regarding what route would be chosen, however, and for the next year speculation was rampant over that question. Although four routes were ostensibly being considered, the two serious contenders were an eastern route that would have ascended the Copper River valley and a western route that would have tapped the Matanuska and Susitna valleys. The three AEC commissioners, lured by the possibility of gaining access to the agriculture and minerals of the Matanuska and Susitna valleys, focused most of their attention on the western route. Thus it was not altogether surprising when, in April 1915, President Wilson announced his choice of the route connecting Seward and Fairbanks. By adopting this choice, the government agreed to purchase two bankrupt railroads: the Alaska Northern route, north of Seward, and the Tanana Valley Railroad, in the Fairbanks area. [7]

Seward, as a result of that decision, entered a new period of prosperity. For the next several years, hundreds of workers invaded town as the old Alaska Northern tracks were upgraded and, in places, rerouted. Economic activity remained high until the line was completed in the early 1920s. (Track laying was finished by February 1922, but the line was not open to through traffic until February 1923.) Early in the construction period, in November 1916, the AEC dampened Seward's economic spirits by moving the railroad's headquarters from Seward to Anchorage. Even so, the railroad remained a vital part of town life. Until the advent of World War II, Seward's economy continued to rely on two primary activities: the railroad and the port. [8]

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Chapter 6:
LIVING OFF THE LAND AND SEA

Traditional Use Activities

As Chapters 3 and 4 have noted, a combination of factors–disease, the lure of commercial fishing, and the encouragement of the Russian Orthodox clergy–resulted in the elimination of permanent human settlement from the present-day park during the 1880s.

Map 6-1. Historic Sites-Fox Farming/Homesteading. *(click on image for an enlargement in a new window)*

Human usage of the area, however, continued. Natives from English Bay [] and Port Graham traveled east of Gore Point where they hunted and trapped for subsistence purposes in various portions of the present park. Nuka Island was a favored location for fall hunting camps, while winter and spring hunting camps were established at sites in Nuka, Yalik, and Aialik bays. Natives frequently traveled along the entire coastline of the present-day park; Natives from Tatitlek (on the eastern side of Prince William Sound) as well as Seward and English Bay met at the hunting camps; in other instances, English Bay residents traveled to Seward to meet other hunters. [2]

The hunters left many evidences of their passing. Semi-subterranean houses (*barabaras*) served as shelters in Nuka Bay and perhaps elsewhere as well. In the early 1900s, trappers primarily used steel leg-hold traps. Several traditional methods were also used: a stone trap was used to take weasel and mink, and a log trap was used on otters and other larger animals. [3]

Non-Natives recorded the evidence of past trapping activities. As Josephine Tuerck (later Josephine Sather), who with her husband settled on Nuka Island in 1921, noted,

> When we first came here we found all sorts of old contraptions set up in the trails and close to dens, their purpose having been to catch land otters. On the trails of the mainland and the nearby islands were decayed death-falls by the hundreds. We found little box-like houses built with sticks, in which to set steel traps for minks; all manner of spring poles; plenty of other evidence of the ingenuity of man in his effort to outwit every living thing that walked on legs.... Everything pointed to the cleverness of our predecessors on Nuka Island.

She and her husband did not trap during their first several years on the island, but in 1925, Pete and Josephine Sather set some traps for land otters on the "rocks and little islands" near Nuka Island. Their trapping thereafter, however, does not appear to have been either widespread or long lasting. [4]

Other non-Natives engaged in trapping as well. Mary Barry, the author of a multi-volume history of Seward, provides one indication of the extent of that activity:

> In December 1924, Joe Schulte and Heinie Berger, pioneers of Valdez, arrived in Seward on their gasboat *Arcturus* while on a trapping trip. Schulte ... stayed in Seward while Berger and Captain Louis Clark took the boat to the vicinity of Nuka Bay for the trapping season. Schulte, Berger and Clark continued to go in and out of Seward that winter on trapping expeditions. [5]

During the same period, John Colberg of Seldovia and perhaps other area residents trapped up and down the southern Kenai coastline; Colberg himself trapped as far away as Rugged Island in Resurrection Bay. [6]

Hunting and trapping within the present-day park continued, to some extent, until the 1940s. It largely died out after that time. [7] Subsistence fishing, as noted below, continued for another decade because pink salmon in and around Nuka Bay supported the Sathers' fox farm. In 1951, the Fish and Wildlife Service began keeping data on Cook Inlet area subsistence fishing activities. (During the 1950s and early 1960s, it was called the "personal use fishery.") The state, when it took over management of the fisheries resource, continued the practice. Annual tabulations confirm that in the Eastern District (i.e., Resurrection Bay), subsistence fishing (primarily for red salmon) took place during most years; the most active year was 1969, when subsistence permittees caught 929 salmon. At no time from the early 1950s through the early 1970s, however, did either Territorial or State authorities receive subsistence permit applications for Outer District salmon fishing. There was, apparently, little or no interest during this period–by either Natives or non-Natives–in fishing for subsistence purposes in park waters. [8]

When the National Park Service began to get involved in the area, it issued conflicting messages about existing subsistence activities. In its December 1973 master plan, the ad hoc Alaska Planning Group stated that

> at least some subsistence fishing for salmon, shellfish, and herring roe takes place in the coastal areas of the Barren, Pye, Granite and Chiswell Islands and the Aialik Peninsula [by] the people of Port Graham and English Bay. Hair seal and mountain goats are hunted in the Chiswell Islands....

But in late 1977, NPS officials declared that "there presently is no documented record of subsistence use in [the] Kenai Fjords National Park proposal, although the Interior Department is recommending the park be open to subsistence use." [9] Neither President Carter's proclamation creating Kenai Fjords National Monument in 1978, nor the Alaska National Interest Lands Conservation Act of 1980 establishing Kenai Fjords National Park, provided language that authorized hunting, trapping or other subsistence uses. Specific data concerning where trapping traditionally took place prior to the park's establishment, and usage levels within those areas, have been investigated by others [10] and will not be repeated here.

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Chapter 7:
THE LURE OF GOLD

Most of the Kenai Peninsula exhibits little evidence of mineralization, and mines on the peninsula, while numerous, have contributed only a minor portion of the state's mineral output. Few economically viable mines have been established on the eastern or western part of the peninsula. Extending in a generally north-south direction across the peninsula's central portion, however, is a belt of country rock consisting of alternating beds of slate and graywacke. Igneous dikes that are currently referred to as greenstones have locally intruded that rock mass. The dikes occupy fractures of irregular form and moderate extent; free gold is the primary mineral with economic importance, though sulfides are by no means uncommon. (The dikes also contain minor quantities of silver, copper, lead, and zinc.) Those dikes are found in an irregular belt that extended from the Hope and Sunrise areas south to Kenai Lake, while others are found along the North and West arms of Nuka Bay. Other mineralized areas on the peninsula are found on both the eastern and western slopes fronting on Resurrection Bay, along the Resurrection River, and additional sites scattered across the peninsula. [1]

Early Kenai Peninsula Exploration

As noted in Chapter 3, the first known mine on Kenai Peninsula was started at the behest of Peter Doroshin, a Russian mining engineer who visited the American colonies in search of potential mineral resources. In addition to the Port Graham coal deposits (which were mined during the 1850s and 1860s), Doroshin also found minor gold deposits along both the Kenai and Russian rivers. Little additional prospecting took place until the early 1880s, when Joseph M. Cooper sought gold near present-day Cooper Landing. In 1889, coal was extracted near present-day Homer, and the following year gold was obtained near Anchor Point. Both endeavors were commercially unsuccessful. [2]

Map 7-1. Historic Sites-Gold Mining. *(click on image for an enlargement in a new window)*

More promising gold deposits were found along the peninsula's northern shore. A man named King discovered gold near present-day Hope about 1888, and shortly afterward, Charles Miller staked a gold claim on Resurrection Creek. The area remained fairly quiet, however, until 1893 when the creek witnessed new discoveries. Increasing numbers of miners arrived in 1894, and a remarkable find in July 1895 by John Renner and Robert Michaelson brought a major rush–perhaps 3,000 men and women–to the shores of Turnagain Arm the following year. Scores if

not hundreds of claims were made in the Sixmile and Canyon creek drainages as well as within the Resurrection Creek drainage system. The towns of Hope and Sunrise boomed for the remainder of the decade, both diminishing in importance in later years. By 1911, Sunrise was practically deserted and by the 1930s most of the buildings had vanished. [3] Hope lost most of its population, too, but unlike Sunrise, Hope never "ghosted."

By the early twentieth century, prospectors had begun locating minerals in the southern peninsula as well. This may have been a result of the Hope-Sunrise excitement; the commencement of a large copper mine on nearby Latouche Island may have played a role; and the establishment of Seward in 1903 doubtless encouraged local mineral prospecting. Regardless of the reason, two claims had been staked in the Seward area by October 1904; both were located in Sunny Bay (present-day Humpy Cove) on the east side of Resurrection Bay. During the next several years, copper was found at a number of Resurrection Peninsula sites, and a minor (if well-publicized) copper rush ensued. Although the early reports on the copper claims appeared promising, no development occurred to compare with the copper mines of Latouche Island, and copper miners turned their interest elsewhere. Gold was also found in the area, most notably the Gateway Group along Tonsina Creek, but little if any production took place. By 1910, all development work for both copper and gold had ceased. [4]

Prospecting also took place during this period at the Kenai Peninsula's southwestern tip. A 1909 report noted that gold and other prospects had been located (probably since 1905) both at the west end of Windy Bay and near Port Dick. Ore quantities, however, were insufficient to justify production. [5]

Of particular interest to both prospectors and government geologists were the chromite (chromic iron) deposits west of Port Dick. Two deposits were known: one at Chrome Bay, near the mouth of Port Chatham, the other on the north side of Red Mountain, southeast of Seldovia. These deposits were known prior to 1910, but the Port Chatham deposit became of commercial interest only in 1917, when the price of ore rose because of wartime needs. [6] Whitney and Lass produced about a thousand tons of ore both that year and in 1918. By 1919, a "considerable plant investment" had been made, resulting in the production of "chrome of good quality." The company, however, mined no ore that year due to a return to prewar price levels. The plant soon closed and did not reopen. [7] At Red Mountain, commercial development did not take place until World War II. The mine operated from 1942 to 1944, and again from 1954 to 1957. [8]

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Chapter 8:
IMPACTS OF MILITARY ACTIVITIES

The military has long been interested in the Kenai Peninsula's southern coastline. Resurrection Bay, one of many indentations along that coastline, has enormous strategic value; it remains ice-free all year long, and the topography north of the bay is sufficiently gentle that roads and rail lines beginning here have penetrated the interior. These routes, as noted in Chapter 5, have allowed the area to serve as a commercial entrepôt for much of southcentral and interior Alaska. Because of its strategic value, Resurrection Bay has been the military's primary focus. Certain aspects of military activity, however, have taken place in or near present-day parklands.

Early Plans and Activities

Russian authorities, through naval charts and occasional expeditions, knew of Resurrection Bay's strategic value by the mid-nineteenth century. During the first two decades after the U.S. government purchased Russian America, the bay's strategic value was largely overlooked. Beginning in the 1880s, however, the Lowell family's settlement and roadbuilding activities connected with Hope-Sunrise mining operations increased that value. As noted in Chapter 5, the U.S. military had the opportunity to see the area for themselves during the Klondike gold rush period; in May 1898, a three-man army expedition sailed to the head of Resurrection Bay and trekked north to Kenai Lake. Five years later, the town of Seward was founded and a railroad toward Alaska's interior was begun. From that point on, most of those interested in Alaska recognized that Seward and Resurrection Bay would be a primary access corridor into southcentral and interior Alaska. This fact was of considerable interest to both military and civilian authorities.

Map 8-1. Historic Sites-Military Activity. *(click on image for an enlargement in a new window)*

The military first signaled its interest in the Seward area in March 1907, shortly after Congress appropriated study funds for a suitable harbor along the "southern Alaska coast" for a navy yard and navy station. An army expedition, in 1898, had located a substantial coal deposit along the Chickaloon River, a branch of the Matanuska River near present-day Sutton; the Navy, recognizing that the Alaska Central was being built northward to make the coal deposit more accessible, was interested in constructing a coal transfer facility along the coast. But the Navy also knew of another potentially large deposit–the Bering River coal

beds–so the study was intended to decide which field should be developed. [1]

During the summer of 1907, the Navy began to lean toward selecting a location near Seward, and in late September, a navy ship arrived to choose an appropriate site for a Naval Coaling Depot. By November, naval authorities had announced their intention to withdraw a 3,350-acre parcel along the west side of Resurrection Bay; it would be 2-1/2 miles from north to south and include both the Spruce Creek and Tonsina Creek drainage, and would go two miles west from the bay. The coaling depot would be sited at Lowell Point. President Roosevelt withdrew the parcel on February 21, 1908. [2]

Development of the parcel, however, had to wait until coal could be cheaply brought to the site and the Navy had demonstrated a need for it. Those conditions would not be fulfilled any time soon because President Roosevelt, in a widely disparaged move, withdrew Alaska's coal reserves from entry in November 1906. (Roosevelt issued his edict because, in his opinion, existing laws limiting coal-mine claims to 160 acres were unworkable and conducive to fraud.) Naval authorities were further stymied because the Alaska Central's end of track was more than a hundred miles away from the coalfields. [3]

Events on the federal level soon re-ignited interest in the Chickaloon River coal resources and Seward's role in the coal lands' development. On May 28, 1908, Congress passed the Alaska Coal Act, which permitted lands intended for coal developments to be consolidated in claims of up to 2,560 acres. Soon afterward, construction on the Alaska Central stopped, and as noted in Chapter 5, the transfer of the railroad's assets to the Alaska Northern did not result in additional track mileage. Construction remained at a standstill until 1912, when Congress authorized the construction of the Alaska Railroad. In 1914, Congress passed a coal-land leasing bill, which further stimulated Alaska coal development. The government, recognizing that the Chickaloon deposit would become accessible in the near future, extracted 800 tons of coal as a pilot project during the winter of 1913-14. It tested the coal and found it had good burning properties. That test stimulated further site development. The government made no secret of its intention to use Chickaloon coal to power U.S. Navy vessels. It needed to do so because the U.S., with its growing international stature, had many new navy ships docked in Pacific Coast ports, but it had few west-coast sources of cheap, plentiful coal. [4]

As a result of those actions, the military again became interested in the Seward area. By February 1916, local officials had been informed that Resurrection Bay "may be the location of a coaling station in the near future." Seven months later, President Wilson set aside Rugged Island as a military reservation, perhaps as a proposed coaling-station site. [6] Meanwhile, railroad construction (which included the rehabilitation of the old Alaska Central route) had begun in April 1915; it reached Anchorage in the fall of 1916, and by October 1917 the rails had been extended to the mine at Chickaloon. A coal train arrived there soon afterward, and on October 30, the first shipment from the government-owned mine arrived in Anchorage. [6]

Coal continued to be mined at Chickaloon for the next several years. Only a small amount, however, was mined each year; in 1919, for example, just 4,000 tons were extracted. The coal, moreover, was used locally, thus obviating any need for a Seward-area coaling station. The Navy, during this period, made no move to develop or use the mine. [7]

Beginning in 1919, the Navy decided to increase its involvement in the area. A Navy Commission report that year recommended that land be set aside at Seward "for a Navy pier and coal-handling plant," and in August, President Wilson issued an order setting aside acreage at the east end of Monroe Street "for the erection of wharves, coal storage yards and other Naval purposes." During the summer of 1920, Navy Secretary Josephus Daniels and other officials traveled to both Seward and Chickaloon to assess the situation for themselves.

On the heels of that visit, the Navy decided to invest more than $1 million in the development of the Chickaloon coal deposit. During the next two years exploration activity was dramatically intensified, more than a hundred workers were brought to the area, a commodious townsite was constructed, and an imposing coal washing plant–begun in 1921 and completed in March 1922–was built several miles away. [8]

The washing facility had been completed for just two weeks when, on March 30, 1922, Interior Secretary Albert B. Fall abruptly announced that the Navy, on May 1, would close the mine and abandon the coal-washing plant. Navy officials did so because, after further tests, they found east coast coal superior to Alaska coal; because they knew that a large-scale Alaska coal source was available in case of an emergency; and because the discovery of vast new California oil fields portended the Navy's gradual transition from coal-powered to oil-powered ships. As a result of the Navy's decision, Seward never received large volumes of Chickaloon coal, and the military never constructed a Seward-area coaling station. [9]

During the summer of 1923, the hopes of Seward citizens were buoyed once again, when a survey ship visited the bay "with a view to the establishment of a navy base at some point in Alaska." The Navy, however, did not follow through on its proposal, either in the Seward area or anywhere else in the territory. By January 1925, Rugged Island was declared "useless for military purposes" and the former withdrawal was revoked. [10]

Although no facilities were constructed in conjunction with Seward area military reservations, the military was nevertheless active in Seward during this period. The government, which was constructing the railroad, had a large number of foreign nationals on the various construction crews. When the U.S. government entered World War I in April 1917, emotions rose and some of those foreigners were regarded as "enemy aliens." That same month, therefore, Seward's Spanish-American veterans' group organized an ad hoc committee for public safety and defense. By year's end, Seward's so-called Council of Defense was large and well organized, and in early 1918, its leaders requested that a military detachment be brought from nearby Fort Liscum (near Valdez) to patrol the city. The local citizens' group, which was later known as the Seward Home Guard, disbanded in March 1919. The military detachment, however, remained after the cessation of hostilities, and it was not until the summer of 1921 that the soldiers returned to Fort Liscum. A new detachment arrived in town the following summer; it probably remained until the railroad was completed in mid-1923, then left soon afterward. [11]

The military, during this period, also maintained a radio station on the Resurrection River flats north of Seward. In February 1916, the local chamber of commerce wrote the Navy Secretary and urged that a radio station would be a necessary adjunct to the proposed naval coaling station. Perhaps in response, personnel from the Naval Communication Service arrived in town that August to select an appropriate site. A 40-acre site north of town (near today's airport) was withdrawn the following April, and by December 1917 facilities had been constructed and the station was operating. The stationed remained until August 1923, when budget cuts forced its closure, but the Naval Radio Service reopened the facility in April 1924. The U.S. Army Signal Corps assumed control over the station in June 1926 and operated it until it was abandoned in 1930. [12]

Kenai Fjords

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Chapter 9:
COMMERCIAL FISH AND SHELLFISH HARVESTING

The Kenai Fjords coastline is rich with marine life. Many species of fish and shellfish inhabit the area's streams, fjords, and pelagic zones. Relatively few species, however, have been harvested for commercial purposes. Prior to the 1960s, the only species of interest to commercial fishers have been various species of salmon, halibut, cod, and herring. In recent decades, fishers have harvested a variety of new species, including species of crab, shrimp, scallops, and octopus. Halibut and cod, as a rule, have been harvested in the open ocean, 30 to 60 miles south of the park coastline, while the remaining fish and shellfish species have been gathered along or near the coast.

Map 9-1. Historic Sites-Commercial Fishing. *(click on image for an enlargement in a new window)*

The streams of Kenai Peninsula's southern flank are shorter than those that flow into Cook Inlet. For this and other reasons, salmon (particularly red salmon) and other commercially viable fish and shellfish have never been as plentiful in this area as they have been either in Cook Inlet or Prince William Sound. Inasmuch as commercial fishing along the peninsula's southern coastline did not take place until fishing was a well-established industry in both Cook Inlet and Prince William Sound, the park's fishing history will be told within the context of developments in these adjacent areas.

This chapter will concern itself primarily with the area's commercial fisheries. A history of the park area's twentieth century subsistence fishery is described in Chapter 6, while the sport fishery is covered in Chapter 10.

The Southern Kenai Peninsula Salmon Fishery, 1911-1945

Not long after the United States government purchased Alaska from the Russian government, West Coast commercial fisheries interests began to exploit Alaska's untapped fisheries populations. They had, by this time, been harvesting the salmon populations of Washington territory and the province of British Columbia for some time. Before long, fishing companies began to eye Alaska's seemingly unlimited salmon resource.

Early Cook Inlet Salteries and Canneries

In 1878, Alaska's first two salmon canneries were established. Both were located in southeast: one was near Sitka, the other at Klawock, on Prince of Wales Island. That same year, commercial salmon interests first took advantage of Cook Inlet's rich fisheries resource; the Alaska Commercial Company (ACC), which operated a fur trading station near the mouth of the Kenai River, established a salmon saltery at the site. Captain James Wilson, the station agent, was in charge. A year later, a second salmon saltery was established at the Western Fur and Trading Company's fur trading station at the mouth of the salmon-rich Kasilof River, some 12 miles south of the ACC saltery. Captain H. R. Bowen operated both the trading station and saltery. During the same period, the first saltery was opened on Kodiak Island; it was located on Karluk Spit, along the island's southwestern coast. [1]

Other nearby fisheries developments followed soon afterward. In 1882, the first two salmon canneries in Central Alaska were built; the Alaska Packing Company of San Francisco built a cannery at Kasilof, while Smith and Hirsh built a cannery at Karluk Spit. The following year, the Alaska Commercial Company opened its second Cook Inlet salmon saltery; it was located at English Bay, where the company had operated a fur station since the early 1870s. [2]

Between the late 1880s and the late 1890s, new canneries were built in several areas adjacent to the southern Kenai coast. In 1888, four canneries were built on Kodiak Island and one at Kenai. A year later, the first Prince William Sound canneries were built (four were constructed there that year, all on the sound's eastern shore), and five additional canneries were erected on Kodiak Island. In 1890, a new cannery was constructed at Kasilof, and in 1897 another cannery arose at Kenai. In 1899, the first cannery was constructed on Cook Inlet's western shore; it was located at Tyonek. By 1900, therefore, scattered salmon canneries were located northwest, south, and east of the present park boundaries; all, however, were located more than a hundred miles away. During this period, the sockeye (or red) salmon was the only valuable salmon species; the early canneries, therefore, were located near sockeye-laden streams. Few were interested in the southern Kenai fishery, where pink and chum salmon species predominated. [3]

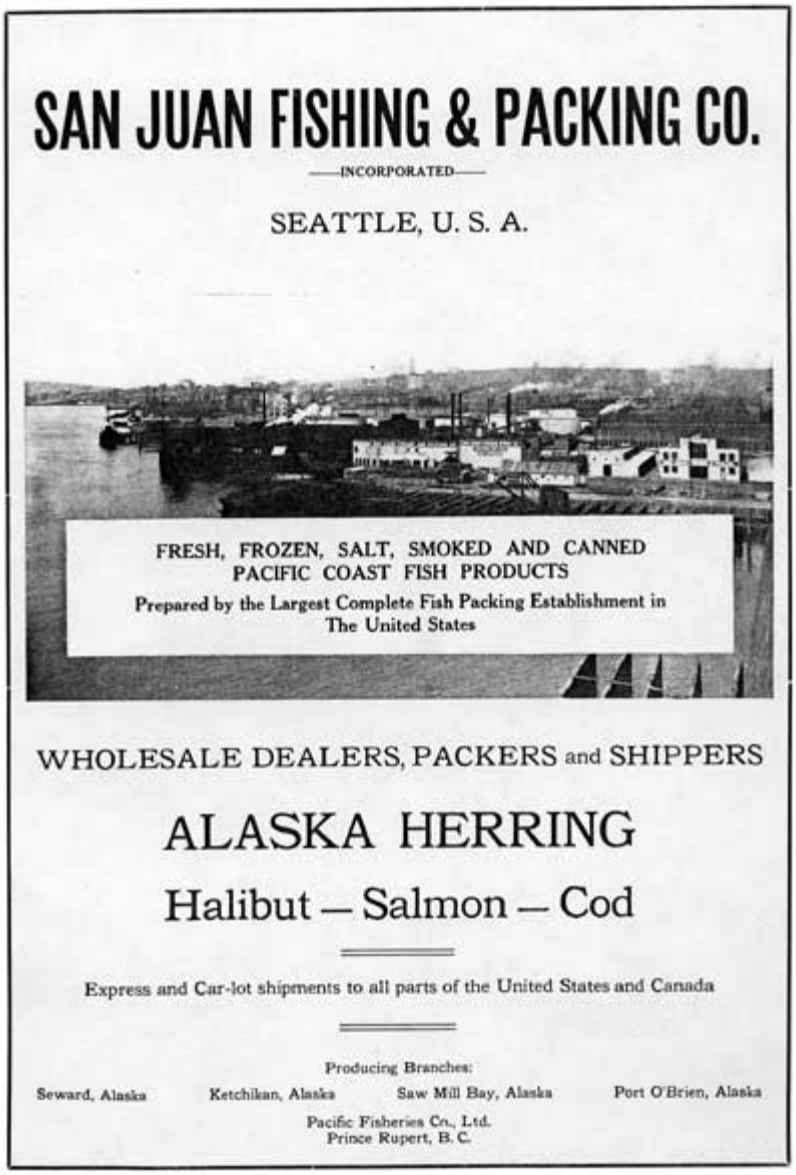
Few new canneries were constructed during the first decade of the twentieth century. The decade that followed, however, witnessed new growth in the fishing industry, and for the first time, canneries were constructed just a few miles away from the present park boundaries. In 1911, the Seldovia Salmon Company built the first cannery in Lower Cook Inlet; it was located at Seldovia, a town that had been in existence for more than 30 years. In 1912, the Fidalgo Island Packing Company built a cannery at Port Graham, and three years later a cold storage facility (for cod and halibut) was constructed at Portlock. Eight years later, the Arctic Packing Company built a cannery at English Bay. Seldovia and English Bay were long-established area villages; Port Graham and Portlock, however, were unpopulated sites before facilities were erected there. Canneries remained at most of these locations until the 1950s, if not longer. [4]

The Resurrection Bay Fishery

During the same period that witnessed the first canneries in Lower Cook Inlet, commercial salmon processing facilities were pioneered in Resurrection Bay. In 1911, Charles F. Boggs established a salmon saltery in Seward. Boggs, along with partner Alfred Rosness, operated the saltery in 1912 but closed it thereafter. [5] During 1915 and 1916 new salteries popped up on the east side of Resurrection Bay, at Caines Head, and at Sunny Cove on Renard Island; all were small in scale, and none lasted more than a few years. [6]

Canneries were also in the works. In 1912, former Seward resident Henry H. Hildreth headed a group that proposed a salmon cannery at Caines Head. The group also planned to construct

a saltery at Porcupine Cove, recognizing that nearby Bear Glacier would be an excellent source for ice. But neither facility was built. [7] A more successful proposal was made by the San Juan Fishing and Packing Company. [8] Officials from that company arrived in Seward in November 1916; construction of a cannery and cold storage plant, located at the foot of Jefferson Street, began in January 1917. It was ready by the time salmon season commenced in mid-June. [9] Cannery management stated that in addition to canning salmon, they planned to freeze halibut, salmon, black cod and red snapper.



The "San Juan plant" was Seward's largest cannery from 1917 to 1930. *Pacific Fisherman Year Book, 1921, 104.*

For most of the next forty years, a salmon cannery operated in Seward. The so-called San Juan plant, using traps [10] as well as company-owned purse seiners, canned salmon only until 1921; for the rest of the decade, salmon was only an incidental part of an operation that was geared toward halibut processing. (Few black cod or red snapper were ever processed there.) Just a year after the San Juan plant de-emphasized its salmon canning operations, the Kodiak Island Fishing and Packing Company established a Seward plant. The cannery, however, operated for only the 1922 and 1923 seasons. [11] Fisheries interests were forced to conclude that the Resurrection Bay salmon supply was (in the words of one government

report) "insufficient for the profitable operation of a cannery." In order to augment the salmon harvest, the Territory of Alaska built a hatchery at Grouse Lake (eight miles north of Seward) that opened in late 1924. Red, king, and pink salmon were raised. A fire, however, destroyed the hatchery in March 1927. It was not rebuilt. [12]

In 1929 a new plant, called Seward Fisheries, Inc., appeared on the scene. Owned by Nils Hagen and three associates, it was located just south of town and was described as a "smaller fish-processing plant;" fish were butchered by hand but packed by machine. The facility operated until 1934; it then lay idle for two years until it was reopened as the Hagen and Company plant. The new, improved plant was fully mechanized; government observers, however, noted that the facility was still just "a small one-line cannery." [13] The Hagen and Company plant operated until the end of World War II. [14]

When the San Juan plant opened in 1917, officials had announced that even though the company had three purse seiners, it would process all fish delivered to the plant. Such an invitation, which was tendered by canneries throughout the territory, encouraged the growth of a local, independent fishing industry. Before the San Juan plant opened, Seward-area fishers were probably limited to those who were involved in the early salteries (noted above), plus occasional entrepreneurs who sold their catch directly to local residents. The presence of a cannery, however, attracted a sufficient number of Seward-based fishing vessels that by the late 1920s, the Federal government had agreed to construct a small boat harbor. The Corps of Engineers constructed the harbor during the summer of 1931. [15]

Boats based at the Seward small boat harbor (such as those moored in this mid-1970s view) have played a major role in the fishing history of the nearby fjords country. *M. Woodbridge Williams photo, NPS/Alaska Area Office print file, NARA Anchorage.*

The number of fishing vessels, never large, varied from year to year; in 1933, for instance, the *Seward Gateway* noted that the local fleet consisted of the M.S. *Marian*, the M.S. *Roy*, the M.S. *Mayflower*, the M.S. *Bavaria*, and several power dories. (The first four motor ships were independently owned; Seward Fisheries owned the dories.) Henry Munson, a longtime local resident, recalled that during the 1930s "there were about a dozen boats fishing in the bay;" a wartime report concurred with Munson's estimate, noting that "about 12 fishing boats are normally based in the Seward harbor." [16] During the early years of the fishery, the

primary techniques used were either beach seines or hand purse seines. By the mid-1920s, however, these methods had been replaced by gill nets; during the 1930s, gill nets and power dories harvested the bay's fish. The summer fishing season typically began in early June and lasted until August 10; the fall season began ten days later and stayed on until September 10. [17]

The Regulatory Environment

Early Alaska salmon processing was carried on in a virtually laissez-faire environment. But by the early 1920s, it had become increasingly clear that commercial interests had overfished and abused many of Alaska's primary salmon fisheries. Governmental authorities, as a result, began to regulate some of the territory's prime salmon fishing areas. The first such action took place in 1922 when three fisheries reservations were established; one of the three, the Southwestern Alaska Fisheries Reservation, included waters just west of the southwestern Kenai Peninsula. The following year, more widespread changes began. The U.S. Bureau of Fisheries subdivided the territory into management districts; the area west of Gore Point was included in the Cook Inlet district, while the area east of Gore Point was included in the Prince William Sound district. [18] The reservations created in 1922 remained in force until June 6, 1924, when Congress passed the so-called White Act. This act established a framework for regulating each of the territory's fisheries; areas undergoing considerable fishing pressure, predictably, were immediately regulated with closures and other management actions, while areas that were seldom fished were given few regulations. [19]

In Cook Inlet, several canneries were in operation each year during the 1920s and 1930s. In response to the high degree of fishing activity, the U.S. Bureau of Fisheries applied increasingly sophisticated management actions. Beginning in 1923, for example, the agency dispatched the patrol boat *Teal* from its Seattle headquarters to the Cook Inlet fishing grounds; the *Teal* remained in the inlet all summer, gathering information and enforcing fishing regulations. By the end of the decade, the government was sponsoring an ongoing stream improvement program along selected Cook Inlet waterways. Before long, the agency began to deploy stream guards at key Inlet locations to enforce fishing regulations, and by the late 1930s it had begun chartering aircraft to augment the existing patrol efforts. [20]

During the mid-1950s, the Fish and Wildlife Service placed stream guards near

several area streams. This 1958 photo shows a typical stream guard shack, skiff, and a Coast Guard floatplane. *USF&WS, Cook Inlet Annual Management Report, 1958, 127.*

In Resurrection Bay, where fishing activity was substantially less than in Cook Inlet, the regulatory environment was more relaxed. As noted above, Resurrection Bay was first considered to be part of the Prince William Sound management district. In December 1924, revised White Act regulations redefined Resurrection Bay as being a separate management district with its own set of regulations; the district's fish volume, however, was so small that Central District (Prince William Sound) personnel in Cordova reported on Resurrection Bay fisheries activity. The bay became an administrative part of the Cook Inlet district in early 1951 and has remained there ever since. [21]

Fisheries management in Resurrection Bay was applied with a much lighter touch than in Cook Inlet. Specific regulations, for example, were applied only to bay waters that were north of an imaginary line connecting Cape Resurrection and the west side of Bear Glacier. Active management measures were few. In 1931, the U.S. Bureau of Fisheries dispatched a stream guard to the bay; a year later, the agency maintained a salmon weir near Bear and Grouse lakes. The *Teal*, however, seldom visited Resurrection Bay; the stream improvement program was virtually nonexistent; and fisheries personnel rarely if ever engaged in aerial patrols. [22]

Fishing Along the Outer Coast

Prior to the end of World War II, the long stretch of coastline between Resurrection Bay and the southwestern tip of Kenai Peninsula was almost entirely ignored by the commercial salmon industry. The primary reason for the lack of interest was that red (sockeye) and king (chinook) salmon were the only varieties sought by the canneries. The southern coastline's annual yield of these species was insignificant during this period; the sockeye runs were much smaller than those of later years, because glaciers and floating glacial ice then covered many areas that are now ice-free. [23] The severe weather, rough seas, remoteness from a fisheries facility, and the comparative fragility of the fishing boats then in use were additional reasons why fishers generally avoided the area.

The outer coast, beginning in 1923, was classified as being part of the Prince William Sound district. Then, in late 1924, the area became part of the new Resurrection Bay district. Fishing pressure along the outer coast, however, was so light that no specific regulations were applied to the area until after World War II. By the 1930s, the coastline had once again come under the nominal purview of the Prince William Sound district fisheries agent. That person, however, had far more pressing management concerns; he generally ignored this stretch of coastline, both in day-to-day activities and in annual reports. By 1943, the stretch of coastline west of Aialik Cape had become an administrative division of Cook Inlet. It has remained there ever since. [24]

Governmental fisheries officials, for the most part, were convinced that this stretch of coastline was essentially bereft of marine resources. One report, based on 1927 data, noted the following about the area:

> The fishery districts nearest to [Resurrection Bay] are Prince William Sound on the east and Cook Inlet on the west. In both directions [from Resurrection Bay], especially to the westward, are miles of coastal waters that have no salmon fisheries, so that this bay stands as a district wholly apart from any other.... [25]

Despite that assessment, however, there is widespread evidence that commercial fishers

periodically harvested fish from park waters prior to World War II. Evidence is strongest for such activity during the 1930s and early 1940s, although commercial fishing boats may have been active in the area during the 1920s as well.

As noted in Chapter 6, Natives from English Bay and vicinity often traveled along the park coastline as part of their seasonal round during the years prior to World War I. The establishment of canneries at Seldovia, Port Graham, and English Bay during the 1911-1920 period had the practical effect of disrupting the Natives' seasonal cycle; cannery work was available during the months when residents traditionally put up salmon for winter supplies. [26] Prior to World War I, therefore, Natives were the primary (perhaps the only) subsistence fishers along the outer Kenai coast; whites avoided the area (in the words of one longtime resident) because they "didn't want to step on the toes of the Natives." But after the war, there were "lots of white fishermen" and relatively few Natives. Some of those white fishers may have been residents of Halibut Cove or other Lower Cook Inlet communities who traveled the coast on their way to the Prince William Sound fishing grounds; residents of Cordova and vicinity may also have fished the coastline on their way to Cook Inlet. [27]

Specific information about who fished (or just traveled) along the coast has been provided by Josephine Sather, who helped run a fox farm on Nuka Island. Sather, writing in the mid-1940s, spoke kindly of several "old timers who [came] here on their regular seasonal trips." They included John Malutin, Hans Simondsen, and Bert Jacobsen. Malutin, a Seward resident, was captain of the M.S. *Marian*, which was active from 1927 to 1933, perhaps longer. Little is known about the other two fishermen. In all probability, the Kenai coast was probably visited by quite a number of fishing boats during the 1920s and early 1930s. Because the coast yielded few if any kings or sockeyes, however, commercial fishers did not linger in the area for long. [28]

As noted in Chapter 6, Pete and Josephine Sather were the best-known people to fish the park's waters during this period. They caught pink salmon with seines in many areas of Nuka Bay, and most of the time they were subsistence fishers, feeding what they caught to their foxes. Pete, however, occasionally attempted to sell pink salmon at the canneries, despite their relatively low value. One old-timer recalled that if Sather and other locals "could sell their fish for one-quarter cent each, that gave them flour and sugar for the winter." [29] Sather would typically fill his boat to overflowing; then, because his fishing boat had no refrigeration equipment, he would often head west to the Port Graham-Seldovia area, hoping for a quick sale. If the first cannery he visited wouldn't buy his fish, he would move on to other canneries, making offers at each one. Sather also sold his harvest at the Seward canneries; according to Ralph Hatch, a longtime resident, Sather made a couple of heavily-loaded trips per year to off-load pinks. "By the time he got here," Hatch recalls, "the boat smelled bad but the cannery took them anyway." [30] It should be noted that while much of Sather's subsistence fishing was from Nuka Bay, some–perhaps most–of his commercial fishing harvests were probably from Port Dick and other westward waters. [31]

East of Nuka Bay, the only park waters known to be fished before World War II were located at the southwestern end of Resurrection Bay. In all probability, Seward-area fishers discovered not long after the San Juan plant commenced operations that the Bear Glacier area offered a significant fish run. By the early 1930s, Resurrection Bay had two distinct sockeye runs. The first and larger run took place in the upper bay (north of Caines Head) in early June. By the end of the month, however, the local newspaper announced that "The salmon run in [upper] Resurrection Bay is about over and vessels will have to journey down to Bear Glacier if they expect to make any catches, say local fishermen." [32]

West of Nuka Bay, little or no commercial fishing took place anywhere along the outer coast during the early to mid-1920s. The English Bay, Port Graham, and Seldovia canneries

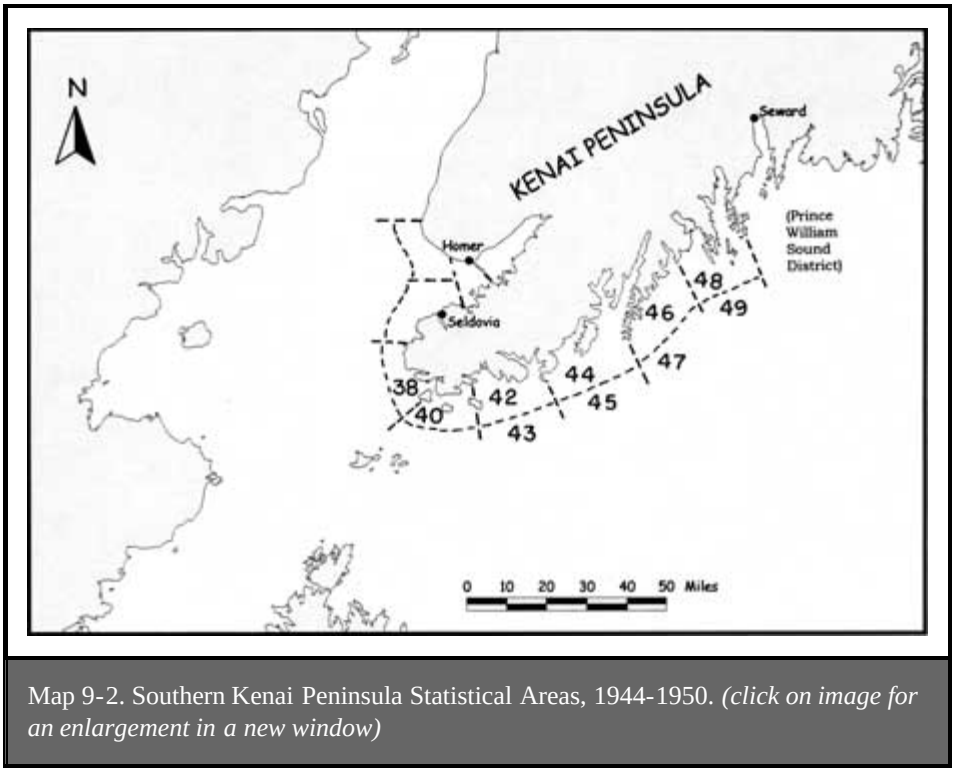
obtained their fish either from nearby fish traps or from fishing boats that stayed fairly close to home. Beginning in 1928, however, a new cannery was built in Portlock, 12 miles southeast of English Bay, and a larger facility was constructed there in 1930. The new Portlock cannery, the availability of more seaworthy fishing vessels, and most of all the rising value of pink salmon all resulted in the exploration of the fishing resources of Windy Bay, Rocky Bay, Port Dick, and other outer coast sites. Fishers soon discovered that these bays were rich in pink and chum salmon, and as the price of these fish rose, these areas became increasingly attractive to the nearby canneries. Roy Cole, the captain of the patrol boat *Teal*, noted in 1935 that "a few [pinks] show in the lower Inlet from English Bay to Point Gore." By mid-July of that year, commercials fishers were harvesting pinks and chums in Port Dick and selling their harvest to the *Adriatic*, a tender owned by the Cook Inlet Packing Company plant in Seldovia. [33]

During the 1920s, Seward was a popular stopover for ships in the halibut fleet that fished out on Portlock Bank and area sites. *Neville Public Museum, photo 5670.4.*

Little is known about fishing activity in the western part of the outer coast for the next few years; management reports from the period do not discuss the subject. [34] Nevertheless, pink or chum salmon (perhaps both) probably continued to be harvested, though in small volumes. By 1939, the area was once again receiving Captain Cole's attention; he noted that year that "the run of pinks in the section from Point Gore to Seldovia was scattered" and made a specific description of the Port Dick run. In 1940, he noted that "intensive fishing was in progress" between Seldovia and Port Dick from July 28 to August 10; the following year, Cole noted a "very good" pink run along the coast between Kachemak Bay and Port Dick and "intensive seine fishing" in the Port Dick area in late July and early August. The resource was sufficiently valuable that Cole, and the *Teal*, personally monitored the Port Dick seine activity during this period. By the early 1940s, therefore, the fishing resources west of Gore Point had been fully explored and were being commercially exploited on a regular basis; Port Dick, specifically, was being described as one of two major pink producing streams in Lower Cook Inlet. [35]

By 1943, commercial fishers had made the first known foray into the Kenai Fjords area. The management report that year noted a new "Seward District" that year east of Port Dick; that district was composed of "Seward Bay" (Resurrection Bay?), from which 7,330 pink salmon were harvested, and "Tunder Bay" (Thunder Bay?), from which 11,970 pinks were harvested. The harvest for both bays was minor; together, they accounted for just 2.1% of the

900,000-plus pink salmon that were caught that year on the east side of Cook Inlet. [36] The "Tunder Bay" harvest did not immediately result in further commercial activity. By 1944, the U.S. Fish and Wildlife Service (the successor to the U.S. Bureau of Fisheries) had instituted a statistical system that recorded the number of fish caught along specific segments of coastline (see Map 9-2). That system failed to record a commercial fish harvest between Gore Point and Aialik Cape either in 1944 or 1945.



Map 9-2. Southern Kenai Peninsula Statistical Areas, 1944-1950. *(click on image for an enlargement in a new window)*

Although fisheries reports suggest (admittedly, with some lack of certainty) that 1943 was the first year of commercial activity in park waters, several longtime Seward residents recall that local fishers (other than Pete Sather) worked in park waters before 1943. Henry Munson, whose memories of Seward date back to the mid-1930s, recalls that "boats went beyond Resurrection Bay" during that period and that "there were boats in that area before World War II." Seward Shea, another longtime resident, was more specific; he remembers stories of salmon fishing at the south end of "Pete's Island" (Nuka Island) and also near Petrof Point. In Shea' s recollection, the boats in this area came from Seldovia; he admits, however, that never personally saw a Seldovia or Port Graham boat east of Gore Point during this period. [37]

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Kenai Fjords

A Stern and Rock-Bound Coast: Historic Resource Study

Chapter 10:
RECREATION AND TOURISM

Early Recreational Trends

Before the Klondike gold rush began, there was little pressure on Alaska or Yukon game resources except in the vicinity of widely dispersed mining camps and cannery sites. The gold rush, however, lured tens of thousands of people northward. By 1900, Alaska had more than twice the population than it had had in 1890; its non-Native population, moreover, grew more than 750 percent during the same ten-year period. [1]

The Lure of the Kenai Peninsula Gamelands

Map 10-1. Historic Sites-Recreation/Tourism. *(click on image for an enlargement in a new window)*

As a direct result of the gold boom, market hunters and individual prospectors fanned out across Alaska in search of game. The publicity that accompanied the gold rush also attracted trophy hunters, few of whom had visited Alaska previously. On the Kenai Peninsula, the Hope-Sunrise area had supported a growing population since 1894, and hunters were active along the Kenai coast during the mid- and late 1890s. As a result, the wildlife inevitably began to suffer. Dall De Weese, a hunter and travel writer, was able to count 500 sheep within six to eight miles of a spot in the Kenai Mountains in 1897; four years later, however, the number of animals had drastically declined. Similarly, hunter Andrew J. Stone noted in 1900 that "the Kenai Peninsula ... has been prolific in animal life but there are so many sportsmen now coming in that the large game is suffering quite a slaughter." (One author felt that non-resident sportsmen were a major culprit; although the game laws "allowed them to kill only two moose, three sheep, three bear, etc., [they] would kill all the animals they could lay their eyes on.") [2] Caribou were particularly vulnerable. Market hunters during the early 1900s exterminated the species in the Kachemak Bay area; in the years that followed, hunters were so successful in their endeavors that the last caribou were eliminated from the Kenai Peninsula about 1913. [3]

By 1905, both the Klondike gold rush and the Hope-Sunrise excitement had passed their peak, and as a result, pressure on the Kenai Peninsula game populations began to diminish. The Kenai, moreover, gained increasing fame as a sport-hunting destination during the years

following the gold rush; by 1911, one source noted that it had "come to be regarded as the greatest game country in the possession of the United States." [4] Its popularity stemmed from its accessibility, the variety of local megafauna (specifically moose, sheep, bear, and goat), and the existence of many trophy-size animals. [5]

The gamelands, located in the hills and flatlands of western Kenai Peninsula, were reached via Kenai during the gold rush period. By 1905, however, construction of the Alaska Central Railroad had proceeded to the point that Seward became the primary entrepôt to the gamelands. Thereafter, most hunters who planned a Kenai Peninsula hunt sailed to Seward where they met a guide. They then took the train north to Kenai Lake, after which they sailed the length of the lake and floated down the Kenai River to the gamelands. As noted in a contemporary article, hunters looking for moose headed most often to Skilak Lake, Kenai Lake, Kenai River, [Lower] Russian Lake, the Chickaloon Flats, or "Kusiloff Lake." Sheep hunting areas included Sheep Mountain, False Creek, Stetson Creek, Skilak Lake, and Tustumena Lake. Goat hunters headed to the eastern peninsula, near Spencer and Bartlett glaciers, and both black and brown bears were scattered about the moose and sheep hunting country. [6]

By 1910, hunters throughout the world had heard about the Kenai Peninsula gamelands, and each year thereafter a smattering of hunters arrived in Seward. Some came for the spring bear hunt, while others arrived to take advantage of the fall moose and sheep hunt. The sportsmen hailed from all over the United States and from foreign countries as well, particularly from Europe. [7] The number who arrived each year was fairly small–usually just 10 or 15 parties totaling 25 or 30 hunters–but their wealth, their influence, and their penchant for publicizing their adventures via books and articles played a large role in broadcasting the Kenai's game resources. [8]

The Kenai Peninsula gamelands were essentially unregulated until May 1908, when Congress passed (and President Roosevelt signed) a law providing for major revisions to the Alaska Game Law of June 7, 1902. The 1908 law mandated that all Alaska hunting guides be licensed; in addition, the law recognized both the popularity and the fragility of the Kenai gamelands when it demanded that all Kenai Peninsula sport hunters be accompanied by a licensed guide. No other Alaska hunting grounds were singled out with this requirement. The law helped ensure the continuity of the Kenai game resource.

One beneficial effect of the 1908 law was that it brought forth a small corps of locally based guides, who gained fame (and some fortune) through their guiding efforts. By 1911, ten of Alaska's fifteen guides listed a Seward address. (The other five lived in Kenai.) Well-known guides living in or near Seward included Andrew Simons, Charles Emsweiler, Ben Sweazey, Bill De Witt, and Andrew Berg. Most if not all of these guides earned the respect of men who had hunted trophy animals throughout the world. [9] Another guide, who joined the ranks during the 1920s, was Luke Elwell. The Seward-bred guide lived in town for more than a decade; then, in 1939, he and his wife Mamie built a lodge at Upper Russian Lake and operated it for the next twenty years. The lodge was (and is) the first permanent habitation north of the present-day park boundary; it is also the largest structure between the park boundary and the Kenai River. [10]

One site along the hunters' route became a point of interest for tourists. Roosevelt, a station stop on the east side of Kenai Lake, had long been a transfer point and roadhouse for hunters heading west to the game country. Then, in August 1923, Nellie Neal announced that she had purchased the roadhouse. Neal, a former market hunter and cook in the railroad construction camps, soon married a Seattle electrician named William B. Lawing. The new Ms. Lawing, hoping to cash in on the expected boom in tourist travel on the recently completed railroad, cleaned out a building that was located in the narrow strip between the lake and the railroad

right-of-way. Then, according to a local news report, she "placed her entire exhibit of fine Alaskan skins and furs on exhibit." The stop, which was renamed Lawing, became increasingly well-known; thousands of Alaska tourists (and residents) stopped there during the 1920s and 1930s. [11]

Seward Area Land Reservations

During the first quarter of the twentieth century, the federal government–specifically, the Interior and Agriculture departments–reserved land along the Kenai Peninsula's southern coastline. These actions may have prevented a broad range of development actions on the lands in question. Most of these withdrawals were the manifestation of events taking place away from southcentral Alaska. The reservations, however, were temporary, and they had a minor if not insignificant impact on Seward-area land use development. They have been presented in this chapter because the Interior Department has reserved several large blocks of Kenai Peninsula land in recent years; each of these actions, including the reservation that eventually resulted in Kenai Fjords National Park, was made to enhance recreational opportunities and preserve non-economic values.

The first agency to reserve a large area along Alaska's southeastern coastline was the Interior Department's Bureau of Forestry. In August 1902, President Theodore Roosevelt had proclaimed the establishment of the Alexander Archipelago Forest Reserve. The Bureau of Forestry administered this area, which comprised a portion of what is now known as Tongass National Forest. Roosevelt, well known as a conservationist, chose William A. Langille to head the reserve. Langille established a reserve headquarters in Wrangell, although he later moved to Ketchikan.

In 1904 and 1905, Langille made several long trips, at the behest of his Washington superiors, to inspect either recently withdrawn areas or areas proposed for withdrawal. One of those trips, beginning in September 1904, took him to Prince William Sound, where he made an examination the area's forest resources. He continued on to Seward, then headed overland to Kenai. He eventually wound up in Seldovia, where he boarded a coastal steamer and sailed back to Resurrection Bay. [12]

Langille, among his duties, was asked to evaluate the idea of a Kenai Forest Reserve. Those whom he encountered during his sojourn had mixed feelings about the proposal. A few recognized the importance of the forestry movement, and others (particularly along the railroad corridor) were opposed to the proposal, but most were indifferent. Langille himself reflected those sentiments; he noted that "The existing forest reserve law ... is too restricting and in a measure unjust to so new a country...." For that reason, he hoped that land would still be available for settlement in any new reserves. Given that caveat, Langille recommended the creation of a reserve that would encompass most of the northern and central Kenai Peninsula; specifically, he recommended that the reserve include the entire peninsula north of a line that connected Cape Puget (40 miles southeast of Seward) with "Coal Inlet" (Kachemak Bay). [13]

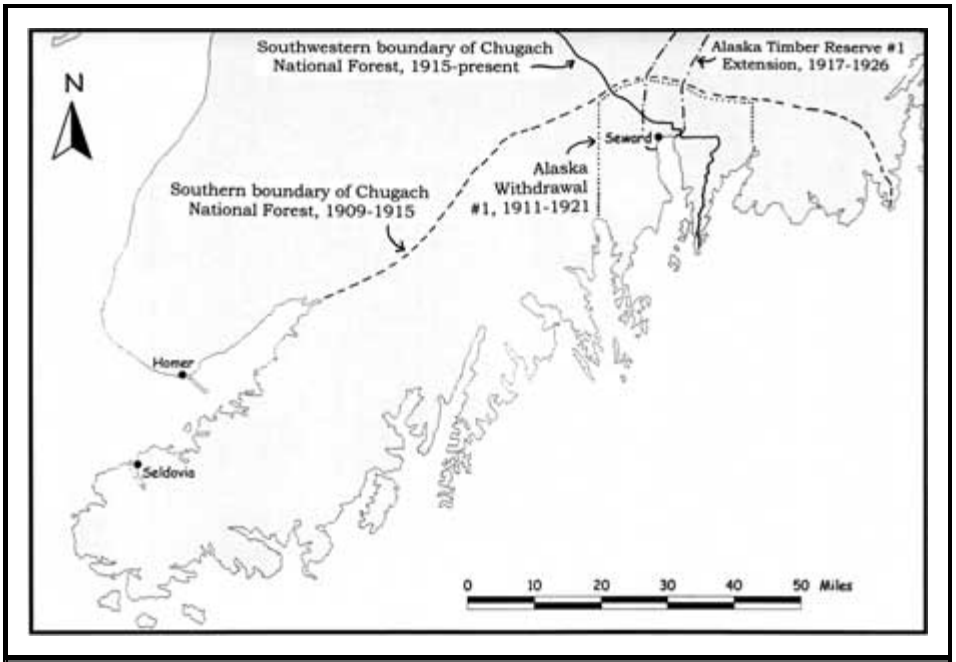
There was no immediate response to Langille's proposal. The Bureau of Forestry, meanwhile, underwent major structural change. In February 1905, the Bureau became part of the Agriculture Department; a month later, the bureau's name changed to the U.S. Forest Service; and in 1907, the agency changed the name of its forest reserves to national forests. [14] Historian Lawrence Rakestraw noted that soon after the establishment of the new agency,

> there came a flurry of activity within the Forest Service regarding new reserves.... The Alaska reserves came up for consideration, and by March [1907] the Forest Service had decided to create new reserves, both in southeastern Alaska and in

the Prince William Sound area.

President Roosevelt responded to that activity by proclaiming the Chugach National Forest on July 23, 1907. The forest, at this time, comprised just 4,960,000 acres, more than a million acres smaller than today; its western boundary snaked along the peninsula's eastern edge. Kenai Lake, the Quartz and Canyon Creek valleys, and the Hope-Sunrise area–all part of the Chugach today–were omitted from Roosevelt's 1907 proclamation. [15]

Just a few months later, in his 1907 annual report, Langille recommended that additional areas–primarily along Turnagain and Knik arms–be added to the Chugach in order to protect them from Alaska Central Railroad construction crews. That order was sent on to Washington, where it and other proposals lay until the closing days of the Roosevelt administration. On February 23, 1909–less than two weeks before William Howard Taft assumed the presidency–Roosevelt more than doubled the size of the Chugach, to 11,280,640 acres, the largest in the country. The proclamation, which institutionalized the boundaries that Langille had recommended in 1904, spread the previous boundaries of the national forest in several directions. It included all of the Kenai except for the area south of a sinuous line that connected Cape Puget with the head of Kachemak Bay (see Map 10-2). That line, for the most part, followed the drainage divide. Most of the Kenai Peninsula land not included in the Chugach, therefore, drained south into the Gulf of Alaska. The newly expanded forest included several thousand acres that are within the present park boundaries; almost all of that land is on the high-elevation portions of Harding Icefield. [16]



Map 10-2. Seward Area Land Reservations, 1909-1926. *(click on image for an enlargement in a new window)*

Sewardites did not hear about Roosevelt's action until several weeks into the new president's term. Local newspaper editor Leo F. Shaw was skeptical about the need for such an action. Shaw noted that "there is apparently little excuse for making a large forest reserve in this part of the territory of Alaska. There are practically no valuable forests in the section of the country included in the reserve." [17]

It is of more than parenthetical importance to note that Kenai's south coast was thrice considered for inclusion in Chugach National Forest. Forest Service historian Lawrence Rakestraw notes that the February 1909 addition had originally been planned to include the

south Kenai coast, but commercial interests in Seward objected, so the crest of the range to Kachemak Bay was used. Two years later, in a report on the Chugach, Tongass National Forest head William Langille suggested that "the southern shore of the Kenai Peninsula from near Seward to the head of Kachemak Bay" be added to the forest. Then, in 1913, forester George Cecil visited the area and reported that the timber resources south of Kachemak Bay were superior to those north of the bay. Neither Langille's nor Cecil's observations, however, resulted in boundary modifications. [18]

On December 5, 1911, the federal government declared a land freeze in the Seward area. In anticipation of "future legislation" (which was probably the Congressional act of August 24, 1912, which authorized a commission to study various rail routes to the interior), the General Land Office established Alaska Withdrawal #1. The newly-designated land, which was "withdrawn from settlement, location, sale, or entry," stretched along the coast from Day Harbor to Aialik Bay; it included all land south of the recently expanded Chugach National Forest boundary, and several thousand acres in the present park. That executive order was modified in August 1912 to allow the "use or disposition of timber" within the recently withdrawn land. This latter provision was probably implemented to make the area's wood resource available to government rail construction crews. [19]

The General Land Office continued to be concerned about timber resources. In the summer of 1915, it created the huge Alaska Timber Reserve #1 in the Susitna and Nenana river drainages to ensure an adequate timber supply for the railroad construction crews. In April 1917, that reservation was extended to include a tract five miles on each side of the government railroad from Seward to the Knik River. The latter action included within its scope a few thousand acres currently included within Kenai Fjords National Park. [20]

Even before the three reservations had been created, action to nullify them had begun. In 1913, Alaska Delegate James Wickersham submitted a U.S. House bill to abolish the Chugach National Forest because of its relative lack of timber; a short time later, the newly created Alaska legislature passed a resolution in support of Wickersham's action. The General Land Office, perhaps in response, decided to tailor its boundaries to more closely circumscribe timbered lands. The agency recognized that "the public good will be promoted by adding to the Chugach National Forest ... certain lands, and by excluding certain areas therefrom and restoring the public lands therein." It prepared a proclamation to that effect, and on August 2, 1915, President Woodrow Wilson signed the proclamation that, on the Kenai Peninsula, modified the Chugach's boundaries to resemble their present configuration. (This action added to the forest the large tract of land on the northeast side of the Resurrection River, but eliminated the huge area in the western Kenai north of the coastal drainage divide.) [21] The following year, forester Asher Ireland visited the Seward area and recommended that 8,641 acres on the southwest side of Resurrection River be added to the forest. Ireland considered the parcel, which contained 42 million feet of spruce and hemlock, valuable both for both timber and protective cover; it had, in Ireland's opinion, "the best body of timber in southwestern Alaska." [22] Ireland's recommendation, however, was not enacted into law.

During the 1920s, the other reservations were eliminated, probably at the urging of local authorities. Seward Senator L. V. Ray sponsored a joint memorial in the 1919 Alaska legislature requesting the "restoration or modification" of Alaska Withdrawal #1. The General Land Office, in response, "appreciated that most of the reasons for the withdrawal have ceased to exist," but it was not until May 1921, with construction of the government railroad nearly completed, that Alaska Withdrawal #1 was "vacated and annulled" by President Warren Harding. Five years later, in November 1926, President Calvin Coolidge issued a similar executive order revoking Alaska Timber Reserve #1 on the Kenai Peninsula. Except for land in the newly reduced Chugach National Forest, most if not all of the Kenai Peninsula

was now open, once again, to location and entry. [23]

Although the federal government appears to have paid an extraordinary amount of attention to the Seward area's forestry resources during this period, there have been no known attempts or proposals to secure timber for commercial purposes in or near the present park boundaries. Isolation, inaccessibility, the lack of potential board feet, and the lack of markets all help explain the absence of commercial timber operations. [24]

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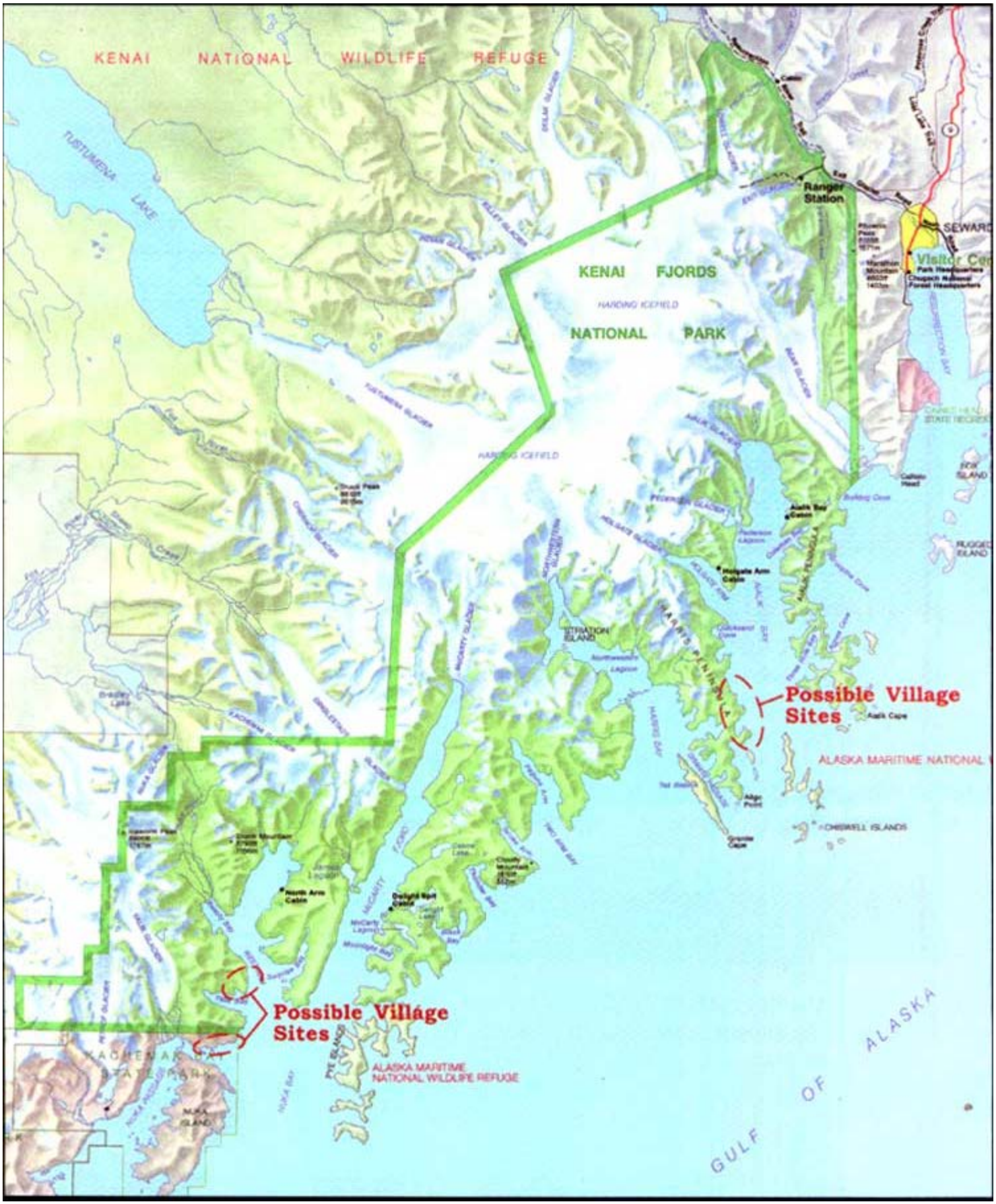
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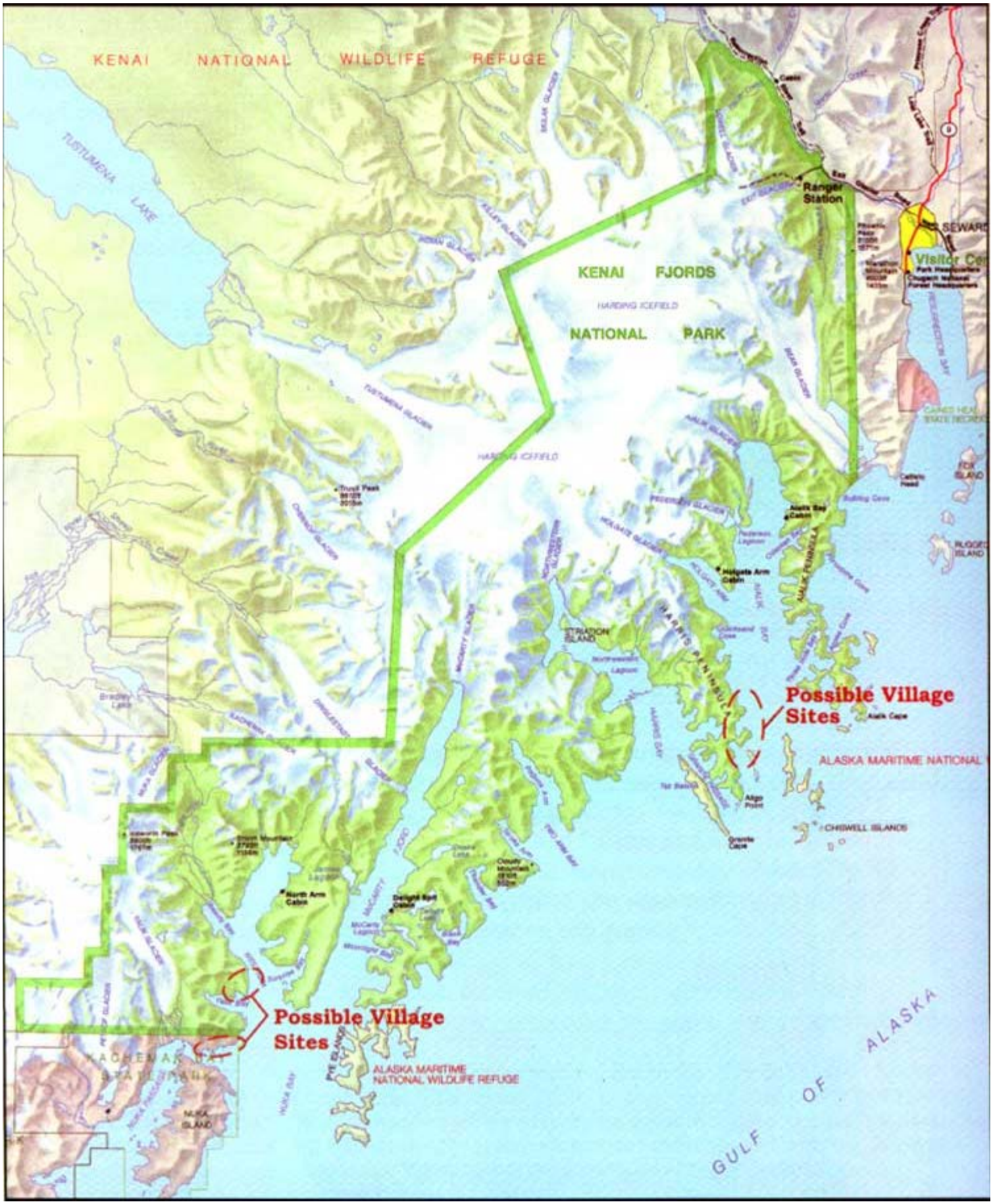
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Probable site of sled road, C. 1923
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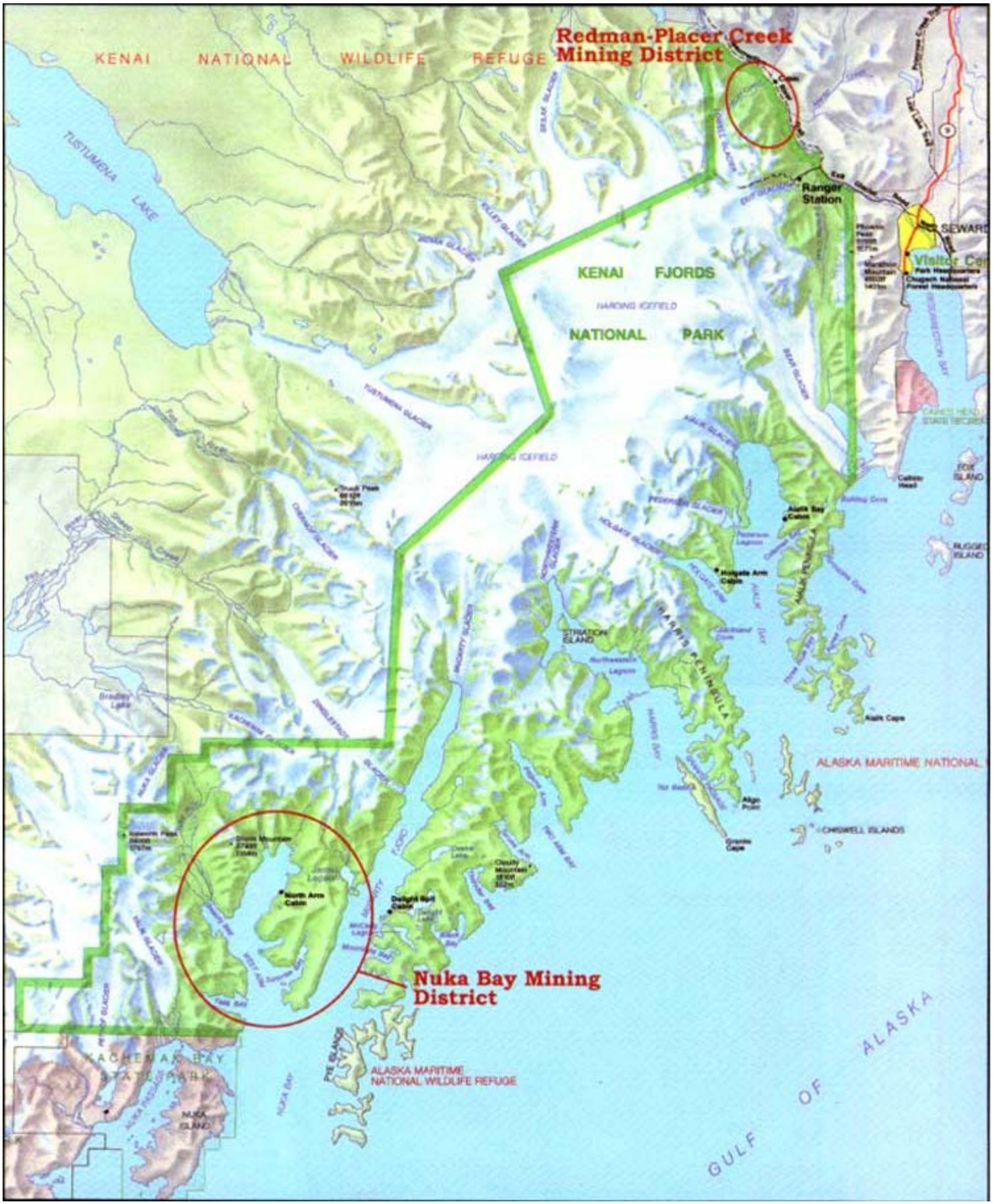
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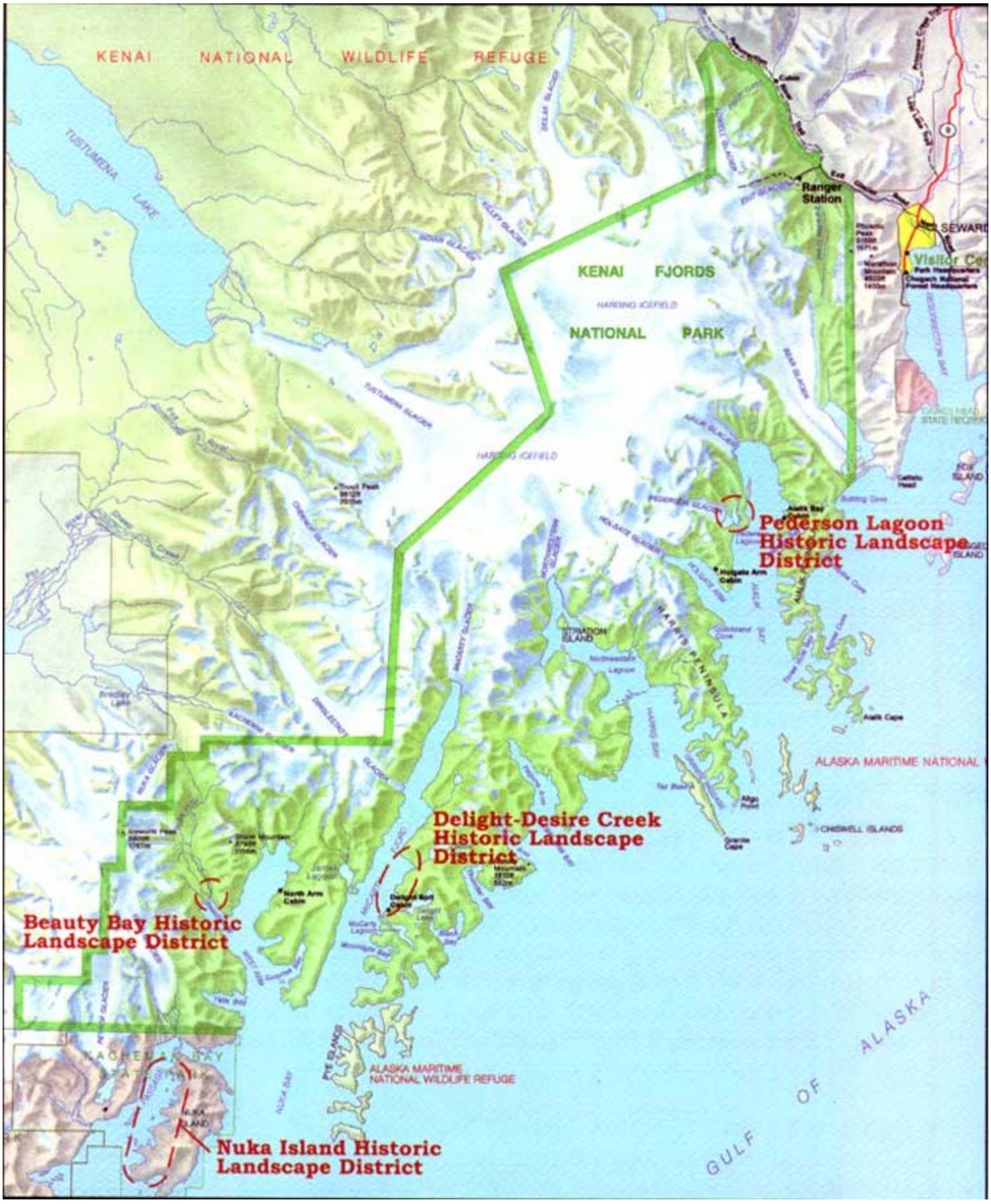
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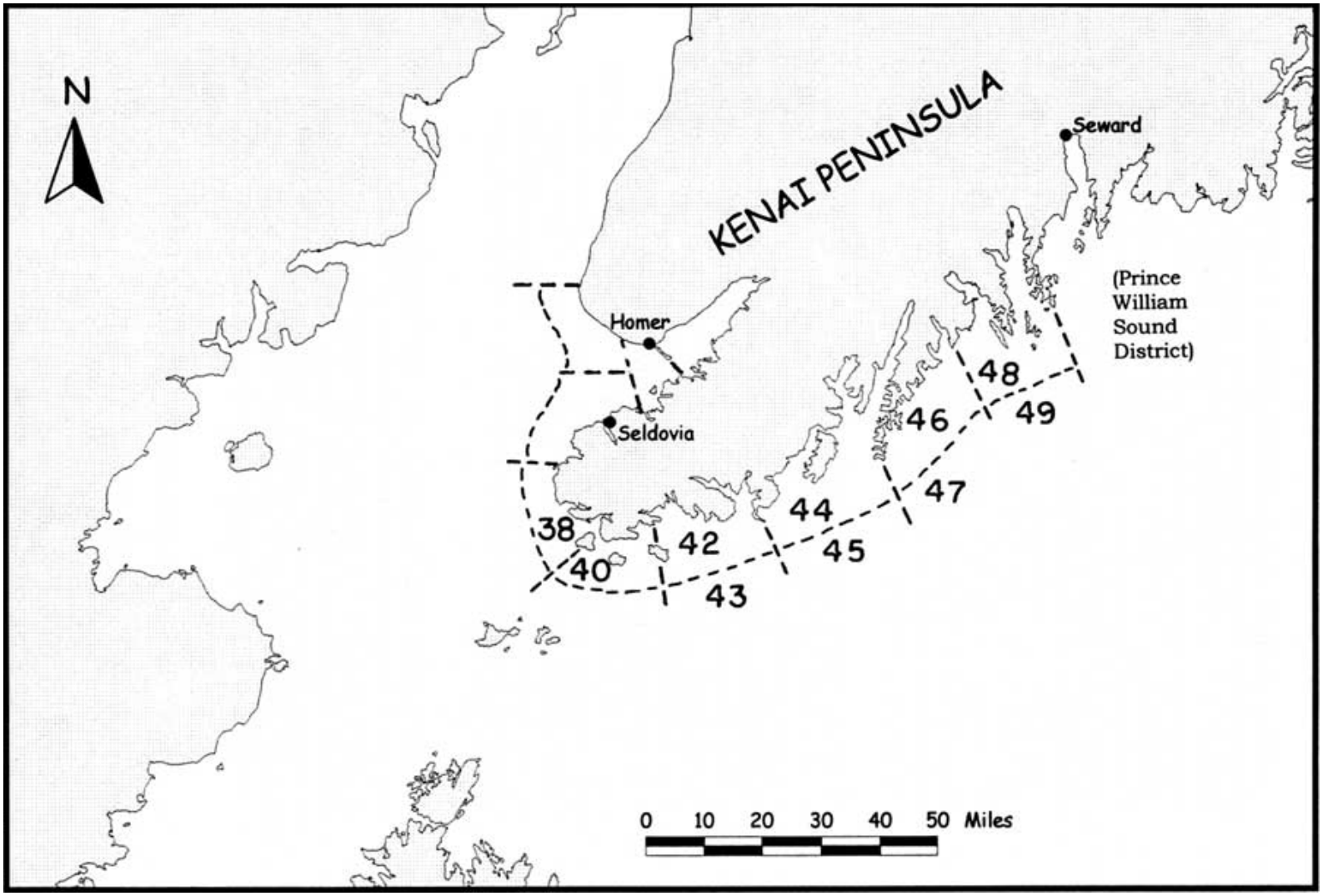
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(Prince
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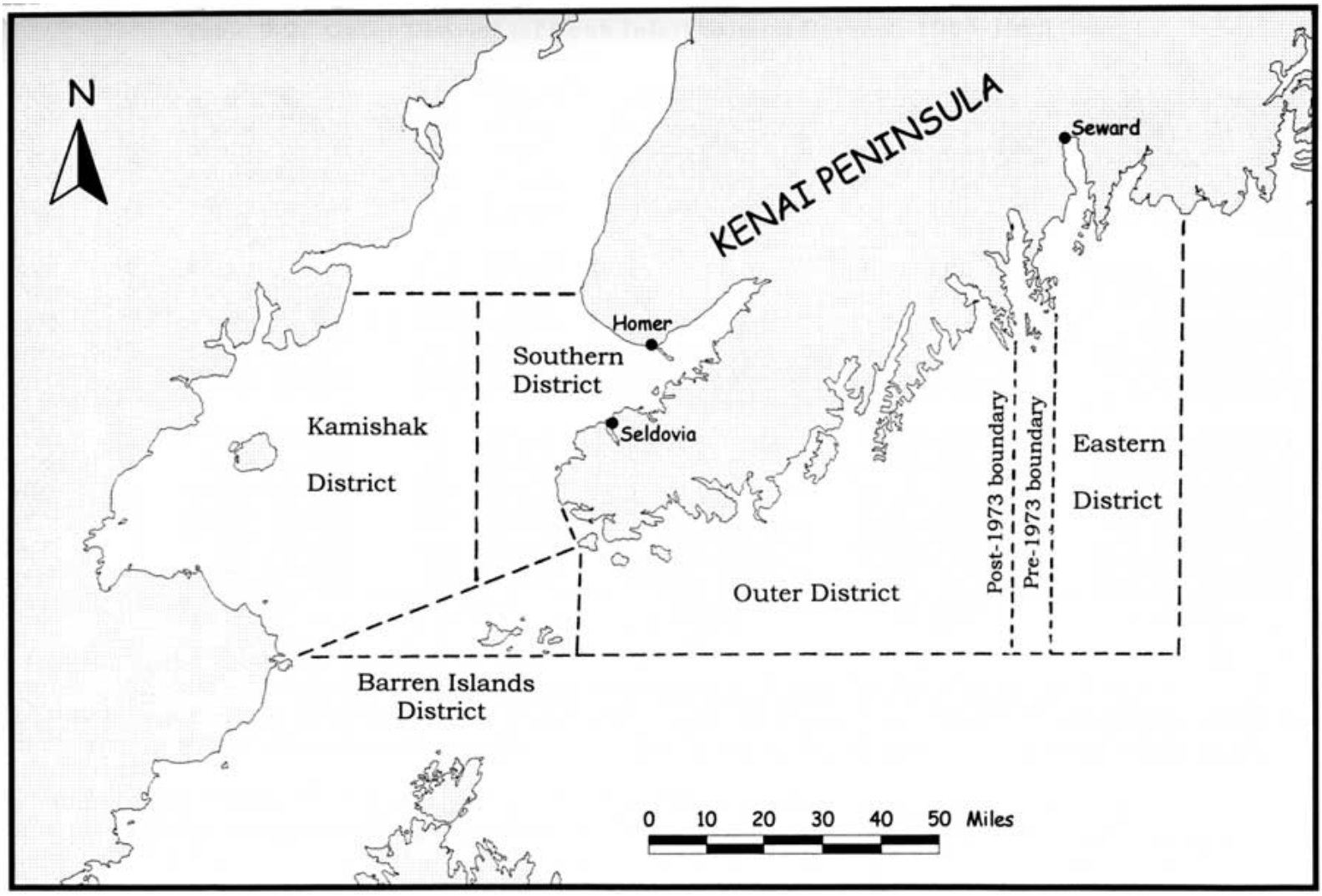
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Southern
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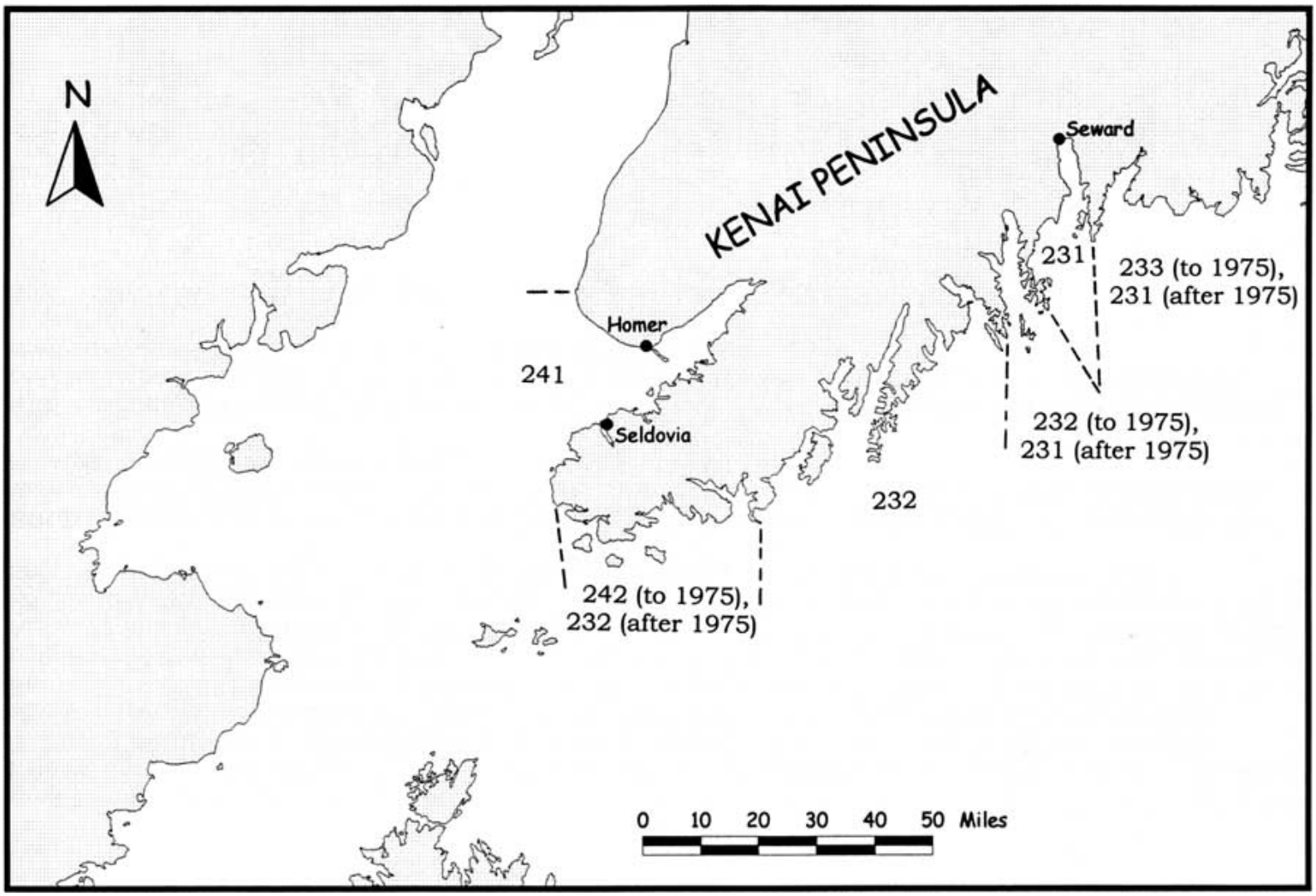
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KENAI PENINSULA
Seward
231
233 (to 1975),
231 (after 1975)
Homer
241
Seldovia
232 (to 1975),
231 (after 1975)
232
242 (to 1975),
232 (after 1975)
0 10 20 30 40 50 Miles


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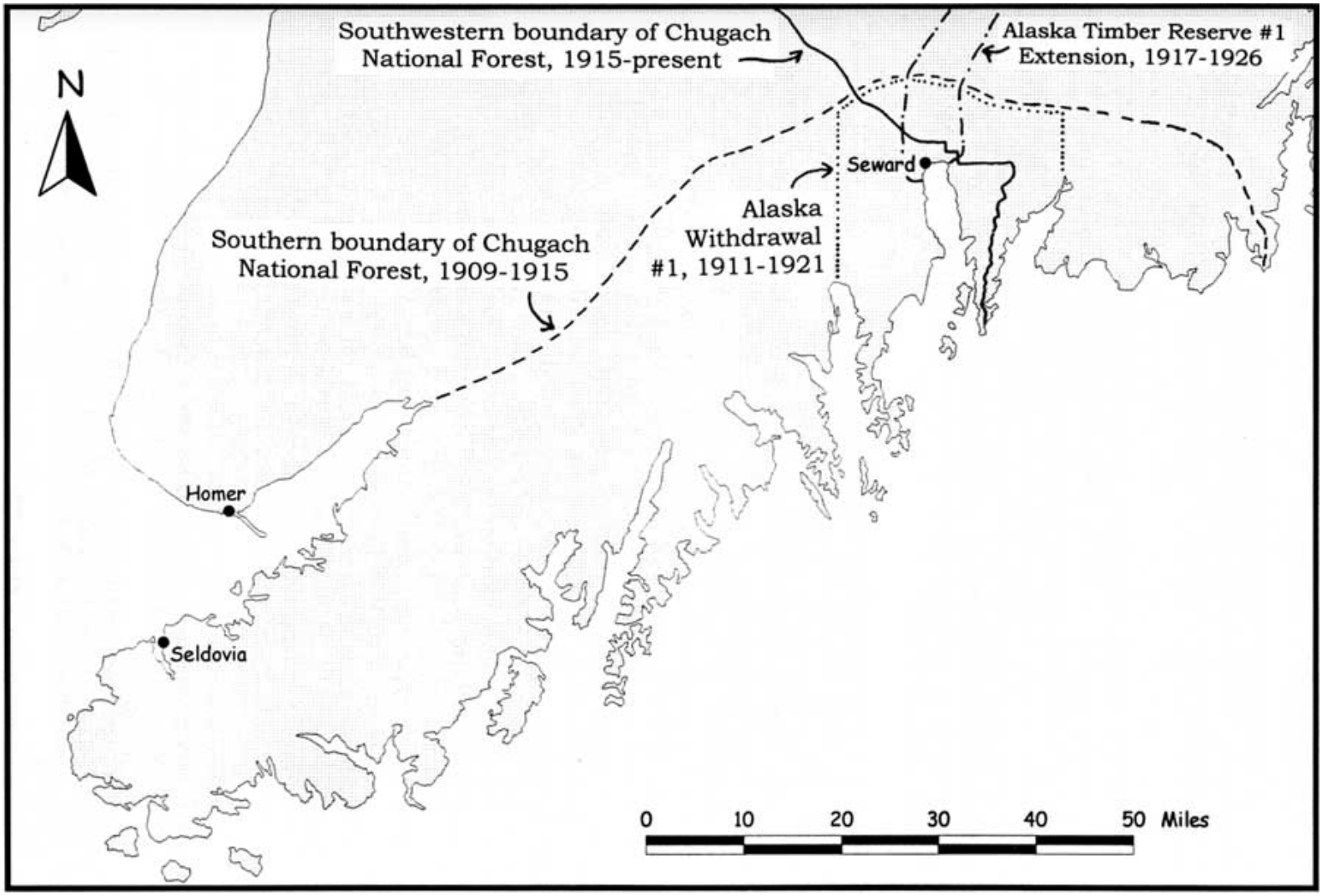
Southwestern boundary of Chugach National Forest, 1915-present
Alaska Timber Reserve #1 Extension, 1917-1926
N
Seward
Alaska Withdrawal #1, 1911-1921
Southern boundary of Chugach National Forest, 1909-1915
Homer
Seldovia
0 10 20 30 40 50 Miles


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TUSTUMENA LAKE
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1964 Boundary
Proposed Andy Simons Wilderness Unit, 1971
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Kenai Fjords

A Stern and Rock-Bound Coast: Historic Resource Study

Chapter 7:
THE LURE OF GOLD (continued)

Nuka Bay Mining Sites: Beauty Bay

Alaska Hills Mines Corporation

The first gold known to be discovered in the area surrounding Beauty Bay took place at the Alaska Hills deposit, two miles up the Nuka River from Beauty Bay. When the discovery took place is open to debate. As noted in the section above, a government report written in 1918 stated that "a quartz lode carrying free gold discovered on Nuka Bay in 1917 has attracted some attention, and it is reported that this lode was being developed in 1918." But a similar report, written during the mid-1930s, said that the gold discovery, by Frank Case and Otis Harrington, took place in 1918. [40] Additional claim filing may have followed that discovery, but no development work immediately ensued, and by the early 1920s, Case and Harrington had either relinquished or sold their claim.

Mineral activity in the area remained quiet until the early 1920s. As noted above, one source notes that gold was discovered nearby, in 1922, by Charles Emsweiler, a Seward-based game guide and policeman. Emsweiler apparently extracted a half ton of ore and sent it to Tacoma for smelting. [41] Then, a year later, the Case-Harrington claim was rediscovered by Frank P. Skeen, a prospector who had been living and working on the peninsula since 1907 if not before. Skeen had apparently acquired Case and Harrington's claim and, as noted above, was "burning off the grass" around his property in late June 1923 when he located a quartz vein that was "two and a half feet in width and fairly plastered with gold." Skeen stripped the vein for fifty feet and found it to be consistently rich; he then extracted two hundred pounds of ore and took it back to Seward for assaying. [42]

Table 7-1. Elements Comprising the Nuka Bay Mining District

Mine Area and Name	Years of Commerical Operation	Identified Historical Register (pre-1948) Elements	National Register Eligibility
Beauty Bay:			
Alaska Hills Mining Corp.	1925-28, 1931, 1937-41	mill, adits (4), improved trail, tramway, log bunkhouses (2)	not evaluated
Nuka Bay Mining	[none]	adits (2), open cuts, small mill, trail, upper camp,	not evaluated

Company (Harrington Prospect)		lower camp [cabins?]	
Nukalaska Mining Company	1934-38 (+1939-41?)	road, tramway (2), mill (old and new), machine shop; camp buildings (4) and tents (2); bunkhouse/ore bin/tram terminal at adit #1; compressor shed at adit #2, tents (2); cabin and storehouse at beach	yes, 1991; SHPO concurs
Glass and Heifner Mine (Earl Mount/Little Creek Prospects)	1965-85?	Open cuts, adit, camp, shaft, raise (all probably obliterated by 1965-85 work)	not evaluated
Miscellaneous Sites	[none]	adit, cabins (2)	not evaluated
North Arm:			
Rosness and Larson Property	1931-33	surface trenching, bulkhead, hoist, adits (3), winze, mill, log cabin, tents (2)	not evaluated
Kasanek-Smith Prospect	[none]	adit, surface trenches; cabin at nearby cove	not evaluated
Robert Hatcher Prospects	[none]	open cut, adits (4), cabin	not evaluated
Charles Frank Prospect	[none]	adit, cabin	not evaluated
Surprise and Quartz Bays:			
Sonny Fox Mine (Babcock and Downey Mine)	1928-40	trail, mill (old and new, surface tram, aerial tram, dock, adits (6), open cuts, camp buildings (5)	yes, 1991; SHPO concurs
Skinner Prospect #1	[none]	adit	not evaluated
Johnston and Deegan Property	[none]	surface trenches, cabins (2), trails	not evaluated
Goyne Prospect (Golden Horn Property]	1931-34	tunnels (2), shallow pits, cabin, trail; bunkhouse?	not evaluated
West Arm and Yalik Bay:			
Lang-Skinner Prospect	[none]	open cuts, tunnels (4), frame house, log cabin; another cabin at "Lang's Beach"	unable to locate
Blair-Sather Prospect	[none]	adits (2), frame house	not evaluated

Skeen soon returned to Nuka Bay to develop his claim. In late August, he exhibited a half ounce of gold that had been washed out from ten ounces of rock, and he also announced that he had specimens showing values of more than $3000 per ton. These yields, as noted above, "caused considerable excitement among the old timers of this vicinity" and caused a minor rush to the area; "some 65 miners and prospectors" had flocked to the area by early September. One visitor to the claim announced that the strike "was all that it was reported to be, and more. Mr. Skeen has a wonderfully rich property there." [43] Skeen called his claim the Paystreak.

Whether Skeen was the sole claimant at the time of his discovery is unknown, but by late August he had acquired several partners, including Earl W. Barnett and J. D. Andrews. [44]

During the winter of 1923-24, Skeen and his partners organized the Alaska Hills Mines Corporation. By the following summer, people working for the company had begun to dig two tunnels: an upper tunnel, at 570 feet above sea level and located on the vein, and a lower tunnel, 495 feet above sea level with drifting on the vein. Also under construction that summer was a mill, located at 40 feet above sea level and adjacent to left bank of Nuka River. The mill building contained a small Blake jaw crusher; a Worthington overflow-type, 5' x 5' ball mill; a drag classifier; amalgam plates; and a concentrating table. Its capacity was 40 tons per 24 hours. A 1,605-foot jigback aerial tramway, completed that year, connected the lower tunnel entrance with the mill, and "substantial camp buildings" (which probably consisted of two log bunkhouses) were also constructed. A two-mile trail connected the mill and adjacent camp with Beauty Bay, but it was so narrow that all the supplies for the mine had to be brought up the Nuka River on a barge. The mill was finally completed in November; a test run of ore was then processed, apparently with favorable results. [45]

In 1925, both the Paystreak Mine and the mill were active from May until November. By year's end, a tunnel (probably the upper tunnel) had been dug 200 feet into the hill and was following a vein 2 feet wide. The mill that year produced, in the opinion of government geologists, "a substantial production of lode gold;" the local newspaper reported that "about $12,000 in bullion" was produced. [46]

Based on that activity, the Alaska Road Commission agreed to improve the trail to the mine. The trail was "cleared, grubbed and graded 1_ miles for an average width of 7 feet." The grading included the blasting away of 1,507 cubic yards of solid rock, much of it along a narrow ledge; in addition, 200 linear feet of corduroy was laid and five timber culverts were constructed. By summer's end, the trail, which cost some $4,300, was "suitable for pack horses or double enders." The local newspaper editor judged the new trail to be "splendid." [47]

The Corporation held a stockholders' meeting in Seward in October and declared its first dividend. The directors had high hopes; they envisioned a post office and "a port for ocean-going steamers." Skeen was no longer part of the company; the primary participants at this time were J. D. Andrews and E. W. Barnett (who had been Frank Skeen's partners in 1923), who now served as the corporation's vice-president and secretary-treasurer, respectively. Other members of the board of directors included Dennis Hurley (president and general manager), Otis E. Harrington and John H. Rice. Miners included Jack Coffey and Jim Foster. [48]

The operation, however, was not without its problems. One major difficulty was an improperly designed mill. Noted one observer, "a great deal of gold has been lost in the tailings [because of the] failure of the concentrating tables to recover all of the sulphides in the ore." A properly designed flotation plant was recommended. Another visitor, moreover, criticized the extraction operation. Geologist J. G. Shepard noted that "the mine was poorly

worked, no attention [having] been given to either chutes or manways." [49] In a late 1925 newspaper article, the company admitted that the mill had "been giving the company more or less difficulty during the first year's operations." They confidently stated, however, that it was "now doing much better and little future trouble is anticipated," and went on to describe that a cyanide plant, which had been recently installed, had "started up immediately and from last reports the recovery has been extremely gratifying." [50] Milling efficiency, however, continued to lag for the next several years.

Underlying the operation's difficulties was a lack of experience in commercial mining by company managers. E. W. Barnett, for example, was an engineer with the Alaska Railroad, and Otis Harrington, John Rice, and J. D. Andrews were all known to be prospectors. Given that background, J. G. Shepard roundly criticized the operation, noting that

> The management of this property has been very inefficient. Nothing was known as to the value to the ore milled. The value of the tailings was an unknown quantity. A total lack of knowledge of the principles of mill operation was displayed. Mining was poorly done. In short it has been an operation such as might be expected, of men who had no conception of current mining practice.... [A] haphazard operation, such as [has] been carried on in the past, is bound to be a failure. [51]

Robert Heath, who visited the site in 1932, made a similar assessment, which pertained both to the Nuka Bay area generally as well as to the specific operation at Alaska Hills. He noted the following:

> The greatest obstacle seems to be lack of men who understand the business and technique of mining. There have been many expensive mistakes made in the past by the pioneer operators that could be avoided by a new company just entering the field.... Practically all of the attempts at mining have been promoted and conducted by men who were trained in other kinds of work. [52]

Despite those difficulties, the Alaska Hills Mines Corporation continued to produce commercial quantities of gold for the next several years. The U.S. Geological Survey's annual report for 1926 noted that

> the only [Nuka Bay] mine from which any considerable production of gold was reported was on the Paystreak claim of the Alaska Hills Mines. This mine increased its output considerable over the preceding year and appears to have had an especially successful season, being enabled to run practically without interruption from early in May until November. [53]

The mine remained active in 1927 and 1928; the *Seward Gateway* during that period faithfully reported the travels of Barnett, Coffey, and others involved with the company. In the spring of 1927, Territorial Highway Engineer R. J. Sommers visited the mill. Shortly afterwards ARC personnel were undertaking "small improvements ... desired by the operators in that district" to the two-year-old trail that connected the mill with tidewater. [54]

By 1928, the Alaska Hills operation was no longer the chief Nuka Bay producer, having been surpassed by the Babcock and Downey (Sonny Fox) mine in Surprise Bay. Production at Alaska Hills that year closed early owing to a snowslide that destroyed "several of the buildings." Perhaps as a result of the slide, "only the usual assessment work was done" in 1929. The following year, the mine apparently continued to be unproductive. [55]

By the summer of 1931, however, the damaged buildings had been either restored or replaced, and the Alaska Hills mine was one of two area mines "producing in a small way,"

the other mine being the Babcock and Downey outfit. Engineer Earl Pilgrim that year made a thorough investigation of the property for the Territorial Bureau of Mines. He noted that the property consisted of five mining claims: Pay Streak No. 1, Pay Streak No. 2, Pay Streak Extension, Pay Streak Fraction, and Fairweather. Four tunnels were dug on those claims: an upper tunnel, now 125 feet long; a lower tunnel, now 550 feet long; a crosscut tunnel (280 feet northwest of the lower tunnel and at a 370-foot elevation) which was 165 feet long; and a fourth tunnel, at the Emsweiler vein, which was 75 feet long. Pilgrim noted that a crew of three was working at the site that summer; they milled 267-1/2 tons of gold ore and reported a profitable operation. John H. Rice and E. W. Barnett, both of whom had been with the company since the mid-1920s, were the principal company officers. [56]

Production lapsed again after the 1931 season. In 1933, the USGS's annual report noted that "the principal producing mines in the Nuka Bay District" included "the Alaska Hills mine, under the management of E. W. Barnett." But little, apparently, was produced that year, inasmuch as Stephen Capps's 1936 report stated that "only a small amount of mining" had been done since 1931; work in 1936, moreover, was limited to assessment work. [57] For the remainder of the decade, U.S. Geological Survey officials provided bullish (if vague) statements about the mine's activity; in 1937, Alaska Hills was listed as one of three "principal producing properties" in the Nuka Bay area, and in 1939, it was listed as one of the three Nuka Bay properties where "more than casual prospecting" had taken place that year. [58]

The summer of 1940 again witnessed a minimum of activity. That October, however, the property was leased to partners Dave Andrews and John Coffey who, with two others, conducted gold mining and milling operations until late July 1941. The lessees, during that period, milled 160 tons of ore. Inasmuch as the two upper tunnels had caved in, the partnership worked in the two lower tunnels and operated a 1200-foot, two-bucket tramway between one of the tunnel openings and the top of the mill building. The mill, at this time, had a Blake type crusher (as before) but a Union Iron Works ball mill; its capacity was one ton per hour, some 40 percent less than the 1924-era Worthington ball mill had offered. Three men operated at once, two in the mine, the other doing the tramming and crushing. [59]

When Andrews and Coffey ceased operations, mining at the site had been taking place, off and on, for almost 20 years. [60] The property boasted some 900 feet of underground workings, and an estimated $45,000 of gold ore had been extracted, milled, and shipped. After July 1941, however, no known mining operations took place at the site. (The claims were soon relinquished, and unlike many Nuka Bay properties, no new claimants attempted to develop the property during the postwar period.) The site slowly decayed, and by June 1967, the mill had been "dismantled and burned and all the camp buildings were collapsed." Donald Richter, the geologist who investigated the property that year, was able to find just one of the four tunnel entrances (the others were either caved in or covered with snow), and the mid-1920s ARC trail along the Nuka River had been abandoned. [61]

In July 1991, National Park Service personnel visited the property's mill area and main camp as part of the agency's Mining Inventory and Monitoring Program. They made a detailed reconnaissance, spending two days at the site. At that time, the mill consisted of "rusted machinery and artifacts that are partially covered by lumber and metal remains of the collapsed walls and roof of the mill building. Much of the mill machinery is apparently missing." The nearby camp consisted of a log cabin ruin, specifically "sill logs covered with collapsed corrugated metal roofing. Very few artifacts were observed around the camp structure." Agency personnel made no attempt, as a result of the site visit, to nominate the property to the National Register of Historic Places.

Crews from NPS's Mining Inventory and Monitoring Program visited various Nuka Bay-area historic sites during the late 1980s and early 1990s. They encountered hundreds of artifacts--tramways (top), classifiers (bottom), and other items--that

remain from the mines' heyday in the 1920s and 1930s. *NPS photos.*

Nuka Bay Mining Company (Harrington Prospect)

Shortly after Frank Skeen found gold at what became known as the Alaska Hills Mines Corporation site, Otis Harrington located gold at a site two miles south of Skeen's find. (Harrington was no newcomer to the area; he, along with Frank Case, had claimed the Alaska Hills site in 1917 or 1918 but had subsequently abandoned it.) The new deposit was located 1,470 feet above the waters of Beauty Bay, near the crest of Storm Mountain's southern ridge. Harrington located the quartz vein, thereafter called the Harrington prospect, in either late 1923 or early 1924.

Inasmuch as Harrington apparently worked alone, development proceeded slowly. When geologist H. H. Townsend visited the site in 1924, the deposit sported several open cuts and one timbered shaft. During the year that followed, "very little development work" took place at the so-called "Nuka Claims;" the only improvement was a 20-foot tunnel. Harrington, by the summer of 1925, had taken a partner and was planning to install a small mill that winter. (News reports at the time noted that an Ellis ball mill was on its way to one of the area's mines; it may have been headed for Harrington's property.) The geologist that visited the property, however, told him that there was "not sufficient ore of a rich value in sight to warrant this expenditure." Perhaps on the basis of that advice, no mill was installed. [62] Harrington soon turned his interest in the property over to Denis Hurley. Hurley's interest in the site, however, was brief; that October, he relinquished all rights at the property to Calvin M. Brosius.

Brosius, a prominent Seward resident, was a lumber and building materials dealer. He had no direct interest in mining. Having supplied many area miners, however, it is not surprising that he became active in mining operations. In addition to the Nuka Bay property, he and partner Bill Knaak also had interests in mines at Crown Point (near Lawing, north of Seward) and on Stetson Creek (just south of Cooper Landing). Knaak was a miner by profession; he did most of the development work, while Brosius's support appears to have been primarily financial. [63]

The Nuka Bay property lay idle until 1928, when "some work" took place there. By the following year, Brosius and his associates had established the Nuka Bay Mining Company. Brosius let a contract to Alec Erickson to dig 100 feet of tunnel at the site. Another worker soon joined him. By year's end, "about 95 feet of tunnel was driven" and a mill (probably a "small gasoline-driven Gibson mill") had been delivered to a location "near the portal of the tunnel," but the mill was never operated. Access to the site was via the ARC trail for about three-quarters of a mile north from Beauty Bay; at that point stood a Nuka Bay Mining Company-owned log cabin, from which a 3,400-foot trail led eastward (and up a steep slope) to the mine. [64]

Development work appears to have continued at the mine for the next two years. By the summer of 1931, Earl Pilgrim noted that the "principal owners" of the "Nuka Bay Mines Company" were Brosius and Mrs. E. B. Weybrecht. The mine site consisted of three lode claims: Nooka, Nooka Extension, and Nooka No. 1. The complex consisted of the now-abandoned upper tunnel, at elevation 1,470 feet, where Harrington had carried on his early work; a lower tunnel, nearly 400 feet long, at elevation 1,140 feet; and an open cut at elevation 1,240 feet. An upper camp was located at elevation 1,200 feet. (A lower camp was not mentioned, but it probably consisted of the log cabin, and perhaps ancillary buildings as well, at the ARC trail junction.) The mill was situated at the mouth of the lower tunnel, where most of Brosius's activity appears to have taken place, but according to a 1936 report, the mill was probably never used. [65]

After 1931, the operation lapsed into idleness. In 1933, Charles Goyne may have spent time at the site (his Surprise Bay property was being worked by others that year), and plans were also announced to have miner John Soble drive a 30-foot tunnel there. The tunnel, however, was apparently never begun, and no further development work took place at the site. Brosius, who still controlled the property, continued to perform annual assessment work until 1941. The following year, Brosius was killed in an accident at his lumber store, and the claims were apparently relinquished soon afterward. [66] In 1968, two new mining claims (North Beauty No. 1 and No. 2) were made at the property, and the following year the Snowlevel claim was located, possibly at the same site as the North Beauty claims. The owners, all of whom held other area claims, were Donald Glass of Jamestown, Ohio; Martin L. Goreson of Seward; J. L. Young of Kenai; and Ray Wells, address unknown. No development work took place as a result of these claims. The two North Beauty claims were abandoned, and by the early 1980s the Snowlevel claim had been relinquished. [67]

The camp, last actively used in 1931, deteriorated quickly. In 1936, the mill was "exposed to the weather and in bad condition." By 1967, Donald Richter noted during a site visit that "no buildings remain standing in the prospect area, and the tailing pile at the portal of the [lower] exploration tunnel is largely grown over with alder." The portal of the tunnel, with its "410 feet of underground workings," was still open and accessible. The trail from the ARC trail to the camp, however, was "almost completely covered with growth" and the cabin where the trail commenced was in a collapsed state. [68]

In July 1991, the mine and camp were visited by National Park Service personnel as part of the agency's Mining Inventory and Monitoring Program. As part of their detailed reconnaissance, they noted that "the site consists of a large concentration of mining equipment and machinery, an adit with associated ore cart track, a large spoil pile, and two prospect pits." No buildings were found, and artifacts were "composed mainly of tool fragments and industrial debris." This group, like Richter 24 years earlier, was unable to locate the upper tunnel. A few days later, members of the group visited the collapsed log cabin, at the base of the trail, that may have served as the lower camp. They found that "some courses" remained on all four walls; no roof existed, however, and the logs were "punky and sodden." A few associated artifacts were found nearby. Agency personnel made no attempt to nominate either property to the National Register of Historic Places.

Nukalaska Mining Company

The Nukalaska Mine, located on a near-vertical, north-facing slope high above Beauty Bay, was the last significant prospect in the Nuka Bay area to be located, and also the last to be commercially developed. Al Blair, who had previously developed the Blair-Sather prospect in Yalik Bay, discovered the vein and made three mineral claims in 1926. He appears to have remained active at the site through the summer of 1927. [69] Soon afterward, however, he lost interest in the area. In September 1931, veteran prospector Robert Hatcher (who was also active elsewhere in Nuka Bay) and fellow Sewardite T. S. McDougal claimed the vein but did little if any site work. [70] Hatcher apparently hired Ray Russell, who developed the site sufficiently to interest mining developer M. B. Parker from Hollywood, California, along with Edward P. Heck of Fellows, California and F. G. Manley of San Francisco. The group bought the property in early 1933. By the end of that year, a government geologist was probably referring to this site when he noted that "rumors were afloat of a number of deals pending with a view to the undertaking of more intensive work." [71]

By early 1934, Parker had formed the Nukalaska Mining Company. Commercial development proceeded immediately. Geologist Stephen Capps noted that the improvements included:

> the construction of 1-1/4 miles of road from the beach to the camp and thence to the lower terminal of the tramway, 2,000 feet upstream from the mill; a 3,500-foot 2-bucket 7/8-inch cable gravity tramway from the mine to the lower terminal...; and a mill, office, bunk houses, cook house, and blacksmith shop. The [flotation] mill is equipped with jaw crusher [and] ore bin, with a capacity of 1 ton an hour.... [72]

The original or western quartz vein, according to Capps, "crops out on the crest of a high, rugged ridge" at elevation 2,280 feet and "is so steep as to be difficultly [sic] accessible." To mine it, an adit (or tunnel) was driven into the cliff face 200 feet below the outcrop. Workers found the vein after digging into the mountain for 230 feet; once encountered, they began crosscut tunnels that, by August 1936, had been driven 175 feet to the west and 200 feet to the east. Active stoping was also carried on; in one section, stopes reached 80 feet above the adit level. At the mine portal stood a bunkhouse, ore bin and tram terminal, with an enclosed blacksmith shop. [73]

Development proved so promising that in 1935, the company staked 15 additional mining claims. The size of the crew also increased; in 1934, the crew was evidently fairly small, but by 1936 the company had 20 workers at the site, enough for one daily shift in the mine and three shifts in the mill. [74] Workers in 1935 included Don McGee and Amos Buffin; company managers included Parker, his assistant Z. N. Marcott, and Ray Russell. [75]

During 1936 and 1937, good news prevailed at the Nukalaska Mine. After an August 1936 visit, for example, geologist Stephen Capps noted that "the material milled was yielding about $100 to the ton in gold, notwithstanding the fact that about two-thirds of it was country rock that had to be mined along with the vein quartz." Based on such promising results, a crew numbering either 19 or 20 people (including one woman) worked a six-month season, from May to November. [76]

Despite the company's success, managers recognized that the existing system of ore removal needed to be changed. Snowslides each year destroyed the 2,000-foot road that connected the camp with the lower tramway terminal; nearly every year, moreover, snowslides swept the towers away from the tramway that connected the mine entrance to the road terminus. The destruction caused by those events limited the milling season to three months annually. [77] In order to circumvent those problems, managers by the end of 1937 unveiled plans to drive a new, eastern tunnel "on the opposite side of the creek from the old workings." [78] Work both that year and in 1938, however, was limited to the western workings.

In June 1938, a fire "destroyed part of the buildings comprising its surface plant;" the milling plant (perhaps the only building involved) was "completely destroyed." The company, as a result, gained new management; the new managers, who resided in Los Angeles, included W. V. (Vince) Conley, President; W. R. Foster, Treasurer; and J. S. Mathews, Secretary. Mining was suspended for the remainder of the year. [79]

That winter, another tragedy struck as "heavy snow slides ... damaged some of the surface equipment at the Nukalaska property." The twin disasters forced the company to lay off two-thirds of its workers. The remainder of the work force soldiered on, however, and "in spite of the delays required for these repairs, the operators [in 1939] were able to extend the long crosscut they had been driving about 350 feet." By year's end, the length of the crosscut tunnels that branched off the main, 230-foot tunnel reached 200 feet (to the west) and 490 feet (to the east). The western tunnel was abandoned thereafter. [80]

On June 1, 1940, the company began to develop the long-planned eastern or lower tunnel, the portal of which was at elevation 1,300 feet. Work on the new tunnel continued all summer

and by early September, 1,250 feet had been dug. [81]

By the following July, 90 feet had been added to it. At its portal stood a compressor shed; between there and the mine camp stretched a 2200-foot aerial tramway with a single 5/8" cable and a 3/8" carrier cable. A 1941 visitor to the camp noted that "safety conditions are none too good: the men ride to and from work on the power tram on a two-wheel carrier, which almost touches the ground in two places, and the carrier cable drags on bedrock in several places forming grooves." The tram to the mine's western tunnel workings, described as a 3,700-foot aerial tram with a double 7/8" cable, was no longer used but had not been removed. [82] The camp and the surrounding area had changed little since the mid-1930s. The main camp consisted of three wooden buildings–the office, a bunk house, and cook house–plus two tents. A machine shop was located 300 feet above the camp; at the beach, 1-1/4 miles northeast of the main camp, stood a cabin and a small storehouse. Miners lived in the bunkhouse, the tents, and the beach cabin; the crew in 1940 numbered 12 to 15 people, which included a tram operator, a blacksmith, and site manager Vince Conley. Two men lived with their wives, and one of the couples had their two young children in residence. [83]

During the summer of 1941, mining was concentrated on a western extension of the eastern workings. According to a mine resident, however, production had to be curtailed because of falling rocks and because so much water was encountered that fuses could not stay lit. After that season, production shut down for a decade or more. During the 1950s some Hawaiians, locally called the Honolulu group, tried to rework the mine but the venture was apparently short-lived. [84] The site appears to have lain idle until 1969, when J. L. Young, V. J. Wright, and Ray Wells claimed the property as the Lucky Devil Mine. No known production took place there, however; they last performed assessment work on the property in 1971, and there have been no mining claims on the property since then. In 1976, the property was assessed at a rock-bottom valuation of $250. [85]

The Nukalaska Mine, in retrospect, was one of the largest mines in the Nuka Bay area. Although activity took place at the site off and on between 1926 and the 1950s, it appears to have operated commercially only from 1934 until 1938. (No commercial production took place after 1938 because no mill was in place.) During that time, two widely varying estimates have emerged of its gold yield. J. C. Roehm, in 1941, reported that "the total production ... was reported at 2,320 tons of ore milled" and a "total production figure of $116,000." But Donald H. Richter, who based production figures solely on years of activity and an assumed volume of 200 tons of gold ore per year, estimated the mine's yield to be approximately $35,000. Based on the size of the crew, the length of the workings, and (admittedly anecdotal) descriptions of the ore's value, Roehm's yield appears to be the more accurate of the two. [86]

This property, along with most sites in the Nuka Bay area, has significantly deteriorated over the years. When Richter visited the site in June 1967, he wrote that the

> road from Shelter Cove to the mill & camp ... was obscured by vegetation, and the mill equipment and camp buildings had been destroyed by man and weather. An aerial tram, however, was still standing; it has a vertical drop of about 1,900 feet and extends from the mine adit to a terminus three-eighths of a mile west of the mill. Southwest of the mill the remains of another aerial tram, or possibly one that was under construction in 1940, extends up the east face of the mountain.... The mine workings were inaccessible owing to caved timbers at the portal. Four hundred feet west of the mine ... a small bunkhouse still stands cabled onto a narrow ledge. [87]

Despite its relatively advanced state of decay, the remaining site evidence has intrigued

visitors. By the early 1980s, a National Park Service report noted that "the access road to the complex is extremely overgrown, and the effects of past mining activities are not readily visible." Even so, archeologist Harvey Shields called the site a "Jewel in the Jungle." At the old camp, he noted that

> Because of the underbrush and overgrowth it was difficult to get a truly accurate idea of what was there. However, several collapsed buildings were seen along with many pieces of large equipment such as generators, a possible flotation cell, a Model A Ford, and an assay office. This was in addition to many smaller tools and household items.... Cables could still be discerned high overhead that relate to the system bringing ore down from the mine. The actual shaft was not located but local knowledge suggests that it was intentionally sealed off with a great deal of equipment stored inside. [The complex] has a great deal to offer the National Park Service and the nation. Most obviously it is a time capsule for understanding early to mid-twentieth century mining in Kenai Fjords.

The property's value was reflected in Kenai Fjord National Park's *General Management Plan*, issued in July 1984. The plan noted that "the abandoned mine facility at Shelter Cove is an excellent representative of the type of mining operation which occurred in the Nuka Bay area." [88]

In 1989, a team from the NPS's Mining Inventory and Monitoring Program visited the mill and camp area. The description of the area is more accurate, if perhaps less dramatic, than that provided in 1983:

> The Nukalaska mill and camp location consists of several collapsed structures with a large inventory of associated, in-place artifacts dating from the 1920s and 1930s. Buildings, for the most part, are in a state of total ruins. Several structures appear as diffuse lumber scatters with foundation remnants. Distinct but collapsed structures include three plank-framed cabins, a plank-framed cookhouse, a powerhouse/blacksmith shop, and a mill building. Associated with these last two features is a huge inventory of in-place artifacts and equipment associated with the processing of gold-bearing ore materials. Other associated features include a collapsed shed, an equipment scatter, a stationary engine, and a barrel scatter. Although the structures are in poor condition, site integrity is exceptional [89]

Personnel spent several days making a detailed description of the property. In the evaluation that followed that visit, agency personnel noted that the site was "probably eligible" to the National Register of Historic Places. A year later, historian Logan Hovis wrote a "Determination of Eligibility" report in which he concluded that the mine and camp was eligible for listing on the National Register under criteria A, C, and D. That report was forwarded to Alaska's State Historic Preservation Officer, Judith Bittner. On April 24, 1991, Bittner agreed, noting that "we concur that [the site is] eligible for inclusion in the National Register of Historic Places under the stated criteria."

During the summer of 1991, NPS personnel returned to the area and visited the Lucky Devil Mine (i.e., the west workings of the Nukalaska Mine). The site included a collapsed cabin with associated artifacts, a pit of unknown function, an unrecorded adit, and a nearby cable tram. It has not yet been evaluated for National Register eligibility. [90]

Glass and Heifner Mine (Earl Mount and Little Creek prospects)

In September 1923, shortly after Frank Steen's "discovery" attracted scores of miners to the area, Eric Burman and H. Carlson found four promising quartz veins near the head of Beauty

Bay and dubbed it the Little Creek property. The site of their find was along Ferrum (Iron) Creek, just 0.9 miles from tidewater and less than three miles away from Frank Steen's Alaska Hills claim. The pair began developing their property that summer; they excavated a large number of open cuts, dug a 20-foot tunnel, and roughed out a trail between the claim and the bay. [91]

Carlson soon lost his interest in the property, and in June 1928 Burman sold his rights at the site to Earl Mount, a longtime Seward resident and proprietor of the Seward Leather Works. [92] In the summer of 1929, Mount hired a miner to help develop his property. The claimant periodically visited the prospect but probably spent little time there. [93]

By 1931, Mount had staked two claims–Little Creek No. 1 and Little Creek No. 2–and either he or his employees had performed development work on four of the property's quartz veins. On the vein that had been developed in 1924, a tunnel had now been extended another 30 feet. The other three veins, located to the south of the tunnel, featured open cuts and trenches. A small camp (of unspecified composition) had been established not far northeast of the tunnel. [94]

By the following year, Mount had staked an additional claim. Geologist Stephen Capps, who investigated the property in 1936, noted that Mount began leasing the property to others in 1932; either he or the lessee sank a 15-foot shaft that year. [95] For the next two years, Jack Morgan, Guy Kerns and other lessees extended the existing tunnel another 400 feet and completed a raise that extended to the surface. The lessees, however, failed to find enough gold to justify the purchase of a mill, and in 1934 they abandoned their lease. For years afterward, Mount continued to hold the property but limited his involvement to annual assessment work. [96] The claim was eventually abandoned.

In 1958, Seward residents William Knaak and Frank Cramer relocated the property, calling it the Beauty Bay Mine. They erected a cabin, built an arrastra, and treated 500 to 600 pounds of ore to determine its value. Cramer, a barber, and Knaak, a World War I veteran, carpenter, and longtime miner, attempted to develop it for the next few years. Knaak reportedly found several more ore bodies and remained active with development work until 1962, but the partners did not commercially develop the property. [97]

In 1965, two men from Jamestown, Ohio, geologist Don Glass and pharmacist Max Heifner, agreed to purchase the property for $52,500. They began making payments that year, and in 1968 they completed the purchase and secured a warranty deed from the former claim owners. Glass visited the property every year for more than a decade. Beginning in 1965, Glass worked the Beauty Bay claim. Then, in 1968, he staked the Glass-Heifner No. 1 and No. 2 claims. [98]

The new partnership reinvigorated activity at the mine. Heifner noted that soon after the partnership began purchasing the property, Glass "cleared out an ad hoc [aircraft] runway along the beach and made it sufficiently long by clearing out a lot of alders that grew above the high tide line." [99] He also widened the mile-long trail between the beach and mine with a bulldozer. In 1965, Glass purchased a used four-foot ball mill from the state and installed it on the property. By 1967 he had also lengthened the existing cabin by 15 to 18 feet and had added a machine shop. In addition to the ball mill, the milling equipment consisted of two jaw crushers and a concentrating table. By 1973, the partners had reportedly invested $230,000 in the operation. [100]

Records are not available regarding the amount of ore milled from the site, but it appears to have been a small-scale commercial operation. Donald Richter noted in 1967, for example, that "a limited amount of ore" had been mined, and the Seward City Council, in 1974, stated

that $27,000 in gold had been extracted from the site during the previous year. George Moerlein, asked to assess the operation in July 1976, stated that the partners had produced "less than 100 tons" of ore over the last 12 years (although he also stated that "to date, the property has no recorded production"). He assessed the property, exclusive of improvements, at $30,000; this was more than twice that of any other Nuka Bay mining property. Heifner, in a recent interview, noted that the partners were "fairly successful" but that they didn't get rich. [101]

Glass returned to the site each year until 1979. By 1981, the partners had leased their property. They later sold the mine on contract to Harry Waterfield, who mined and performed assessment work. After Waterfield's death, Glass and Heifner again claimed the property and continued to hold it until 1994, when they sold it to Seward resident Tom DeMachele, the current claimant. Because mining has remained active in recent years, there are still two valid unpatented mining claims at the site: Glass-Heifner No. 1 and Glass-Heifner No. 2. [102]

Although development activities took place in the mid-1920s, early 1930s, and late 1950s, commercial mining took place only after 1965. Recent activity, moreover, has diminished whatever historic value the site may have acquired from pre-World War II developments. Shields, in 1983, noted that recent mining activities had "pretty much obliterated the traces of the early mining activity." [103]

In August 1989, a National Park Service team visited the site as part of the Mining Inventory and Monitoring Program. A report generated after that visit noted that the camp still contained all the buildings that had been constructed in the 1960s save the bunkhouse, which had burned. It also stated that "scattered pre-1940 artifacts were observed and recorded, although they have been displaced from their original contexts and integrated into the modern venture." Based on that evidence, investigator Logan Hovis stated that "it seems likely that this site is not eligible for nomination to the National Register of Historic Places," and no attempt was made to prepare such a nomination.

Miscellaneous Sites, Beauty Bay

Little is known about other mining sites adjacent to Beauty Bay. Somewhere along the bay's west side, perhaps midway between the head of the bay and Shelter Cove, was a prospect worked by Robert Evans. Evans, as noted in Chapter 6, was a homesteader who lived in a cabin near present-day McCarty Fjord. Nuka Island resident Josephine Sather recalled that when Evans "first came to this part of the country he did assessment work for others. Later he hunted seals, and finally he took to prospecting." Records related to Evans are few, but a May 1935 article from the *Seward Gateway* suggests that he remained at one site for an extended period:

> Bob Evans came to town this morning riding his Speedboat "Nuka Bay Comet." It was his first visit from the gold camp in two and one-half years. He is doing development work on gold claims owned jointly by Mrs. P. C. McMullen and himself, driving a long tunnel into a rich lead. Mr. Evans, veteran prospector and amateur photographer of exceptional ability, is in town for a brief vacation and for supplies. [104]

Evans probably began working the claim in late 1931 or 1932; how long he worked the site is not known, although other comments by Mrs. Sather suggest that he may have intermittently returned to the site until just before his death in 1941. [105] Unfortunately, however, no area visitors ever noted the specific site of his claim, and the site may now be indistinguishable from the surrounding terrain. Evans probably never built a cabin at the site, preferring instead to travel there from his East Arm cabin, and inasmuch as no records

establish specific development work, he probably never installed milling equipment.

Scattered sources refer to other ephemeral prospecting ventures. The Homestead and Anchor Group, purportedly located between the Alaska Hills Mine and Nuka Bay, was located shortly after Skeen's find in 1923, and it was visited by geological investigators in both 1924 and 1925. A 15-foot tunnel was driven on the property in 1924, but the prospects were so poor that it was probably abandoned after 1925. So far as is known, no recent investigators have rediscovered this site.

Two historic cabins were constructed on the shore of Beauty Bay which are not known to be related to a mining venture. Earl Pilgrim noted both during his 1931 investigation; both were located at the head of the bay. One, at the base of the trail to the mining development along Ferrum Creek, was probably built by Earl Mount (or someone in his employ) after Mount acquired the mining property in 1927. A field examination notes that the other cabin, at the northeast end of the bay, is located at the southern end of the old wagon road; in all probability, therefore, it was built in conjunction with either the Alaska Hills or Nuka Bay properties. Geologist Don Glass may have obliterated Mount's cabin as part of his airstrip development during the 1960s. If not, it may still exist, though in deteriorated condition. The other cabin is now just above the tidal zone, the land having subsided during the March 1964 earthquake; only a few base logs remain to identify it. [106]

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Kenai Fjords

A Stern and Rock-Bound Coast: Historic Resource Study

Chapter 9:
COMMERCIAL FISH AND SHELLFISH HARVESTING
(continued)

Salmon Fishing Along the Southern Kenai Coast, 1946-1959

General Postwar Trends

During the decade following World War II, the number of canneries in lower Cook Inlet remained stable. As they had for the previous two decades, canneries active west of the park were located at Portlock, Port Graham, and Seldovia. East of the park boundaries, the "small, one-line cannery" in Seward changed its name in 1946 (from Hagen and Company to the Resurrection Bay Company), and it changed its ownership in 1950 (from Nils Hagen to Marvin Viale). The cannery, however, continued to operate much as it had since 1937, when the plant had become fully mechanized.

Major changes took place in the area's salmon industry during the postwar period. One discouraging trend was that fishermen, particularly in Resurrection Bay, were overharvesting reds and other salmon species. (In 1947, a Seward entrepreneur backed away from a fisheries venture because he considered "the runs in Resurrection Bay to be too nearly depleted;" the area fisheries agent that year agreed, declaring that the bay's chum run was "used up." [38]) The Seward cannery, desperate to obtain enough fish to sustain operations, began purchasing Copper River salmon, even though (in the government agent's opinion) "some of these fish were, no doubt, taken illegally in [Prince William] Sound...." This practice was already underway by 1944 and continued for several years thereafter. [39]

A second postwar trend that affected canneries was the statehood movement. Prior to World War II, few Alaskans pushed for statehood. The war, however, brought thousands of new residents, an enhanced defense capability, and less dependence on resource-based industries. The canneries were one of the primary interests fighting statehood, but statehood advocates fought back and cited the widely used fish trap as a primary instrument preventing locally-based resource development. The territorial legislature, and Alaska's delegates to Congress, put increasing pressure on the canneries to eliminate fish traps. The canneries stubbornly hung on; they did not abandon fish traps until 1958, the year Congress passed the statehood bill. The continuing pressure, however, resulted in a reduction in the number of fish traps during the 1940s and early 1950s. This de-emphasis on fish traps took place in Lower Cook Inlet, as elsewhere; in order to keep harvest levels at previous levels, more fishing boats were deployed and boats searched ever farther for salmon stocks.

The overharvesting of the red salmon resource (on a territory-wide basis) and the increasing acceptance of pink salmon as a food fish resulted in higher pink and chum salmon prices. That price structure made Port Dick (which during some years was the Cook Inlet district's most highly-productive pink salmon harvest area) and nearby bays increasingly attractive fishing venues. The new price structure, combined with the increasing scarcity of red salmon,

also encouraged independent fishers to seek out previously untapped areas. The windswept, stormy stretch of coastline between Gore Point and Resurrection Bay had, as noted above, been only lightly utilized prior to the mid-1940s. During the next decade, however, an increasing number of fishers explored the area for the first time.

Fishing in Park Waters: The Laissez Faire Period, 1946-1954

The first postwar harvesting of park waters took place in 1946 in Statistical Area 44 (see Table 9-1). This stretch of coastline runs between Gore Point and the Pye Islands; it encompasses both Nuka Bay and Nuka Island. Fish and Wildlife Service records indicate that 2,513 pinks and 75 chums were caught there that year; the number of pinks was some 0.3 percent of the Cook Inlet total, while the chum harvest was less than 0.1 percent of the total number caught in the Cook Inlet district. Records do not indicate specifically who caught these fish. It appears, however, that Pete Sather, who worked that year as an independent purse seiner for the Resurrection Bay Company, harvested a majority of the pink salmon and almost all of the chums in that area. (Sather also worked elsewhere, most probably in the Port Dick-Windy Bay area.) [40]

Table 9-1. Harvest Data for Statistical Area 44, 1944-1950

In 1944, the U.S. Fish and Wildlife Service divided the Cook Inlet Management District into statistical harvest areas. Six statistical areas comprised the waters of present-day Kenai Fjords National Park. Area 44 included the inner waters from Point Gore to the Pye Islands; Area 45 included the outer waters in that area. Area 46 included the inner waters from the Pye Islands to the east side of Two Arm Bay, Area 47 the outer islands. Area 48 included the inner waters from the east side of Two Arm Bay to Aialik Cape, Area 49 the outer waters.

For Area 44, which included the waters surrounding Nuka Island and the waters of Nuka Bay, the harvests in the following table were recorded from 1944 through 1950. For areas 45 through 49, the Fish and Wildlife Service tabulated no harvest during this seven-year period. The agency did not provide data for these areas after 1950.

NOTE: "% of CIH" is the percentage of the total Cook Inlet harvest (for that species) that was caught in Statistical Area 44.

	Pink Salmon		Chum Salmon		Coho Salmon	
	Number	% of CIH	Number	% of CIH	Number	% of CIH
1944	0	0.0	0	0.0	0	0.0
1945	0	0.0	0	0.0	0	0.0
1946	2,513	0.3	75	0.0	0	0.0
1947	0	0.0	0	0.0	0	0.0
1948	7,918	2.1	109	0.1	52	16.2
1949*	36,761	8.5	5,200	2.2	37	n.a.
1950	1,760	0.8	1,857	5.2	0	0.0

* - The 1949 total includes 151 reds. The harvest total includes 6,891 pinks reported in the Cook Inlet report; the remaining harvest, which came from "Nuka Bay," was processed by the Resurrection Bay (Seward) cannery and was reported in the Central District (Prince William Sound) report.

Source: U.S. Fish and Wildlife Service, *Cook Inlet Annual Management Report*, various

issues.

In 1947 no commercial harvests were recorded in park waters, perhaps because even-year runs in adjacent areas had proven to be far stronger than odd-year runs. The following year, however, commercial fishermen returned to Area 44 and harvested 7,918 pinks, 109 chums, and 52 cohos. Although Pete Sather may have harvested a portion of the area's catch, the only known fisher there that year was Alfred A. Anahonak, a 30-year-old "private operator" (that is, an independent fisherman) from Port Graham. Anahonak's possession of a fishing boat represented a new trend among area residents. Subsistence expert Ronald Stanek has noted that before World War II, residents were "limited to set netting, working for the canneries, and utilizing wild resources for subsistence purposes. Since then, Port Graham fishermen have acquired their own drift and seine boats...." [41]

In 1949, fishers again ventured out to Area 44 and gathered far more fish than they had in previous years. Fish and Wildlife Service figures indicate a total harvest of 36,761 pinks, 5,200 chums, 151 reds, and 37 cohos. The Area 44 pink harvest that year was a surprising 8.5 percent of the Cook Inlet total; the chum haul was large too, totaling 2.2 percent of the Cook Inlet catch. The harvest was notable for another reason; it was the first year that a red salmon harvest had been recorded in the area. In 1950, fishers returned to Area 44 and harvested 1,857 chum salmon (5.2% of the Cook Inlet chum catch) along with 1,760 pink salmon. Commercial fishers, it appeared, had "discovered" the park's waters. The only park area in which fishers had shown an interest, however, was Area 44 (west of the Pye Islands), along with the Bear Glacier area. [42] The long stretch of coastline between McArthur Pass and Aialik Cape was still untouched.

During this period, "Herring Pete" Sather (according to admittedly inexact records) spent much of the fishing season working in the Port Dick area or in other areas outside park waters. Others, therefore, fished the Nuka Bay area to an increasing degree. Alfred Anahonak, noted above, was one early harvester. Others may have been a quartet of Seward fishers named Bill Bern, Glen Hammersly, Freddy Blosso, and Charles Peterson. According to Seward Shea, a longtime Seward resident, the four men worked on the purse seiner *Marathon*. One day, "Herring Pete" told them that the fish were jumping in Nuka Bay. The bay at that time, however, was a hazardous place to reach; McArthur Pass was often impassable because floating ice was dangerous to the wooden boats then in use. Because the McCarty Glacier face was not far north of James Lagoon, additional ice lay in the southern reaches of Nuka Bay. Despite those dangers, the four successfully fished the bay, and their success brought others in their wake. [43]

As noted above, 137 red salmon were harvested in Area 44 in 1949. This harvest, small though it was, was significant inasmuch as these were the first red salmon caught in park waters by commercial fishers. The existence of a red salmon population in the bay indicated that the glaciers had retreated enough to support a biologically active lake-and-river system where reds could spawn and migrate. The McCarty Glacier face, during the early years of the century, had connected James Lagoon on the west with McCarty Lagoon on the east; and to the north, the upland areas on both sides of the glacier were glaciated as well. Between 1920 and 1925, however, the glacier's eastern side had melted to the point that Delight Lake was formed, and between 1935 and 1940 a new water body, Desire Lake, emerged to the north. If it is assumed that the red salmon harvested in 1949 came from the Delight Lake system (the most logical location for them), then the time lapse between the lake's emergence from the ice and its ability to support a red salmon run was less than thirty years. This is a remarkably quick recovery, considering the biological complexities involved. [44]

Another sockeye run that began during this period took place in Aialik Bay. Longtime resident Seward Shea recalls that the run, which spawns in Addison Lake above Pederson

Lagoon, was discovered by Seward resident Henry Larson, known locally as "Henry the Bear." In either the late 1940s or early 1950s, Larson entered the bay in search of platinum float. He built a small prospecting shack and used it as a base camp. His prospecting venture failed but he found salmon by the hundreds. Using a gill net, which he stretched between an island (perhaps Slate Island) and the mainland, he harvested $6500 worth of sockeyes. Soon after Larson returned to the dock, news of the find spread to Shea and other Seward fishermen. Many of the other fishers made their own investigation and returned there in later years. Government fisheries agents, however, did not learn about the Aialik red run until the late 1950s. [45]

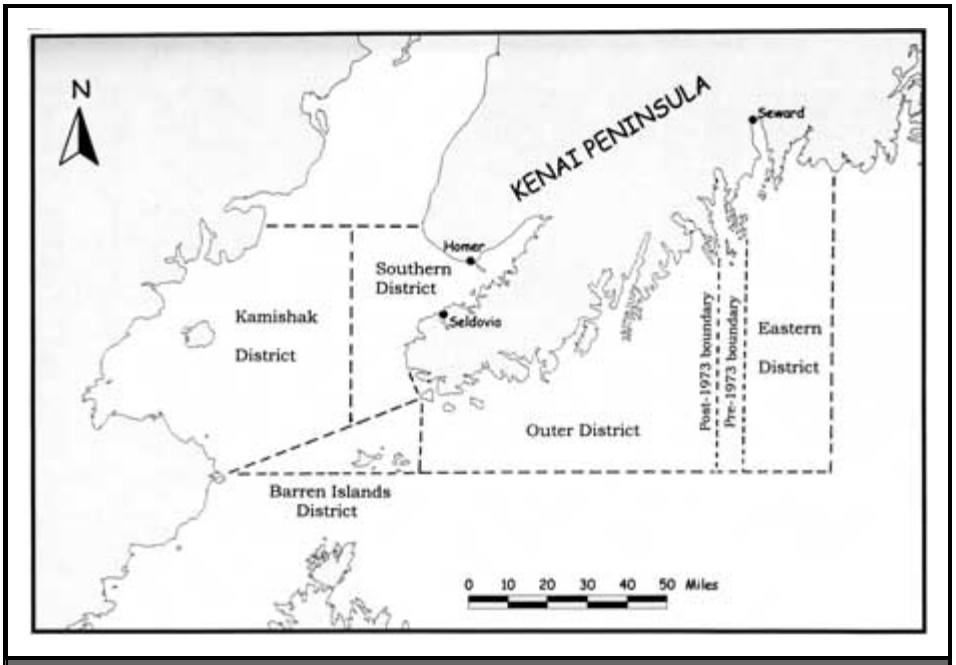
Pete Sather, a Nuka Island resident since the mid-1920s, not only fished Nuka Bay's salmon, but as an incident during the early 1950s shows, he claimed to have single-handedly started a run of his own. As part of his fox farming operation, he consistently cleaned the pink salmon he harvested in a stream that previously, in Sather's opinion, had had no salmon in it. (This stream was probably adjacent to his cookhouse, which was not far from his residence.) By the early 1950s, the stream supported a significant pink salmon population. Other fishers discovered the run and attempted to harvest the resource. Pete, however, resisted; he reasoned that he had single-handedly created the run and should therefore have proprietary rights over the salmon. He took his case to the courthouse in Anchorage; the court, however, ruled against him. [46]

As noted above, management of park waters during the late 1940s was ostensibly under the purview of the Cook Inlet District. The small harvest level, however, incited no interest from federal fisheries authorities; they may have ignored the area because, to some degree, the park's waters were being fished out of Seward, which was in the Central (Prince William Sound) District, headquartered in Cordova. In early 1951, management of the Resurrection Bay fishery shifted from the Central District to the Cook Inlet District. For the next several years after that boundary change, annual reports continued to overlook fishing activity in park waters. (Jim Branson, who worked as a Fish and Wildlife Service stream guard at Port Dick in 1952, perhaps summed up the agency's attitude toward the area when he mentioned, in a recent interview, that the agency ignored the coast east of Gore Point because there was "not much of a resource out there.") In all probability, a small number of commercial fishermen continued to venture to Nuka Bay, [47] but as one old-timer noted, "population levels [of fish were] hammered there because there was no enforcement." Fisheries managers continued to ignore the area until 1953, when "numerous air and foot surveys were conducted in the lower inlet...." That effort, which included "all important pink and chum streams south of Kachemak Bay," included a cursory survey of Nuka Island streams. Fisheries personnel probably ignored other Nuka Bay sites. [48]

As noted earlier, one of the two major reasons that Nuka Bay and other pink- and chum-producing areas became popular between the late 1940s and the mid-1950s was because of increasing price levels. Before 1940, prices for the two species were so low that they were incidental fish; that is, they were caught by fishers who were searching for other, more highly valued species. By 1942, the price of the two species had risen to 6-1/2-8-1/2 cents apiece; five years later, pinks sold for 11 cents while chums sold for 15-1/2 cents. Based on those prices, Cook Inlet canneries typically processed 40,000 cases of pinks and 30,000 cases of chums each year. But after 1950, prices on both species rose substantially; in 1952, for example, pinks sold for 30 to 40 cents apiece while chums were worth 40 to 50 cents. As a result, fishing boats sought to catch an increasing number of pinks and chums during the 1950s. [49]

Rising price factors, however, do not fully explain why interest in the Nuka Bay area skyrocketed in the mid-1950s. The other causative factor was availability. Statistics from Cook Inlet show that during the 1946-1951 period, both total catch levels (expressed in

number of fish) and fishing effort (expressed in gear-unit days) rose steadily. From 1951 to 1957, however, both of these figures declined. It became increasingly clear that the streams that had traditionally provided large pink salmon returns–the Talachulitna River (a tributary of the Susitna), the Kenai River and other streams flowing into the northern and central portions of Cook Inlet–were being overharvested. As a result, canneries eagerly sought out alternative locations. The Outer District, which stretched from Point Adam (near Portlock) to Aialik Cape (see Map 9-3), contained many productive pink and chum runs; not surprisingly, therefore, the park waters and other Outer District streams became increasingly important during this period (see Tables 9-2 and 9-3). Based on the contributions of Outer District streams and those in other newly-harvested locations, the volume of fish caught in the Cook Inlet administrative district rose again by the late 1950s and continued to rise for years thereafter. [50]



Map 9-3. Lower Cook Inlet Management Districts. *(click on image for an enlargement in a new window)*

Table 9-2. Outer District (of Cook Inlet) Salmon Harvest, 1954-1995

Figures given are number of fish, while percentages are those of the entire Lower Cook Inlet catch. The Outer District goes from Point Adam (south of Port Graham, on Kenai Peninsula's southwestern tip) to Bear Glacier (at the southwestern end of Resurrection Bay). Source: ADF&G, *Cook Inlet Finfish Report, 1976-1977*, Table 16; and ADF&G, *Lower Cook Inlet Finfish, Annual Management Report, 1995*, Appendix Table 8.

An asterisk (*) signifies a percentage less than 0.1%. In regards to king salmon, a number sign (#) is used because no attempt was made to compute percentages. The number of kings harvested is relatively small; the number harvested in all of Lower Cook Inlet has never exceeded 2,000 per year, and in most years commercial fishers harvested fewer than 500.

Year	Kings(#)	Reds	Cohos	Pinks	Chums	Total
1954	13	4,927 (12.4%)	369 (2.4%)	82,205 (30.6%)	112,877 (42.5%)	200,391 (33.8%)
					40,887	

1955	7	701 (1.7%)	277 (2.9%)	557,997 (47.1%)	(59.5%)	599,869 (46.1%)
1956	23	2,889 (8.0%)	190 (2.0%)	42,368 (20.4%)	19,248 (21.8%)	64,718 (18.9%)
1957	13	2,982 (11.1%)	110 (6.2%)	149,197 (52.2%)	138,171 (66.9%)	290,473 (55.7%)
1958	1	1,719 (8.8%)	83 (4.6%)	739,768 (77.9%)	100,386 (80.6%)	841,957 (76.8%)
1959	3	10,365 (47.9%)	109 (1.7%)	68,875 (55.2%)	65,675 (59.3%)	145,027 (55.0%)
1960	4	1,336 (5.4%)	533 (19.8%)	328,501 (53.7%)	67,187 (57.9%)	397,561 (52.6%)
1961	2	12,595 (55.3%)	444 (27.4%)	105,447 (34.8%)	40,204 (72.3%)	158,692 (41.4%)
1962	2	8,697 (34.4%)	1,893 (24.5%)	1,684,023 (74.9%)	126,750 (70.7%)	1,821,365 (74.0%)
1963	6	1,974 (13.1%)	369 (5.5%)	21,462 (10.6%)	116,923 (84.4%)	140,734 (38.7%)
1964	2	1,370 (6.6%)	431 (4.6%)	767,396 (72.7%)	269,512 (83.4%)	1,038,711 (73.7%)
1965	0	1,965 (14.0%)	7 (0.8%)	21,816 (18.9%)	22,443 (79.9%)	46,231 (29.2%)
1966	1	2,710 (17.7%)	357 (6.6%)	398,751 (68.8%)	87,620 (67.9%)	489,439 (67.1%)
1967	2	2,165 (7.5%)	56 (2.1%)	259,951 (69.2%)	37,533 (43.9%)	299,707 (60.8%)
1968	1	1,550 (1.6%)	106 (2.2%)	191,691 (32.7%)	20,283 (27.0%)	213,631 (28.1%)
1969	0	92 (0.1%)	11 (1.8%)	51,533 (25.5%)	5,400 (8.8%)	57,036 (14.7%)
1970	5	4,177 (18.7%)	243 (5.0%)	302,879 (52.7%)	118,746 (52.9%)	426,050 (51.6%)
1971	11	1,630 (7.3%)	174 (3.8%)	310,710 (79.1%)	116,995 (78.7%)	431,520 (75.9%)
1972	7	26,423 (45.6%)	17 (0.8%)	1,005 (3.5%)	43,490 (57.6%)	70,942 (43.1%)
1973	1	5,064 (17.3%)	30 (1.4%)	197,259 (64.2%)	76,341 (66.1%)	278,695 (61.3%)
1974	1	399 (1.5%)	28 (0.4%)	1,678 (3.3%)	11,931 (62.1%)	14,037 (13.5%)
1975	0	720 (2.6%)	7 (0.1%)	160,291 (15.1%)	11,350 (52.4%)	172,368 (15.4%)
1976	7	18,886 (32.5%)	0 (0%)	93 (0.1%)	412 (0.8%)	19,398 (7.8%)
1977	34	33,733	1,528	1,127,800	70,167	1,233,262

		(33.7%)	(53.2%)	(87.3%)	(48.1%)	(80.0%)
1978	236	10,695 (6.8%)	45 (0.7%)	70,080 (19.9%)	19,224 (26.1%)	100,280 (17.0%)
1979	30	25,297 (39.3%)	150 (1.2%)	1,945,521 (65.0%)	180,558 (82.6%)	2,151,556 (65.4%)
1980	12	22,514 (32.4%)	16 (0.1%)	154,041 (17.3%)	32,246 (43.9%)	208,827 (20.0%)
1981	61	18,133 (16.4%)	485 (4.5%)	1,714,115 (52.3%)	238,393 (70.9%)	1,971,187 (52.7%)
1982	129	66,781 (50.9%)	92 (0.2%)	67,523 (12.2%)	63,075 (31.8%)	197,600 (21.3%)
1983	14	16,835 (9.0%)	54 (0.5%)	199,794 (21.5%)	27,203 (14.1%)	243,900 (18.5%)
1984	3	29,276 (10.9%)	41 (0.3%)	89,085 (12.7%)	3,204 (3.5%)	121,609 (11.3%)
1985	19	91,957 (33.0%)	3,210 (31.1%)	618,222 (50.3%)	11,844 (38.7%)	725,252 (46.8%)
1986	6	48,472 (20.6%)	5,052 (26.8%)	401,755 (28.5%)	11,701 (14.1%)	466,986 (26.8%)
1987	14	31,845 (12.8%)	2,481 (17.3%)	23,890 (11.9%)	28,663 (18.3%)	86,893 (14.0%)
1988	5	9,501 (3.0%)	2 (*)	6,094 (0.7%)	71,202 (22.1%)	86,804 (5.5%)
1989	1	10,286 (6.3%)	72 (0.6%)	52,677 (4.1%)	43 (0.4%)	63,079 (4.2%)
1990	2	17,404 (8.5%)	74 (0.8%)	191,320 (49.9%)	614 (8.8%)	209,414 (34.6%)
1991	2	6,408 (2.0%)	12 (0.1%)	359,664 (43.4%)	14,337 (59.2%)	380,423 (31.9%)
1992	0	572 (0.3%)	1 (*)	146 (*)	181 (0.8%)	900 (0.1%)
1993	2	4,613 (2.0%)	119 (0.9%)	159,159 (18.4%)	970 (22.2%)	164,863 (14.7%)
1994	0	5,930 (5.1%)	993 (6.8%)	13,200 (0.8%)	32 (0.6%)	20,155 (1.1%)
1995	12	17,642 (6.6%)	1,272 (7.2%)	192,098 (6.7%)	474 (3.0%)	211,498 (6.7%)

Table 9-3. Eastern District (of Cook Inlet) Salmon Harvest, 1954-1995

Figures given are number of fish, while percentages are those of the entire LOWER Cook Inlet catch. An asterisk (*) signifies a percentage less than 0.1%. The Eastern District extends from Bear Glacier (at the southwestern end of Resurrection Bay) east to Cape Fairfield (between Whidbey and Johnstone bays). Source: ADF&G, *Cook Inlet Finfish Report, 1976-1977*, Table 18; and ADF&G, *Lower Cook Inlet Finfish, Annual Management Report, 1995*, Appendix Table 9.

An asterisk (*) signifies a percentage less than 0.1%. In regards to king salmon, no attempt

was made to compute percentages. A number sign (#) is used because the number of kings harvested is relatively small: the Lower Cook Inlet harvest has never exceeded 2,000 per year, and in most years is fewer than 500.

Year	Kings(#)	Reds	Cohos	Pinks	Chums	Total
1954	0	11,786 (29.7%)	2,256 (14.9%)	7,562 (2.8%)	1,945 (0.7%)	23,849 (4.0%)
1955	4	5,049 (13.8%)	6,160 (63.7%)	55,994 (4.7%)	3,147 (4.6%)	70,354 (5.4%)
1956	0	296 (0.8%)	3,761 (40.2%)	14,873 (7.2%)	519 (0.6%)	19,450 (5.7%)
1957	120	169 (0.6%)	119 (6.7%)	0 (0%)	20 (*)	428 (0.1%)
1958	0	0 (0%)	0 (0%)	200 (*)	0 (0%)	200 (*)
1959	58	5,477 (25.3%)	8,954 (95.0%)	125 (0.1%)	14,612 (13.2%)	29,226 (11.1%)
1960	0	105 (0.4%)	853 (31.7%)	8,720 (1.4%)	467 (0.4%)	10,415 (1.4%)
1961	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
1962	0	0 (0%)	3,728 (48.2%)	49 (*)	10 (*)	3,787 (0.2%)
1963	1	1 (*)	2,250 (33.4%)	11 (*)	0 (0%)	2,263 (0.6%)
1964	0	22 (0.1%)	22 (0.2%)	813 (0.1%)	12 (*)	869 (0.1%)
1965	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
1966	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
1967	0	348 (1.2%)	203 (7.4%)	3,097 (0.8%)	275 (0.3%)	3,923 (0.8%)
1968	2	74,484 (78.2%)	5 (0.1%)	41,464 (7.1%)	872 (1.2%)	116,827 (15.4%)
1969	3	99,403 (80.9%)	6 (1.0%)	1 (*)	10 (*)	99,423 (25.7%)
1970	11	1,767 (7.9%)	692 (14.2%)	40,226 (7.0%)	633 (0.3%)	43,329 (5.2%)
1971	21	2,198 (9.9%)	1,115 (24.4%)	1 (*)	423 (0.3%)	3,758 (0.7%)
1972	12	82 (0.1%)	903 (40.4%)	18,190 (63.5%)	743 (1.0%)	19,930 (12.1%)
1973	5	0 (0%)	801 (38.1%)	2 (*)	0 (0%)	808 (0.2%)
1974	0	0 (0%)	517 (7.9%)	0 (0%)	0 (0%)	517 (0.5%)
1975	1	0 (0%)	124 (2.0%)	0 (0%)	0 (0%)	125 (*)
1976	0	5 (*)	200 (6.2%)	35,423 (26.0%)	45 (0.1%)	35,673 (14.3%)
1977	0	5,776 (5.8%)	360 (12.5%)	1,349 (0.1%)	3,229 (2.2%)	10,714 (7.0%)
1978	0	2 (*)	582 (8.9%)	29,738 (8.4%)	100 (1.4%)	30,422 (5.1%)
1979	0	0 (0%)	296 (2.4%)	0 (0%)	0 (0%)	296 (*)
1980	0	122 (0.2%)	426 (2.9%)	155,779 (17.5%)	720 (1.0%)	157,047 (15.0%)
1981	0	9,270 (8.4%)	470 (4.4%)	44,989 (1.4%)	3,279 (1.0%)	58,008 (1.6%)
1982	0	3,092 (2.4%)	950 (2.0%)	143,639 (26.0%)	7,698 (3.9%)	155,379 (16.7%)
		25,932				

1983	0	(13.8%)	594 (5.3%)	36,154 (3.9%)	7,934 (4.1%)	70,614 (5.4%)
1984	47	54,420 (20.2%)	536 (3.2%)	136,797 (19.5%)	10,535 (11.4%)	202,335 (18.7%)
1985	11	24,338 (8.7%)	835 (8.1%)	92,403 (7.5%)	5,144 (16.8%)	122,731 (7.9%)
1986	0	3,055 (1.3%)	770 (4.1%)	40,243 (2.9%)	3,757 (4.5%)	47,825 (2.7%)
1987	0	3,687 (1.5%)	1,631 (11.4%)	14,333 (7.1%)	14,913 (9.5%)	34,564 (5.5%)
1988	1	20,253 (6.3%)	486 (6.1%)	1,740 (0.2%)	24,668 (7.7%)	47,148 (3.0%)
1989	0	8,538 (5.2%)	5,346 (44.2%)	92 (*)	312 (2.8%)	14,288 (1.0%)
1990	0	7,682 (3.8%)	7,645 (82.2%)	11,815 (3.1%)	307 (4.4%)	27,449 (4.5%)
1991	1	4,703 (1.5%)	7,283 (38.2%)	167,250 (20.2%)	80 (0.3%)	179,317 (15.1%)
1992	0	432 (0.2%)	3,136 (53.1%)	60,007 (12.5%)	86 (0.4%)	63,361 (9.2%)
1993	0	1,824 (0.8%)	8,924 (66.2%)	10,616 (1.2%)	9 (0.2%)	21,373 (1.9%)
1994	1	9,661 (8.3%)	10,410 (70.9%)	44,987 (2.7%)	2,792 (51.1%)	67,851 (3.8%)
1995	0	46,556 (17.5%)	5,192 (29.3%)	12,000 (0.4%)	330 (2.1%)	64,078 (2.0%)

The Onset of Regulation, 1955-1959

The Fish and Wildlife Service continued to ignore the park coastline through the 1954 season. Most of the fish harvested in the area, as before, were probably pink salmon that were caught near Nuka Island. In 1955, however, the agency instituted active management when it dispatched its first enforcement specialist to Nuka Island. Fishery aid F. Douglas Swanson was assigned to Nuka Bay for six days in mid-August. One of 273 agency enforcement personnel who worked Alaskan streams that summer, Swanson performed the typical duties that his predecessors had been undertaking since the 1920s. Those duties included enforcing closure regulations (particularly around stream mouths) and conducting spawning-ground observations. As part of his work, Swanson was the first governmental representative to learn of the existence of the Delight and Desire Lake sockeye run. John Skerry, the Fish and Wildlife Service's agent for Cook Inlet, concluded that because the run was unregulated, local fishers were therefore abusing the resource. Those fishers, moreover, had no interest in helping government agents. Skerry noted that "there is still a great deal to be learned of the various fish runs in [park waters]. Much of this has to be uncovered by personal observation due to the unco-operative attitude taken by the Seward fishermen." [51]

By 1956, the park coastline was becoming an increasingly popular fishing venue. Nuka Bay was now home to boats owned by Port Graham canneries; the Libby, McNeill and Libby company, which had a cannery on Kodiak Island; and one or more of the Seattle-based processing ships. These fishing boats, in turn, were supported by tenders that waited nearby. Aialik Bay, on the other hand, was fished primarily by Seward-based boats. During this period the Resurrection Bay harvests, which had been anemic since the 1930s, fell to the point that Seward's only cannery closed after the 1955 season. Despite the lack of a nearby cannery, Seward fishers continued to harvest the small if valuable Aialik Bay sockeye run. [52]

As a result of the stepped-up activity, federal fisheries personnel in 1956 increased their

presence in park waters and moved to ensure the protection of the sockeye run that had been revealed to them the previous year. William Miller, who had been working as a Fish and Wildlife Service stream guard since 1953, was stationed at the mouth of Delight Creek from mid-June to late July; he then moved to Nuka Island, where he stayed until mid-August. He also served a stint at the head of Beauty Bay in Nuka Bay's West Arm. Another stream guard dispatched to the area that summer was John Frye, who arrived at the mouth of Delight Creek before Miller left. A Fish and Wildlife Service floatplane, which patrolled the Outer District for the first time, augmented Miller and Frye's observations and enforcement capabilities. [53] During the same general period–probably in the mid-1950s, according to one old-time fisherman–the Fish and Wildlife Service stationed a stream guard in a tent at the edge of Pederson Lagoon, in Aialik Bay. Here, as in Nuka Bay, the guard remained until fishermen left the area. [54]

Markers such as this one were posted near various Kenai Fjords stream mouths beginning in the mid-1950s. *Alaska Geographic 10:3 (1983), 9.*

Miller's experiences as a stream guard, like Swanson's, were more or less typical of those who served in that capacity elsewhere in Alaska during territorial days. It was Miller's job to monitor activity surrounding the buoys that had been placed 500 yards from the mouth of salmon streams. Because pink and chum salmon commonly school at stream mouths, regulations prohibited fishing boats from passing beyond the buoys, which were marked with plywood, three-foot-square stream markers. Fishing boats, however, often lurked just beyond the markers, particularly at high tide. In an intricate game of cat-and-mouse, many boats tried–in various, devious ways–to fish inside the buoy perimeter without being detected. Miller, equipped with a small, motorized skiff, was asked to establish a presence and prevent fisheries violations; during his stay on Nuka Island, he was responsible for monitoring the fishing activities at several island streams simultaneously. Miller led a rugged life that summer; on Nuka Island, he stayed in one of Pete Sather's abandoned fox shacks, while at Delight Creek, he camped in a tent. [55]

Miller and the other stream guards recognized that the Nuka Bay pink runs for 1956 were "not as great" as in 1955, even though the even-year pink fishery was traditionally dominant. Worried that the pink population could not be sustained under the current system, fisheries agent John Skerry recommended that the season end on August 18. The suggestion was quickly implemented. The stream guards also made a number of baseline stream surveys. Streams surveyed for the first time included Nuka Island Creek, Home Cove, South Creek, Mike Bay, and Duck Bay–all of which were located on Nuka Island–along with Desire and Delight creeks, which flowed into McCarty Fjord. Stream mouths marked that summer were located at Delight and Desire creeks, Home Cove, the unnamed cove south of Home Cove, and Nuka Bay Creek. [56]

From 1957 to 1959, the park fishery continued to be managed in much the same way as in 1956. At least one fisheries enforcement person was dispatched to Nuka Bay each summer; stream guard work continued to take place at Delight Creek and several Nuka Island locations. [57] On a more occasional basis, personnel tallied escapement levels, surveyed streams, and measured stream temperatures. One summer, the agency patrolled the area with its Grumman Goose; a year later the agency's patrol vessel, the *Kittiwake*, checked Nuka Bay's closure markers. [58]

Specific changes during this period were few. The various stream guards welcomed one of those changes; in 1957, the shelters at both Nuka Island Creek and Delight Creek were upgraded from tents to an 8' x 10' tent frame, with walls and roof made of corrugated

aluminum. A second change involved enforcement methods. The existing system of stream mouth protection was apparently less than effective, so agency managers adopted a stakeout system in which the stream guards hid in the undergrowth and watched for stream robbers. This practice was more cost-effective than the previous system had been and it resulted in more fisheries violations, but local fishers became angrier than ever at federal fishing policies. [59]

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Kenai Fjords

A Stern and Rock-Bound Coast: Historic Resource Study

Chapter 9:
COMMERCIAL FISH AND SHELLFISH HARVESTING (continued)

Commercial Salmon Fishing Since Statehood

Statehood and Its Ramifications, 1960-1963

The relative continuity of fisheries management along the Kenai Peninsula's outer coast, and fisheries management throughout Alaska, was abruptly changed by statehood. A statehood bill passed Congress in June 1958, but Alaska did not enter the Union until January 1959, and the new state did not assume responsibility for fisheries management until 1960. Therefore, fisheries management for the first year after statehood continued much as it had during territorial days.

When the Alaska Department of Fish and Game assumed control of the new state's fisheries, the health of Alaska's salmon stocks had been declining for years. A major reason for the declining stocks was the strong bond between the canneries and the Fish and Wildlife Service, both being based outside Alaska. Jim Rearden, a longtime Fish and Game biologist, has remarked that "all the agency cared about was the canneries," and the canneries had a near-total influence over territorial fishing regulations. Independent fishermen, and Alaskans in general, strongly resented their own lack of influence over fisheries regulations. One manifestation of that resentment was that some Alaska fishers robbed fish along creeks and at stream mouths. [60] As noted above, many Alaskans equated federal fisheries management with the fish trap. While the number of fish traps slowly declined during the years that preceded statehood, the widely hated traps were not eliminated until Congress passed the statehood bill.

Another reason that Alaska's salmon stocks were in relatively poor shape was because of the nature of fisheries regulation. Jim Rearden has noted that

> under Federal control, the regulations were generally adopted six months or more in advance of the fishing season and they were virtually inflexible; any change had to be published in the *Federal Register* before it became effective. Once a regulation was in place, there was little chance of modifying it, regardless of its effect on fishermen or on the salmon.

The transfer to state management, however, made the adoption of fisheries rules far easier; rule changes, via "emergency orders," could be made by field announcement and implemented within hours. [61] Those regulations, moreover, were generated by an Alaskan, not Federal, bureaucracy. Fisheries policy was set by a statewide board appointed by Alaskans and subject to a public hearing process. Because of the changes in fisheries management that followed statehood, local antagonism against fisheries regulations lessened. The resentment did not, however, evaporate. Some fishers continued to fish out of season, at stream mouths, and in other ways contrary to the newly constituted regulations.

Other changes that followed statehood were easily visible on the fishing grounds. The placing of stream guards continued after statehood, but the unpopular stakeout program was eliminated. The number of Alaska stream guards, moreover, shrank considerably. In park waters, stream guards continued at Home Cove on Nuka Island and in the Delight-Desire Creek area, [62] but apparently no guards were deployed to Aialik

Bay after statehood. The guards' survey duties, to an increasing degree, were taken over by a Fish and Game biologist who periodically flew over the area–either from Port Dick to Resurrection Bay, or from the head of Kachemak Bay to Nuka Bay and on to Resurrection Bay–in a Super Cub. (The small, maneuverable Cub had a distinct advantage over the Grumman Goose used by federal fisheries managers. The Cub could fly as slowly as 65 or 70 miles per hour without stalling–slow enough that biologists could count the spawners from the air–while the Goose's stall speed was 140 or 150 miles per hour.) Stream guards returned to the area in the summer of 1961, and perhaps again in 1962; they then left the Outer Coast, never to return. [63]

By the time the State of Alaska began managing the park area fishery, the southern coast's salmon runs had become sufficiently well known–and its harvest statistics had become sufficiently reliable–that its contribution to the overall Cook Inlet regional fishery could be assessed (see Table 9-4). Fish and Game personnel recognized that Nuka Bay (i.e., the stretch of coastline between Gore Point and the Pye Islands) had a fairly strong run of pink, chum and sockeye salmon; the Aialik Bay area had a sizable sockeye run; and Resurrection Bay had distinctive pink, chum, and sockeye runs. For those reasons, historical statistics are provided in the following paragraphs for three of the five salmon species. (Relatively small numbers of coho and king salmon are harvested in park waters, or elsewhere in the Outer District, so no specific statistics are provided for those species.)

Table 9-4. Salmon Harvest, by Number of Fish (in thousands) and Percentage of Total Harvest for Selected Periods, 1954-1994

Year	chinook salmon (410) (#/pounds)	sockeye salmon (420) (#/pounds)	coho salmon (430) (#/pounds)	pink salmon (440) (#/pounds)	chum salmon (450) (#/pounds)	salmon total (#/pounds)
Outer District Figures:						
1954-59	0 — 0.0%	23.6 — 1.1%	1.1 — 0.1%	1,640.4 — 76.6%	477.2 — 22.3%	2,142.4
1960-65	0 — 0.0%	25.9 — 0.7%	3.7 — 0.1%	2,936.8 — 81.1%	654.7 — 18.1%	3,621.2
Statistical Area 232 Figures:						
Year	chinook salmon (410) (#/pounds)	sockeye salmon (420) (#/pounds)	coho salmon (430) (#/pounds)	pink salmon (440) (#/pounds)	chum salmon (450) (#/pounds)	salmon total (#/pounds)
1968-69	0 — 0.0%	0.1 — 0.2%	0 — 0.0%	64.6 — 91.9%	5.5 — 7.9%	70.3
1970-74	0 — 0.0%	37.6 — 13.3%	0 — 0.0%	190.9 — 67.6%	53.8 — 19.1%	282.4
1975-79	0.3 — 0.0%	89.4 — 2.5%	1.6 — 0.0%	3,179.2 — 89.7%	274.0 — 7.7%	3,544.7
1980-84	0.1 — 0.0%	153.5 — 5.6%	0.5 — 0.0%	2,224.5 — 81.1%	364.0 — 13.3%	2,743.1
1985-89	0 — 0.0%	192.1 — 13.4%	10.6 — 0.7%	1,102.7 — 77.2%	123.4 — 8.6%	1,429.0
1990-94	0 — 0.0%	34.3 — 4.4%	1.0 — 0.1%	723.5 — 93.3%	15.9 — 2.1%	775.1

Source: Tables 9-2 and 9-8.

Statistics collected during the 1960-1963 period show that in regard to pink salmon (see Table 9-5), Nuka Bay had fairly strong harvests during even-numbered years. These harvests numbered more than 25,000 fish per year, and comprised between 4% and 6% of the total Lower Cook Inlet harvest. Its odd-year harvests, however, were so small that they comprised less than 1% of the Lower Cook Inlet harvest. During all four of these years, the Resurrection Bay harvest was far less than that in Nuka Bay; in 1961 and 1963, in fact, the harvest was nonexistent. But the Port Dick harvest–just west of Nuka Bay–was far greater than in any park area.

Table 9-5. Commercial Pink Salmon Harvest for Selected Lower Cook Inlet Bays, 1959-1995

Figures given are in numbers of fish (in thousands), while percentages are those of the entire Lower Cook Inlet catch. (Lower Cook Inlet includes all Kenai Peninsula Streams between Anchor Point and Cape Fairfield, plus all west-side waters between Cape Douglas and the Iniskin Peninsula.) Source: ADF&G, *1995 Lower Cook Inlet Annual Finfish Management Report*, Appendix Tables 19 and 20. T = trace (i.e., fewer than 50 fish), * = percentage less than 0.1%.

Year	Port Dick Bay	Nuka Bay	Resurrection Bay	Total, Lower Cook Inlet
1959	28.2 (22.6%)	33.3 (26.7%)	8.4 (6.7%)	124.7
1960	257.4 (42.1%)	26.6 (4.3%)	5.8 (0.9%)	611.6
1961	92.9 (30.6%)	2.0 (0.6%)	0 (0%)	303.4
1962	1,118.3 (49.7%)	129.8 (5.8%)	0.1 (*)	2,248.3
1963	19.0 (9.3%)	0.3 (0.1%)	0 (0%)	203.6
1964	526.3 (49.9%)	23.8 (2.3%)	0.3 (*)	1,055.4
1965	15.3 (13.2%)	0 (0%)	0 (0%)	115.6
1966	296.8 (51.2%)	0 (0%)	0 (0%)	579.2
1967	259.9 (69.2%)	0.1 (*)	1.2 (0.3%)	375.5
1968	55.0 (9.4%)	90.2 (15.4%)	37.4 (6.4%)	585.4
1969	51.5 (25.4%)	0 (*)	0 (0%)	202.4
1970	193.8 (33.7%)	48.4 (8.4%)	40.2 (7.0%)	574.3
1971	94.6 (24.1%)	119.7 (30.5%)	0 (0%)	392.9
1972	0 (0%)	0.3 (1.0%)	18.2 (63.4%)	28.7
1973	96.6 (31.4%)	8.1 (2.6%)	0 (0%)	307.4
1974	0.6 (1.2%)	0.7 (1.4%)	0 (0%)	50.6
1975	90.3 (8.5%)	35.4 (3.3%)	0 (0%)	1,063.4
1976	0 (0%)	0.1 (0.1%)	35.4 (26.0%)	136.4
1977	881.7 (68.1%)	56.3 (4.4%)	0 (0%)	1,293.9
1978	63.6 (18.0%)	6.3 (1.8%)	29.7 (8.4%)	352.6
1979	964.8 (32.3%)	121.7 (4.1%)	0 (0%)	2,990.9
1980	133.3 (15.0%)	12.8 (1.4%)	155.8 (17.4%)	889.7
1981	1,140.9 (35.7%)	395.1 (12.3%)	32.6 (1.0%)	3,199.2
1982	44.0 (8.0%)	8.7 (1.6%)	137.4 (24.9%)	551.6
1983	140.0 (15.1%)	55.0 (5.9%)	27.1 (2.9%)	927.6
1984	84.6 (12.1%)	4.4 (0.6%)	122.3 (17.5%)	700.6
1985	455.6 (37.0%)	150.8 (12.3%)	74.6 (6.1%)	1,229.7

1986	304.0 (21.6%)	97.8 (6.9%)	36.5 (2.6%)	1,408.3
1987	3.0 (1.5%)	20.9 (10.4%)	11.8 (5.9%)	201.4
1988	5.9 (0.6%)	0.2 (*)	0.5 (0.1%)	921.3
1989	0 (0%)	43.0 (3.3%)	0 (0%)	1,296.9
1990	169.1 (44.1%)	0.2 (0.1%)	0 (0%)	383.7
1991	289.7 (35.0%)	10.6 (1.3%)	0 (0%)	828.7
1992	0.1 (*)	0 (0%)	0 (0%)	479.8
1993	26.6 (3.1%)	13.8 (1.6%)	0.7 (0.1%)	866.8
1994	1.6 (0.1%)	11.6 (0.7%)	T (*)	1,647.9
1995	0 (0%)	21.4 (0.8%)	0 (0%)	2,848.5

Regarding chum salmon (see Table 9-6), the Nuka Bay harvest was fairly strong in both 1960 and 1961; the bay yielded more than 3% of the Lower Cook Inlet harvest in both years. During the following two years, however, the chum runs there slid into insignificance. As with pink salmon, the Nuka Bay harvests were consistently greater than in Resurrection Bay, which had almost no harvest activity, while the Port Dick harvest was many times greater than in Nuka Bay.

Table 9-6. Commercial Chum Salmon Harvest for Selected Lower Cook Inlet Bays, 1959-1995

Figures given are in numbers of fish (in thousands), while percentages are those of the entire Lower Cook Inlet catch. (Lower Cook Inlet includes all Kenai Peninsula Streams between Anchor Point and Cape Fairfield, plus all west-side waters between Cape Douglas and the Iniskin Peninsula.) Source: ADF&G, 1995 Lower Cook Inlet Annual Finfish Management Report, Appendix Table 22. T = trace (i.e., fewer than 50 fish), * - less than 0.1%.

Year	Port Dick Bay	Nuka Bay	Resurrection Bay	Total, Lower Cook Inlet
1959	42.4 (38.3%)	1.7 (1.5%)	0.1 (0.1%)	110.8
1960	53.9 (46.4%)	8.4 (7.2%)	0.5 (0.4%)	116.1
1961	36.8 (66.2%)	1.7 (3.1%)	0 (0%)	55.6
1962	112.0 (62.5%)	0.5 (0.3%)	0 (0%)	179.3
1963	110.8 (80.0%)	1.5 (1.1%)	0 (0%)	138.5
1964	227.4 (70.3%)	0 (0%)	0 (0%)	323.3
1965	14.2 (50.5%)	0 (0%)	0 (0%)	28.1
1966	60.9 (47.2%)	0 (0%)	0 (0%)	129.1
1967	36.0 (42.2%)	1.5 (1.8%)	0.1 (0.1%)	85.4
1968	10.9 (14.5%)	6.9 (9.2%)	0.7 (0.9%)	75.1
1969	5.4 (8.8%)	0 (0%)	0 (0%)	61.2
1970	21.8 (9.7%)	5.9 (2.6%)	0.4 (0.2%)	224.2
1971	0.7 (0.5%)	0.1 (0.1%)	0.4 (0.3%)	148.6

1972	0 (0%)	2.3 (3.0%)	0.7 (0.9%)	75.5
1973	33.4 (28.9%)	40.8 (35.3%)	0 (0%)	115.5
1974	8.1 (42.2%)	3.9 (20.3%)	0 (0%)	19.2
1975	6.8 (31.5%)	3.6 (16.7%)	0 (0%)	21.6
1976	0 (0%)	0.4 (0.8%)	0 (0%)	50.8
1977	25.6 (17.6%)	17.4 (11.9%)	0 (0%)	145.8
1978	10.3 (14.0%)	0.4 (0.6%)	0.1 (0.1%)	73.5
1979	79.0 (36.2%)	14.7 (6.7%)	0 (0%)	218.5
1980	19.0 (25.9%)	7.8 (10.6%)	0.7 (1.0%)	73.5
1981	85.8 (25.5%)	3.8 (1.1%)	2.4 (0.7%)	336.1
1982	30.3 (15.3%)	0.9 (0.4%)	7.7 (3.9%)	198.0
1983	18.0 (9.4%)	0.8 (0.4%)	6.9 (3.6%)	192.3
1984	1.9 (2.1%)	0.2 (0.2%)	3.0 (3.2%)	92.5
1985	9.6 (31.4%)	0.8 (2.6%)	3.0 (9.8%)	30.6
1986	10.4 (12.6%)	1.3 (1.6%)	3.5 (4.2%)	82.7
1987	27.1 (17.3%)	1.6 (1.0%)	13.9 (8.9%)	157.0
1988	64.4 (20.0%)	6.8 (2.1%)	23.9 (7.4%)	321.9
1989	0 (0%)	0 (0%)	0 (0%)	11.3
1990	0.5 (7.1%)	T (*)	0 (0%)	7.0
1991	13.7 (56.6%)	T (*)	0 (0%)	24.2
1992	0.2 (1.0%)	0 (0%)	0 (0%)	22.2
1993	0.7 (15.9%)	T (*)	0 (0%)	4.4
1994	T (*)	T (*)	2.5 (45.5%)	5.5
1995	0 (0%)	0.1 (0.6%)	0.3 (1.9%)	15.6

As to the sockeye run (see Table 9-7), the number of fish caught in both Aialik Bay and Nuka Bay was no larger, in general, than either the pink or chum harvest. But because the Lower Cook Inlet is not normally considered a significant sockeye region, these two bays often contributed more than 10% of the region's total harvest. More important, sockeye salmon's relatively high value (more than twice the price, on a per-pound basis, than either pinks or chums) ensured that both fishers and agency officials paid especial attention to the health of those runs. The Nuka Bay and Aialik Bay runs were far greater than were those in adjacent districts along Kenai Peninsula's southern coast.

Table 9-7. Commercial Sockeye Salmon Harvest for Selected Lower Cook Inlet Bays, 1959-1995

Figures given are in numbers of fish (in thousands), while percentages are those of the entire Lower Cook Inlet catch. (Lower Cook Inlet includes all Kenai Peninsula Streams between Anchor Point and Cape Fairfield, plus all west-side waters between Cape Douglas and the Iniskin Peninsula.) Source: ADF&G, 1995 Lower Cook Inlet Annual Finfish Management Report, Appendix Table 14. T = trace (i.e., fewer than 50 fish), * - less than 0.1%.

Year	Port Dick Bay	Nuka Bay	Resurrection Bay	Total, Lower Cook Inlet
1959	1.3 (6.0%)	8.3 (38.4%)	0 (0%)	21.6
1960	0.2 (0.8%)	6.7 (27.1%)	0.1 (0.4%)	24.7
1961	4.3 (18.9%)	8.2 (36.0%)	0 (0%)	22.8
1962	2.6 (10.3%)	5.1 (20.2%)	0 (0%)	25.3
1963	0.5 (3.3%)	0.5 (3.3%)	0 (0%)	15.1
1964	0 (0%)	0 (0%)	0 (0%)	20.7
1965	0 (0%)	2.0 (14.3%)	0 (0%)	14.0
1966	0 (0%)	0 (0%)	0 (0%)	15.3
1967	0 (0%)	2.2 (7.6%)	0 (0%)	29.0
1968	0 (0%)	1.5 (1.6%)	74.5 (78.3%)	95.2
1969	0 (0%)	0 (0%)	99.4 (80.9%)	122.8
1970	3.1 (13.9%)	1.0 (4.5%)	1.7 (7.6%)	22.3
1971	0 (0%)	1.6 (7.2%)	2.2 (9.9%)	22.2
1972	0.3 (0.5%)	26.1 (45.1%)	0.1 (0.2%)	57.9
1973	3.1 (10.6%)	1.5 (5.1%)	0 (0%)	29.2
1974	0.2 (0.7%)	0.2 (0.7%)	0 (0%)	27.4
1975	0.6 (2.1%)	0 (0%)	0 (0%)	28.1
1976	0 (0%)	18.9 (32.5%)	0 (0%)	58.2
1977	5.8 (5.8%)	32.5 (32.5%)	0 (0%)	100.1
1978	0 (0%)	10.7 (6.8%)	0 (0%)	156.4
1979	0 (0%)	24.4 (37.9%)	0 (0%)	64.4
1980	0.1 (0.1%)	21.5 (31.0%)	0 (0%)	69.4
1981	8.7 (7.9%)	17.2 (15.6%)	0.6 (0.6%)	110.3
1982	3.0 (2.2%)	66.3 (50.5%)	0 (0%)	131.3
1983	25.9 (13.8%)	16.8 (9.0%)	0 (0%)	187.6
1984	50.8 (18.9%)	29.2 (10.9%)	3.4 (1.3%)	269.0
1985	24.1 (8.6%)	91.8 (32.9%)	0.3 (0.1%)	278.7
1986	3.0 (1.3%)	48.4 (20.6%)	0 (0%)	234.9
1987	3.5 (1.4%)	31.8 (12.8%)	0.2 (0.1%)	248.8
1988	20.2 (6.3%)	9.5 (3.0%)	0 (0%)	319.0
1989	8.5 (5.2%)	10.3 (6.3%)	0 (0%)	163.3
1990	7.7 (3.8%)	5.7 (2.8%)	0 (0%)	203.9
1991	4.7 (1.5%)	1.8 (0.6%)	0 (0%)	317.9
1992	0.4 (0.2%)	0 (0%)	0 (0%)	176.6
1993	0.2 (0.1%)	3.5 (1.5%)	1.7 (0.7%)	233.8

1994	0.6 (0.5%)	5.9 (5.1%)	9.0 (7.8%)	115.4
1995	2.0 (0.8%)	17.6 (6.6%)	44.6 (16.8%)	265.4

The Good Friday Earthquake and Its Aftermath

At 5:36 p.m. on March 27, 1964, a massive earthquake struck southcentral Alaska. The earthquake measured between 8.2 and 8.4 on the Richter scale; its epicenter was near the north end of College Fjord, approximately 50 miles west of Valdez. The earthquake and the resulting aftershocks, tsumanis and submarine landslides killed 115 people and caused an estimated $380 to $500 million in property damage. [64]

The earthquake devastated Seward, where 11 deaths were recorded and property damage totaled more than $14.6 million. The quake hit Seward, and the park coastline, particularly hard because although the epicenter was more than 100 miles to the northeast, the earthquake's main fault line (and thus its "area of epicenter") paralleled the coast and included most of the park. The park was thus subject to many of the quake's most devastating effects. The earthquake in the park lasted from 2-1/2 to 5 minutes. [65]

One of the earthquake's most substantial impacts was its effect on land elevations. Some areas of southcentral Alaska, in effect, rose from the sea; one site on Montague Island (in Prince William Sound) rose 33 feet. The area within the park, however, was in a zone of subsidence. Maps published as a result of post-earthquake scientific studies show that the quake's "axis of maximum subsidence" went right through the park; it was a sinuous line that wound from the western end of Kenai Lake to the eastern edge of Nuka Island. Areas that were relatively distant from that axis subsided only slightly; the southern tip of Aialik Peninsula, for instance, sank only a foot. But Aialik Bay dropped 4.5 feet, both Two Arm Bay and Shelter Cove (the latter in Nuka Bay) subsided 5.4 feet, and both Beauty Bay (in Nuka Bay) and Chance Cove (just east of McArthur Pass) dropped 6.6 feet. Some areas astride the axis fell as much as 7.5 feet. Near the Sather residence, on the western side of Nuka Island, the water rose and covered part of the warehouse; the quake also destroyed the adjacent boat dock. [66]

The other major impact caused by the March 27 earthquake was a series of tsunamis (large waves) that hit the coast within one-half hour of the quake. The quake generated a large tsunami out in the Gulf of Alaska; the tsunami rose in height as it reached the coast due to the funneling effect of the various fjords. In Resurrection Bay, the tsunami was an estimated 30 to 40 feet high as it neared the bay's northern end; a 30-foot wave slammed into Thumb Cove, on the bay's eastern side, and it was at least that high when it reached Seward. Waves entering Aialik Bay were far higher. [67] Gene Rusnak, a USGS employee, observed that a wave between 90 and 100 feet high hit on either side of Aialik Bay's terminus; spruce trees up to 18 inches in diameter were snapped throughout the area where the wave hit. These waves were particularly devastating because the quake generated submarine landslides that exacerbated the tsunami's effects. Huge waves also hit Port Dick; other bays between there and Aialik Bay were also probably affected, but specific details are lacking. [68]

The lowering of the landmass, in combination with the effects of the tsunami, had devastating consequences on the park's fish population. Both factors, particularly the former, inundated the gravel at stream mouths that was key to pink and chum salmon spawning. (The earthquake had varying impacts on sockeye populations, where spawning took place in upstream lakes; the Aialik Bay population was wiped out for years afterward, probably because of the tsunami's effects, while at Delight and Desire creeks, the impacts were significant but not devastating.) [69] The salmon industry was also crippled because facilities were destroyed. The quake wrecked canneries in Seldovia and elsewhere in lower Cook Inlet. In Seward, four seafood processors were destroyed; of those, Halibut Producers' Co-operative was back on line a year later, but Seward Seafoods and the other processors never reopened. Many fishing boats were destroyed in both locations, and the quake resulted in the death of at least one Seward-area fisherman. [70]

Statistics for the remainder of the decade illustrate the extent of the earthquake's destruction. Nuka Bay pink

salmon harvests for 1964 were low, although within a normal range; but for the next three years they were almost nonexistent. The only productive year for the remainder of the decade was 1968, when the Nuka Bay fishery constituted more than 15 percent of the total Lower Cook Inlet pink salmon harvest. Similar impacts were recorded in nearby Resurrection Bay. But in Port Dick, to the west, the quake had few if any impacts on the pink harvest.

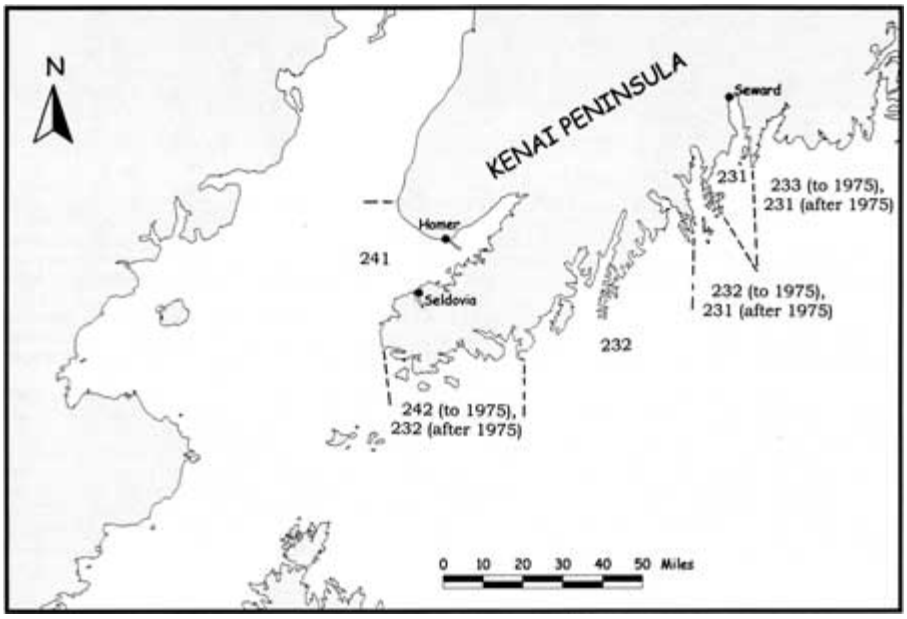
Chum salmon harvests followed a similar pattern. In both Nuka Bay and Resurrection Bay, no chum harvest was recorded from 1964 through 1966, inclusively. Both bays recorded a fairly healthy harvest in 1968 but none in 1969. The Port Dick area, meanwhile, saw chum harvest tumble from more than 100,000 per year during the 1962-64 period to just 10,000 fish in 1968 and 5,000 in 1969.

In regard to sockeye harvests, Aialik Bay suffered catastrophic devastation in the earthquake; no harvests of the species were recorded between 1964 and 1969, inclusively. Nuka Bay fared better, but only slightly; harvests during those years were recorded only in 1965, 1967, and 1968, and the harvests that were recorded lagged behind those that predated the earthquake. In Resurrection Bay, where sockeyes had been off-limits to fishermen for years, no harvests were recorded until 1968, when a hatchery program brought huge numbers of sockeyes. They remained high for another year, then dropped back to insignificant levels.

Fishing in Park Waters, 1970 to Present

No sooner had salmon populations begun to rebound from the earthquake's devastation than another hazard–cold weather–impacted the park's fishery. The winters of both 1970-71 and 1971-72 were "extremely cold years" in the words of the Lower Cook Inlet fisheries biologist. As a result of the environmental stress caused by those winters, the salmon runs and harvests were hit hard. As late as 1977, the East Arm of Nuka Bay was "kept closed to build up pink and chum stock depleted by the 1964 earthquake and severe winter conditions in the early 1970s." [71]

This report is intended to trace the major historical developments in the park's fishery. It is not the place to chronicle or explain the annual salmon harvests, particularly since the mid-1970s. The report shall, however, cover some of the major new actions that have affected the park's fishery in recent years (see Table 9-8 and Map 9-4).



Map 9-4. Lower Cook Inlet Statistical Areas, 1968-1995. *(click on image for an enlargement in a new window)*

Table 9-8. Statistics on Park-Area (Statistical Area 232) Salmon Fishing, 1968-1995

Year	chinook salmon (410) (#/pounds)	sockeye salmon (420) (#/pounds)	coho salmon (430) (#/pounds)	pink salmon (440) (#/pounds)	chum salmon (450) (#/pounds)	salmon total (#/pounds)
1968	-0-	4/ n.d.	3/ n.d.	**13,155**/ n.d.	84/ n.d.	13/246/ n.d.
1969	-0-	92/ n.d.	11/ n.d.	**51,533**/ n.d.	5,400/ n.d.	57,036/ n.d.
1970	2/ 54	4,129/ 21,470	19/ 116	**59,518/ 214,261**	6,602/ 44,234	70,270/ 280,135
1971	11/ 47	1,626/ 9,749	17/ 94	**119,661/ 420,605**	56/ 413	121,371/ 430,908
1972	7/ 37	**26,420/154,665**	3/ 16	682/ 2,394	2,434/ 18,369	29,546/ 175,481
1973	1/ 30	5,052/ 31,984	4/ 34	10,031/ 34,179	**40,909/ 351,028**	55,997/ 417,255
1974	1/ 30	398/ 1,917	27/ 204	1,082/ 4,380	**3,871/ 31,045**	5,379/ 37,576
1975	-0-	710/ 3,894	1/ 8	**35,886/ 119,402**	3,648/ 25,778	40,245/ 149,082
1976	7/ 42	**18,886/117,509**	-0-	93/ 333	412/ 3,383	19,398/ 121,267
1977	34/ 279	33,733/257,372	1,528/ 6,014	**1,127,800/4,236,975**	70,167/ 631,916	1,233,262/5,132,556
1978	236/11,031	10,695/ 71,597	45/ 365	**70,080/ 256,708**	19,224/ 144,071	100,280/ 483,772
1979	30/ 346	25,297/167,662	142/ 1,068	**1,945,529/6,713,115**	180,558/1,526,669	2,151,556/8,408,860
1980	10/ 77	22,514/121,500	16/ 133	**154,041/ 506,266**	32,246/ 248,250	208,827/ 876,226
1981	61/ 833	18,133/109,835	485/ 2,174	**1,714,115/6,687,327**	238,393/1,912,968	1,971,187/8,713,137
1982	129/ 1,629	66,781/431,669	92/ 949	**67,523**/ 224,550	63,075/**571,414**	197,600/1,230,211
1983	14/ (CD)	16,835/ 95,547	54/ 479	**199,794/ 666,357**	27,203/ 241,565	243,900/*1,003,948*
1984	3/ (CD)	29,276/144,046	41/ 412	**89,085/ 319,979**	3,204/ 26,900	121,609/ *491,337*
1985	19/ 121	91,957/499,664	3,210/39,571	**618,222/2,322,644**	11,844/ 100,425	725,252/2,962,425
1986	6/ 64	48,472/278,627	5,052/53,003	**401,755/1,399,956**	11,701/ 93,571	466,986/1,825,221
1987	14/ 118	**31,845**/210,437	2,481/22,283	23,890/ 88,922	28,663/**221,052**	86,893/ 542,812
1988	5/ 88	9,501/ 58,788	2/ (CD)	6,094/ 21,109	**71,202/ 640,101**	86,804/ *720,086*
1989	1/ (CD)	10,286/ 60,244	72/ (CD)	**52,677/ 181,767**	43/ 276	63,073/ *242,287*
1990	2/ (CD)	17,404/ 76,966	74/ 483	**191,320/ 585,250**	614/ 4,121	209,412/ *666,820*
1991	2/ (CD)	6,408/ 30,207	12/ 70	**359,664/ 992,328**	14,337/ 95,915	380,423/*1,118,520*
1992	-0-	572/ (CD)	1/ (CD)	146/ 490	**181/ 1,633**	900/ *2,123*
1993	2/ (CD)	4,613/ 27,012	119/ 937	**159,159/ 461,911**	970/ 6,607	164,863/ *496,467*
1994	-0-	5,930/ 31,620	993/10,342	**13,200/ 41,574**	32/ (CD)	20,155/ *83,536*
1995	12/ 141	17,642/ 96,224	1,272/ 8,868	**192,098/ 601,532**	474/ 3,344	211,498/ 710,109

Explanatory Notes to Table 9-8:

Species Identification: Salmon statistics, over the years, have been tabulated for Area 232; the specific stretch of coastline defined within this statistical area is defined in "Area Identification," below. The three-digit numbers following each species name have been assigned by the ADF&G to identify the various species.

Area Identification: There is a line between the 1973 and 1974 figures, and also between the 1975 and 1976 figures, because of changes in the geographical area in Statistical Area 232. From 1968 through 1973, Area 232 included the stretch of coastline between Gore Point and Aialik Cape. After the 1973 season, the statistical area's eastern boundary was moved west from Aialik Cape to Aligo Point; that action moved Statistical Area 231 (which included Resurrection Bay) west to include Aialik Bay. After 1975, the western boundary of Statistical Area 232 was moved west from Gore Point to Point Adam; after that action, Statistical Area 232 included all of former Statistical Area 242). As a result of this action, post-1975 figures for Area 232 are identical with those for the Outer District. In addition, post-1975 figures (and, to a lesser extent, 1974 and 1975 figures) are not as accurate a guide to park fishing activity as are the 1968-1973 figures.

BOLD numbers indicate the most prevalent species for a given year. Numbers in *ITALICS*, provided in the "total/pounds" column, are less than the total for all salmon species because one or more columns have no data due to confidentiality restrictions.

(CD) — confidential data. When fewer than four permittees fished for a given species in a given year, ADF&G censors harvest data in order to protect the privacy of an individual permittee's harvest. The term "CD", therefore, shows that there were 1, 2, or 3 active permittees.

Source: Herman Savikko (ADF&G, Juneau) letter, June 12 and July 11, 1997.

A major management change, inaugurated in 1975, altered the system by which Alaska's salmon have been harvested. The Alaska Commercial Fisheries Entry Commission, for the first time, began issuing limited entry permits to potential fishers. That system limited the number of fishers active in any given fishery and thus exerted greater management control. The average annual harvest volume, both on a per-boat and total yield basis, rose after the new system was implemented; increases were seen both in park waters and elsewhere in Lower Cook Inlet. Total harvest volumes in park waters remained relatively high for more than a decade after the limited entry system was implemented. There is no evidence that harvest volumes increased due to the new system; instead, salmon productivity probably rose due to improved stream and harvest management techniques. [72]

Another significant change in the park fishery took place in 1987. Prior to that year, the only approved salmon harvesting methods along the outer coast were by hand purse seines (or "pocket seines") and beach seines; these seines could only be used near the coastline or in shallow waters. In 1987, however, a group of seiners prevailed on the Board of Fisheries to modify the regulations in order to allow the use of power purse seines. These seines were attached to larger boats; they allowed fishers to harvest the resource more efficiently and gave fishers from other areas (where power purse seines had been legalized years before) the flexibility to fish the outer coast's waters. [73]

Changes were also taking place in the Delight and Desire lakes area of Nuka Bay. In 1972, fishers harvested the creek system's first major sockeye run; it totaled 26,100 fish, which was more than three times any previous harvest. After a lull, harvest levels shot up again in 1976. To gain more data about the area's salmon resource, Fish and Game personnel spent the following two summers maintaining a counting weir in the area. [74]

Meanwhile, a new salmon-bearing stream was emerging from the retreating ice of McCarty Fjord. North of Desire Lake, a new lake began to be seen which, as late as 1974, had been covered by a glacier. The lake, variously called Delectable, Delusion, or Ecstacy Lake, first appeared in 1985 or 1986; it has been contributing to Nuka Bay's salmon harvest since the late 1980s, if not before.

In 1985, the Delight-Desire area supported a substantial coho (silver) salmon harvest for the first time. Coho salmon, historically, had never been numerous along the Kenai's southern coast; since 1954, harvest levels had never exceeded 2,000 and had exceeded 500 only three times. But in each of the three years from 1985 through 1987, more than 2,000 salmon were harvested in the Outer District, many of them from the Delight-Desire lake system. [75]

As a final note pertaining to the park's salmon fishery, the creation of a limited entry permit system under the Commercial Fisheries Entry Commission (and the statistical data bases that were a by-product of that commission) allowed park managers to accurately recognize, for the first time, the residence of park fishers. As noted above, anecdotal evidence has suggested that the first commercial salmon fishers in the fjords hailed from Seward. Cook Inlet fishers did not sail east of Gore Point; as one longtime Homer fisherman phrased it, there was "kind of a gentlemen's agreement in the early days not to invade each other's territory." [76] As early as the late 1940s, however, Fish and Wildlife Service records were noting that a Port Graham fisherman was active in Nuka Bay. Fisheries personnel stationed in park waters during the mid-1950s suggested that most Nuka Bay salmon fishers were either from Lower Cook Inlet or from locations away from the Kenai Peninsula, while most Aialik Bay fishermen were based in Seward. Biologists were also quick to note that many salmon fishers passed through the area and had valid permits to fish in park waters; some of those people, however, did not fish there. [77] No statistical evidence to prove or disprove these generalities was available until 1975 (see Table 9-9).

Table 9-9. Residence of Commercial Salmon Fishers Active in Kenai Fjords National Park, 1975-1995

The following chart shows the residence of permit holders who actively fished all species of salmon, for commercial purposes only, in the waters of Kenai Fjords National Park (Statistical Area 232) from 1975 to 1995. Note: In 1975 and 1976, Statistical Area 232 extended east to Aialik Cape (and thus included Aialik Bay), but from 1977 through 1995, the coast east of Aligo Point (including Aialik Bay) was in another statistical area.

The areas of residence are defined as follows:

Homer Area = Homer, Anchor Point, Halibut Cove Seward = Seward (only)
Seldovia Area = Seldovia, Port Graham, Nanwalek (English Bay) Other = all other locations

	Homer Area		**Seldovia Area**		**Seward**		**Other**		**Total**
Year	number	% of total	number	% of total	number	% of total	number	% of total	number
1975/fishers	0	0.0%	2	25.0%	2	25.0%	4	50.0%	8
fish	*0*	*0.0%*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*10,357*	*25.7%*	*40,245*
1976/fishers	3	20.0%	7	46.7%	4	26.7%	1	6.7%	15
fish	*n.d.*	*n.d.*	*12,815*	*66.1%*	*1,975*	*10.2%*	*n.d.*	*n.d.*	*19,398*
1977/fishers	22	40.0%	20	36.4%	9	16.4%	4	7.3%	55
fish	*609,128*	*49.4%*	*455,764*	*37.0%*	*145,543*	*11.8%*	*22,827*	*1.9%*	*1,233,262*
1978/fishers	10	25.6%	16	41.0%	8	20.5%	5	12.8%	39
fish	*12,090*	*12.1%*	*38,058*	*38.0%*	*46,407*	*46.3%*	*3,725*	*3.7%*	*100,280*
1979/fishers	22	34.9%	23	36.5%	10	15.9%	8	12.7%	63
fish	*878,866*	*40.8%*	*676,727*	*31.5%*	*348,875*	*16.2%*	*247,088*	*11.5%*	*2,151,556*
1980/fishers	20	37.0%	20	37.0%	6	11.1%	8	14.8%	54
fish	*87,926*	*42.1%*	*68,648*	*32.9%*	*24,924*	*11.9%*	*26,756*	*12.8%*	*208,827*
1981/fishers	25	37.3%	19	28.4%	10	14.9%	13	19.4%	67

fish	*880,137*	*44.7%*	*460,062*	*23.3%*	*304,516*	*15.4%*	*326,472*	*16.6%*	*1,971,187*
1982/fishers	15	36.6%	16	39.0%	6	14.6%	4	9.8%	41
fish	*69,068*	*35.0%*	*71,861*	*36.4%*	*37,435*	*18.9%*	*19,236*	*9.7%*	*197,600*
1983/fishers	11	25.0%	17	38.6%	9	20.5%	7	15.9%	44
fish	*72,552*	*29.7%*	*77,292*	*31.7%*	*71,509*	*29.3%*	*21,806*	*8.9%*	*243,886*
1984/fishers	8	25.0%	14	43.8%	5	15.6%	5	15.6%	32
fish	*20,336*	*16.7%*	*67,495*	*55.5%*	*5,116*	*4.2%*	*30,849*	*25.4%*	*121,606*
1985/fishers	10	28.6%	10	28.6%	10	28.6%	5	14.3%	35
fish	*196,418*	*27.1%*	*207,355*	*28.6%*	*242,621*	*33.5%*	*78,858*	*10.9%*	*725,252*
1986/fishers	13	32.5%	10	25.0%	9	22.5%	8	20.0%	40
fish	*162,407*	*34.8%*	*119,472*	*25.6%*	*118,564*	*25.4%*	*66,543*	*14.2%*	*466,986*
1987/fishers	9	28.1%	8	25.0%	9	28.1%	6	18.8%	32
fish	*13,083*	*15.1%*	*18,893*	*21.7%*	*45,882*	*52.8%*	*9,035*	*10.4%*	*86,893*
1988/fishers	13	41.9%	7	22.6%	9	29.0%	2	6.5%	31
fish	*53,311*	*61.4%*	*15,785*	*18.2%*	*17,204*	*19.8%*	*502*	*0.6%*	*86,802*
1989/fishers	2	20.0%	3	30.0%	3	30.0%	2	20.0%	10
fish	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*63,006*
1990/fishers	22	46.8%	8	17.0%	6	12.8%	11	23.4%	47
fish	*71,150*	*34.0%*	*39,923*	*19.1%*	*18,124*	*8.7%*	*80,217*	*38.3%*	*209,412*
1991/fishers	18	51.4%	6	17.1%	5	14.3%	6	17.1%	35
fish	*210,197*	*55.3%*	*76,524*	*20.1%*	*9,301*	*2.4%*	*84,401*	*22.2%*	*380,421*
1992/fishers	2	40.0%	1	20.0%	1	20.0%	1	20.0%	5
fish	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*327*
1993/fishers	10	47.6%	5	23.8%	3	14.3%	3	14.3%	21
fish	*79,373*	*48.1%*	*7,732*	*4.7%*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*164,861*
1994/fishers	1	16.6%	2	33.3%	3	50.0%	0	0.0%	6
fish	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*n.d.*	*20,123*
1995/fishers	5	38.5%	3	23.1%	4	30.8%	1	7.7%	13
fish	*127,984*	*60.5%*	*n.d.*	*n.d.*	*38,495*	*18.2%*	*n.d.*	*n.d.*	*211,498*

Source: State of Alaska, Commercial Fisheries Entry Commission, "Salmon Seine Statistics by Residence City Areas, 1975-1995" (Project Number 97146), September 8, 1997. n.d.=no data.

Commercial Fisheries Entry Commission statistics suggest, fairly conclusively, that a majority of the salmon fishers active in Statistical Unit 232 (which includes most of the park's waters) during the 1975-1995 period have been Lower Cook Inlet residents. Not surprisingly, those fishers have been responsible for a majority of the salmon harvested. In 1977, for example, 76.4% of the fishers harvested in Statistical Area 232 hailed from Lower Cook Inlet communities; these fishers were responsible for 86.4% of the fish harvest. In 1980, Lower Cook Inlet fishers comprised 74% of all park fishers and brought in 75.0% of the area's salmon harvest; and in 1983, Lower Cook Inlet residents accounted for 63.6% of all park fishers and 61.4% of the salmon harvest. The only years in which Lower Cook Inlet fishers did not account for a majority of park-area fishers *and* a majority of the salmon harvested in the park was in 1975 (when few statistics were available) and in 1987. Seward-area fishers have generally accounted for between 10 and 35 percent of all park-area fishers, and 10 to 35 percent of the total salmon harvest. Fishers residing away from the Kenai Peninsula have usually accounted for 5 to 25 percent of all park fishers, and 5 to 25 percent of the total salmon harvest.

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Kenai Fjords

A Stern and Rock-Bound Coast: Historic Resource Study

Chapter 9:
COMMERCIAL FISH AND SHELLFISH HARVESTING
(continued)

The Halibut and Cod Fisheries

The waters off the Alaska coast have been attracting commercial cod and halibut fishers for more than a century. In 1884, not long after the first salmon cannery commenced operations, San Francisco-based schooners began to exploit Alaska's cod banks. Two areas were visited: the southeastern Bering Sea and "the southern shore of Alaska" (probably the Gulf of Alaska). In the years that followed, cod boats returned to these areas to an increasing degree. The cod harvest continued to increase until about 1915. [78] The cod banks, however, were miles offshore. The schooners, in most cases, had little or no contact with Alaskans and made few if any port calls.

Another bottomfish, the Pacific halibut, was first harvested in 1888 off the Washington coast. At first, vessels remained close to Puget Sound. Industry development, moreover, proceeded slowly; as late as 1900, the total West Coast harvest was less than 10 million pounds. (From 1930 to 1970, by contrast, the west coast harvest varied from 44 million to 75 million pounds.) Then, in the late 1890s, some of the Seattle-based vessels began fishing the waters of Southeastern Alaska each fall. At first, growth was slow because of the difficulties in getting ice, the relatively high transportation costs, and the long distance to the large volume markets in the East. Soon after the turn of the century, however, Seattle began to assume significance as a halibut center, largely based on the increasing supply of Alaska halibut. [79]

During the new century's first decade, the heightened demand for fresh fish caused the Pacific halibut fleet to move northward in search of new fishing grounds. Fisheries interests recognized that halibut and cod thrived on many of the same banks. A chart issued in 1905 of the North Pacific fishing banks noted that the principal halibut and cod banks were in Alaska waters. The three largest banks, where "codfish and small halibut are numerous and red rock fish fairly abundant," were of particular note. Those three, in rank order, were Baird Bank, in Bristol Bay (9,200 square miles); Portlock Bank, northeast of Kodiak Island (6,800 square miles); and Slime Bank, in the Bering Sea (1,445 square miles). [80] In all probability, little commercial bottomfish harvesting took place in Central or Western Alaska during this period; in the Seward area, the only known commercial activity was an occasional boatload of halibut that was sold directly to local residents. [81]

By 1910, the southeastern Alaska halibut and cod fisheries were in sufficient difficulty that Governor Walter E. Clark conducted a fact-finding mission on the subject. He then wrote to Charles Nagel, the U.S. Secretary of Commerce and Labor. In that letter, he noted that "In the last few years the halibut and cod industries have experienced a large growth, and the fresh fish industry ... has become highly important to the people of Alaska and of the states." He was alarmed, however, "that some of the halibut fishing banks [i.e., those in southeastern Alaska] are seemingly becoming depleted." He therefore urged that the steamer *Albatross* be

ordered to Alaska waters that year to study the problem. In response, the U.S. Fish Commission agreed to send a boat that would "prospect for cod and halibut banks in the waters adjacent to Kodiak Island during the season." [82]

Commercial halibut harvesting in the Gulf of Alaska may have begun as early as 1911, primarily as a result of overfishing in southeastern Alaska waters. [83] By November 1913, further development was in the offing. A news article stated that "A fleet of halibut fishing schooners are outfitting [in Seattle], preparatory to sailing for Alaska to test reported halibut banks off the entrance to Resurrection Bay and Prince William Sound. Should the halibut grounds prove satisfactory, the fleet will continue operations there." [84]

Bottomfish harvesting in the Gulf of Alaska continued, probably in small but increasing volumes, for the next several years. In June 1916, a fishing boat from the new Kenai Fishing and Trading Company saltery on Renard Island (near Seward) "located five banks of cod on its first trip out, and returned to Seward with 500 cod fish for salting." [85]

That fall, industry prospects brightened when the San Juan Fishing and Packing Company agreed to build a cannery in Seward. Plant managers were primarily interested in canning salmon, but they also announced that they would freeze halibut and black cod, along with other species. The new plant was a boon to the local halibut industry; two halibut boats were part of the company-owned fleet, and the company also agreed to buy halibut (and other species) from independent fishers. By March 1917, even before the plant had been completed, the *San Juan* was already hard at work; the boat caught 176,000 pounds of halibut within 50 miles of Seward and headed south to the company's Seattle plant to process the catch. [86] These halibut, in all probability, were caught either on the Portlock Bank or in Seward Gully, both of which are directly south of the present-day park.

The San Juan's cold storage facility was completed during the summer of 1917. Largely as a result, Seward became an important halibut port. As F. Heward Bell has noted, it was a convenient port to dispose of "broken trips," those catches too small or with fish to old to be run east to the distant railhead ports. Seward also gained prominence as a reoutfitting center–that is, a place for repairs, spare parts, and provisions. The Portlock Bank and other areas in the Gulf of Alaska, by this time, were becoming major bottomfish harvest areas, and Seward was a welcome nearby port for the Seattle-based fleet. The annual number of halibut processed in Seward during this period remained small. [87]

Seward has offered cold storage facilities for the area's fishing fleet for more than fifty years. *John Skerry photo, from USF&WS, Cook Inlet Annual Management Report, 1958, 42.*

Seward commercial interests, always hungry for a new economic base, publicized the new industry and tried to lure fish-laden boats–and fisheries capitalists–to the port. Seward, at the time, was booming because it was the terminus of the government railroad, then under construction, and residents hoped that the town's growth potential would lead to additional fisheries facilities. The problem, from Seward's point of view, was that there was little market for Pacific bottomfish on the West Coast. Many halibut boats, therefore, headed straight from the fishing banks to Prince Rupert, B.C., from which Canadian National trains sped shipments to eastern markets. Others, aiming for the frozen-fish market, were willing to drop off their fish at an Alaska port; citing a lack of cold storage capacity, however, they usually took their catches to Juneau, Ketchikan, and elsewhere. [88]

Seward commercial interests waged a campaign that stressed the port's unique location and growth potential. The *Pathfinder*, a Pioneers of Alaska publication, hyperbolically proclaimed that

> Seward is the nearest port to the most extensive halibut banks in the world.... The halibut is found on many banks, and is especially plentiful on the famous banks forty miles out from Resurrection Bay.... This great industry is in its infancy, but will be developed to the full in due time, with the result that Seward is destined to be within the next few years the fishing center of Alaska.... Our halibut have already found the Eastern market by the hundreds of thousands of tons. A marked increase each year is shipped East.... To illustrate the extent and richness of the "Halibut Pay Streak," ... boats have repeatedly brought into Seward catches ranging from 100,000 to 125,000 pounds of halibut each, within a period of from six to nine days. This illustration is not an exception. It is the average. It is usual for boats of from 15 to 20 tons to catch their capacity in one day after arriving at the banks. [89]

Advocates also tried to convince fisheries capitalists to invest in new cold storage and transportation facilities. A 1922 *Seward Gateway* article intoned that the lack of additional

storage space prevented Seward from profiting from the increasing harvest. If one or more plants could be built, it stated,

> this town will become the biggest fishing center on the Pacific Coast.... There would be fish for at least ten big cold storage plants on this bay. This means that a couple of hundred fishing boats with crews ranging from three to twenty men would be stationed here.... [But] cold storage plants here must be first assured of transportation [to the] coast cities of the States.... There is no use lying down on the job because some efforts have failed in the past. Keep trying and we are bound to succeed. [90]

Still others claimed that all Seward needed to become a major halibut port was corrective legislation. A 1922 editorial recognized why the industry had been slow to develop and posed a question that called for a legislative response:

> It seems strange to the layman that fishing boats will fish on these banks at the very entrance to Resurrection Bay and take their catches [elsewhere]. On first thought it appears that the reason for this is that there is no market here for the fish. True, there is one cold storage plant and it cannot handle but a very small part of the catch.... Why are there not more cold storage plants on Resurrection Bay? [Because] cold storage fish ... cannot compete with fresh fish. There is one thing that will make the cold storage business profitable ... and that is a closed season on halibut fishing.... The cold storage fish will have a market when fresh fish can no longer be had.... When this becomes the case it is safe to say then Seward will become one of the principal fishing centers on the Alaskan coast. [91]

The editorial writer's wish, in fact, soon became reality. Because the abundance of halibut had been declining for years, in both the U.S. and Canada, industry representatives requested international control of the fishery. The two countries drafted a convention in 1922, and on March 2, 1923, representatives from both countries signed the Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean. The convention created the International Fisheries Commission, the forerunner of today's International Pacific Halibut Commission. One of the convention's main provisions was for a three-month closed season; the first closure began on November 15, 1924. [92]

The international treaty, and the three-month closure, did not result in the construction of new cold storage plants in Seward. This period, to be sure, witnessed dramatically increased utilization of existing facilities; this increase, however, was largely coincidental to the imposition of the seasonal closure. Instead, three other factors are cited in attracting increasing halibut volumes to Seward. The first event, in 1922 or 1923, was an increase in capacity in the San Juan plant's cold storage facilities. (As noted above, the plant was primarily a salmon cannery when it opened in 1917. After the 1921 season, however, canning ceased, and the canning floor was probably converted to a halibut cold storage area soon afterward.) In 1923, the plant instituted two other attractions to lure nearby halibut boats; it installed fueling facilities and raised the prices it paid for halibut. The plant made no secret of its intention to "get boats to offload here that normally go to Sitka and Ketchikan." The newspaper crowed that "there is no reason why Seward should not become the center of the halibut fishing industry, as the banks are right against the mouth of the harbor and extend westward for a hundred miles." [93]

The plan worked. In 1923, the San Juan plant announced that it was shipping between 1.5 million and 1.75 million pounds of frozen halibut per annum; a year later, the plant received some 2.5 million pounds of halibut. Halibut volume remained high for the next several years;

in 1927, the plant again received 2.5 million pounds. [94] These higher volumes, to a large part, were in part due to San Juan's heightened customer-service orientation; a far more important variable, however, was the sharply increasing level of halibut harvesting. (John P. Babcock, of the International Fisheries Commission, stated in July 1927 that "the amount taken from the banks near Kodiak has tripled in the last three years.") In addition, Seward had the nearest cold-storage plant to the rapidly increasing halibut fishery off the Alaska Peninsula. In 1924, relatively few halibut were being caught in the Gulf of Alaska; the Central Alaska harvest was just one-seventh of that in Southeastern Alaska. But by 1925, halibut fishing was being carried on "as far west as Unimak Island," and in 1927, "fish came into Seward from as far away as 800 miles to the westward"–that is, from the seas surrounding Unalaska Island. Although many of the halibut from this newly-exploited fishery found their way to the San Juan plant, local sources continued to state, conclusively, that the Gulf of Alaska halibut fleet landed the lion's share of its catch in Prince Rupert. [95]

During this period, most of those that fished for halibut in the local waters were Americans; Canadians fished there as well, though on a smaller scale. (Fishermen of other nationalities were not prohibited from harvesting in the area, but did not do so.) [96] Prior to 1929, no comprehensive statistics are available on the specific nature of area fishing (see Table 9-10). The Seward newspaper, however, routinely jotted down details about the local halibut fleet when they emptied their holds at the San Juan dock. To judge by news accounts, few if any boats off-loaded halibut in 1921, but during the spring and summer of 1922 scores of notices appeared. (Typical entries noted that "the halibut boat *Constitution* arrived in port Sunday with a load of halibut, the cargo of 12,000 pounds being taken by the San Juan Company," and "the halibut boat *Gladstone*, Capt. Pete Peterson, arrived in port with 28,000 lbs. of halibut, sold to San Juan." [97]

Table 9-10. Annual Halibut Harvest in Statistical Area 25, 1923-1995

Figures provided in the "volume" and "landings" columns are in thousands of pounds of net weight. * - volume has been rounded off to the nearest 10,000 pounds of net weight. m - millions of pounds of net weight.

	Volume of Catch, Area 25			Total for	% of	Area	Landings	% of West
	Canada	U.S.	Total	West Coast	Take	Rank	@ Seward	Coast Total
1923a							1.5-1.75 m	
1924b							2.5 m	
1927b							2.5 m	
1928c							1.0 m	
1929	103	3,204	3,307	56,928	5.8	4/45	1,400	2.4
1930	163	2,479	2,642	49,492	5.3	5/49	1,645	3.3
1931	171	1,948	2,119	44,220	4.8	6/47	1,012	2.3
1932	92	2,935	3,027	44,454	6.8	2/44	52	0.1
1933	89	3,695	3,784	46,795	8.1	1/45	24	0.1
1934	126	3,340	3,466	47,546	7.3	1/41	52	0.1
1935	0	3,465	3,465	47,343	7.3	1/41	17	*
1936	53	3,059	3,112	48,923	6.4	3/41	25	0.1

1937	50	3,892	3,942	49,539	8.0	1/41	6	*
1938	130	3,614	3,744	49,553	7.6	2/41	1	*
1939	62	4,393	4,455	50,903	8.8	2/40	0	0
1940	22	4,354	4,376	53,381	8.2	2/40	1	*
1941	99	3,650	3,749	52,231	7.2	3/40	0	0
1942	35	4,501	4,536	50,388	9.0	1/41	0	0
1943	168	2,814	2,982	53,699	5.6	5/40	0	0
1944	218	2,935	3,153	53,435	5.9	4/41	0	0
1945	601	3,920	4,521	53,395	8.5	2/43	0	0
1946	661	3,129	3,790	60,266	6.3	3/44	0	0
1947	708	1,167	1,875	55,700	3.4	11/43	0	0
1948	453	3,596	4,049	55,564	7.3	4/44	69	0.1
1949	592	2,197	2,789	55,025	5.1	7/44	483	0.9
1950	700	3,677	4,377	57,234	7.6	3/44	182	0.3
1951	871	4,334	5,205	56,045	9.3	2/43	506	0.9
1952	1,064	4,051	5,115	62,262	8.2	2/47	49	0.1
1953	1,770	3,252	5,022	59,837	8.4	2/47	8	*
1954	1,665	3,752	5,417	70,583	7.7	4/46	0	0
1955	1,357	3,836	5,193	57,521	9.0	2/44	9	*
1956	1,200	3,142	4,342	66,588	6.5	4/43	0	0
1957	2,140	3,719	5,859	60,854	9.6	1/44	16	*
1958	1,961	3,663	5,624	64,508	8.7	2/45	51	0.1
1959	2,486	3,951	6,437	71,204	9.0	1/49	124	0.2
1960	2,344	2,879	5,223	71,605	7.3	2/51	162	0.2
1961	2,590	3,441	6,031	69,274	8.7	1/49	87	0.1
1962	2,006	3,562	5,568	74,862	7.4	2/52	619	0.8
1963	2,274	3,555	5,829	71,237	8.2	2/53	1,005	1.4
1964	2,474	2,471	4,945	59,784	8.3	2/53	0	0
1965	2,647	3,145	5,792	63,176	9.2	1/53	666	1.1
1966	3,191	3,403	6,594	62,016	10.6	1/53	1,167	1.9
1967	1,172	4,130	5,302	55,222	9.6	1/52	1,238	2.2
1968	1,175	2,431	3,606	48,594	7.4	4/53	381	0.8
1969	1,089	3,524	4,613	58,275	7.9	1/54	294	0.5
1970	1,169	3,845	5,014	54,938	9.1	1/54	4,046	7.4
1971	1,331	3,139	4,470	46,654	9.6	1/53	3,611	7.7
1972	1,367	3,267	4,634	42,884	10.8	1/56	5,056	11.8
1973	708	2,435	3,143	31,740	9.9	1/51	3,972	12.5

1974	84	1,594	1,678	21,306	7.9	1/52	1,930	9.1
1975	416	1,773	2,189	27,616	7.9	1/52	3,936	14.3
1976	393	1,344	1,737	27,535	6.3	3/51	3,418	12.4
1977	231	1,287	1,518	21,880*	6.9	2/54	3,149	14.4
1978	282	1,518	1,800	22,000*	8.2	2/53	3,396	15.4
1979	174	1,947	2,121	22,540*	9.4	1/53	2,638	11.7
1980	380	1,796	2,176	21,870*	9.9	1/50	1,443	6.6
1981	0	3,155	3,155	25,720*	12.9	1/50	2,334	9.1
1982	0	3,308	3,308	29,010*	11.4	1/51	3,234	11.1
1983	0	2,339	2,339	38,380*	6.1	2/55	3,987	10.4
1984	0	3,601	3,601	44,960*	8.0	3/53	2,914	6.5
1985	0	4,496	4,496	56,110*	8.0	2/54	4,081	7.3
1986	0	7,572	7,572	69,620*	10.9	1/53	5,899	8.5
1987	0	5,058	5,058	69,480*	7.3	4/51	4,201	6.0
1988	0	3,994	3,994	74,350*	5.4	4/50	4,530	6.1
1989	0	3,705	3,705	66,930*	5.5	4/52	4,454	6.7
1990	0	4,869	4,869	61,590*	7.9	2/52	5,183	8.4
1991	0	3,315	3,315	57,000*	5.8	5/52	3,283	5.7
1992	0	3,754	3,754	59,900*	6.3	5/52	3,997	6.7
1993	0	3,097	3,097	59,280*	5.2	5/52	2,936	5.0
1994	0	3,884	3,884	54,750*	7.1	3/52	3,896	7.1
1995	0	2,147	2,147	43,890*	4.9	6/52	2,770	6.3

Source: Richard J. Myhre, et. al., *The Pacific Halibut Fishery: Catch, Effort and CPUE, 1929-1975* (Seattle, International Pacific Halibut Commission), 1977, except as noted. Sources for pre-1929 data for Seward landings: a — Barry, *Seward History/II*, 88, b - Barry, *Seward: A History/III*, 33, c — *Seward Gateway*, August 10, 1928, 4.

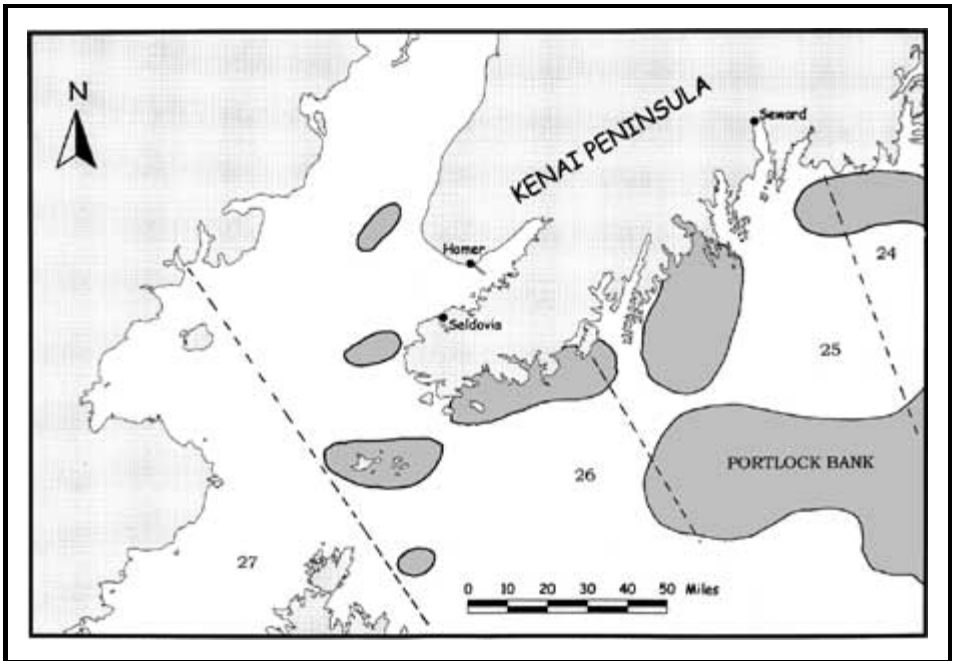
As has been noted in Chapter 6, one of the most prominent early halibut fishermen was "Herring Pete" Sather. The *Seward Gateway* was reporting on his fishing activities by June of 1922. In late July, this entry appeared:

> The halibut boat *Rolfe* [sic] arrived in port Sunday with 15,000 pounds of fish which were sold to the San Juan Co. The *Rolfe* is one of the luckiest boats in the business, bringing in a full load each trip. The boat is registered at 6 tons, but Capt. Pete generally piles on a ton or two more for good measure. [98]

Notices about Seward halibut processing were published throughout the 1920s. [99] Pete Sather's interest in the halibut fishery, however, appears to have tapered off after his marriage, in May 1924, to Josephine Tuerck. After that date, his primary responsibilities centered on the couple's Nuka Island fox farm. He probably never abandoned halibut fishing, however; in 1946, Josephine noted that he "is forever ... fishing halibut for market." [100]

Sather and the other halibut-boat captains sold their product for 10 to 11 cents per pound during the early to mid-1920s. The evidence gathered during this period provides few details about where the halibut were harvested. Most were probably caught out on Portlock Bank. But most of the smaller boats–including Sather's–fished in waters close to the Kenai Peninsula shoreline. [101]

As noted above, the halibut industry, both in the Gulf of Alaska and Seward, grew dramatically during the mid-1920s. In 1927, however, the fishery–and Seward's role in it–took a turn for the worse. That summer, the spectre of overfishing began to rise; the editor of the *Seward Gateway* interviewed the captains of several halibut boats and concluded that the halibut harvests were headed for a crash. The editor stated that "With few exceptions, [the captains] advocate the closing of certain banks, such as ... the Portlock bank.... The fish taken there are all immature and the bulk too small for the market." [102] The number of fish caught in waters off the park coast (in Statistical Area 25, which includes the waters east of Nuka Island and west of Cape Fairfield; see Map 9-5) dropped from 3.3 million in 1929 to 2.1 million in 1931. In addition, a new cold storage plant was built at Portlock, which was more than 100 miles closer to the Alaska Peninsula halibut harvesting areas than Seward. A third factor working against Seward's role was that the Seattle-based halibut fleet, during this period, was converting from sail power to gasoline power; the new technology shortened the time needed between Seattle and the fishing grounds. [103]



Map 9-5. Pacific Halibut Statistical Areas. *(click on image for an enlargement in a new window)*

For all of these reasons, the number of halibut processed at the San Juan plant dropped from 2.5 million in 1927 to 1.0 million a year later. The annual total rebounded to 1.4 million in 1929 and 1.6 million in 1930, but in 1931 it sank back to 1.0 million. In order to profitably operate, the plant had to process at least a million halibut per year. The deepening depression, however, promised further cutbacks in the halibut harvest, so the plant closed after the 1931 season. For the next 18 years, Seward fish plants played an insignificant role in halibut processing and shipping; for at least part of that period, Seattle was the home port for most of the U.S. halibut fleet that fished in the waters of Central and Western Alaska. [104]

The late 1920s and early 1930s were also declining years for the Central Alaska cod industry.

The Alaska cod industry, as noted above, reached its peak about 1915. After that point, however, the lack of a West Coast market began to hamper industry growth. A more sinister factor working against the industry was the persistent claim of Atlantic cod dealers that the Pacific species was "an inferior fish that will not keep." Perhaps because of that claim, the industry appears to have declined during the 1920s; more important to the Alaska economy, the territory never gained a strong foothold as a processing venue. The San Juan cold storage plant in Seward, as noted above, stated its intention to process cod when it opened in 1917, and the Portlock facility, which opened in 1927, was built with the express purpose of processing cod from the Aleutian Islands. At both locations, however, cod appears to have been a minor player. In May 1927, the *Seward Gateway* reported a proposal for a new cold storage plant that would process "cod and halibut for the North Dakota market." That plant, however, was never built, and cod processing appears to have largely disappeared from the scene after that date. [105] By 1933, the Alaska cod industry was operating at a "low level." Annual fisheries reports published in later years indicate that cod, over the years, supported a small, intermittently industry. Harvesting areas included southeastern Alaska, the Bering Sea, the Unalaska area and the Shumagin Islands. These areas were all quite distant from Seward and had no economic impact on local fisheries operations. [106]

Although Seward, during the 1930s and 1940s, did not play a significant role as a halibut-processing site, the waters south of Seward witnessed a boom in halibut harvesting. As noted in Table 9-10, the harvest in Statistical Area 25 (that is, the waters just south of the present-day park) rebounded from 2.1 million in 1931 to 3.7 million in 1933. In 1933 the waters south of the park, for the first time, recorded the highest harvest of any West Coast statistical area; an astonishing 8.1 percent of all West Coast halibut were caught there. [107] The halibut harvest, contrary to the dire predictions of the later 1920s, did not crash. Instead, it remained high for years afterward. From 1933 to 1950, for example, more than three million pounds of halibut were annually harvested from Area 25, with just three exceptions. Area 25 continued to be one of the five highest-ranked West Coast harvest areas in all but two years during that 18-year period, and in five of those years–1933, 1934, 1935, 1937, and 1942–the area was the highest-ranked West Coast harvest area. During this period, between 5 and 9 percent of all West Coast halibut were typically caught in Area 25.

During the 1950s and 1960s, halibut fishing in Statistical Area 25 continued at a high, sustained level. Harvests during that 20-year period ranged from 3.6 million pounds, in 1968, up to 6.6 million pounds, in 1966. Area 25's halibut resource led the West Coast industry; the area was ranked among the top five statistical areas every year between 1950 and 1970, and it was responsible for between 6.5 and 10.6 percent of the entire West Coast harvest during that period.

During the 1970s, harvest levels in Area 25 dramatically fell–most harvests during the 1974-78 level were below two million pounds per year–but they then rebounded. From 1981 to 1994, harvests consistently exceeded three million pounds per year, and in 1986, longliners harvested a record 7.5 million pounds of halibut. Throughout this period, Area 25 continued to rank among the top five statistical areas. The area, each year, was responsible for at least five percent of the West Coast halibut harvest, and in 1981, this area alone accounted for a remarkable 12.9 percent of the entire coast's halibut harvest. Figures from the International Pacific Halibut Commission are unequivocal in their conclusion that Area 25, over the past 67 years (the period for which records have been kept) has been by far the most productive West Coast halibut harvesting area.

Since the 1940s, the Seward halibut processing industry has undergone dramatic change. As noted above, an insignificant number of halibut were processed in Seward from 1932 to 1947. (During the 1932-1936 period, most of the Alaska halibut fleet processed its catch in Seattle; in later years, Prince Rupert and southeastern Alaska ports processed an increasing

number of fish due to their ability to command higher prices and their closeness to the fishing grounds. [108]) The opening, in 1948, of William Pege's Seward Fish and Cold Storage Company brought a brief revival of halibut processing. The company processed 69,000 pounds of locally caught halibut that year. It then shipped out frozen halibut steaks on the Alaska Railroad to Anchorage; the halibut was then air freighted to U.S. destinations [109]. The following year, the cold storage plant took in almost 500,000 pounds of halibut; shipping arrangements changed, and for the first time since 1930, ocean-going vessels tied up in Seward to load fish. The volume of halibut processed remained high in 1950 and 1951, but in 1952 the volume fell to just 49,000 pounds of halibut, and during the 1953-1957 period an insignificant number of halibut were processed in Seward. [110] It should be noted that even in 1949 and 1951, during the height of this short-lived boom, the Seward plant processed less than one percent of all West Coast halibut, even though Area 25 in those years yielded between 5 and 10 percent of the West Coast halibut harvest.

In 1958, Seward Fish and Cold Storage leased its plant to the Seattle-based Halibut Producers Co-operative (HPC), and for the next five years it processed a modest volume of halibut. (Most halibut boats bypassed Seward because, as noted in a 1962 letter from the Bureau of Commercial Fisheries, "new modern fishing boats now transfer their catches to larger cities in the south." [111]) The volume in 1963 shot up to more than a million pounds; this was highest total that Seward had witnessed since 1931. The HPC facility, along with other Seward fish plants, was wiped out in the 1964 earthquake. In 1965, however, the plant was rebuilt, and the following year the volume exceeded the 1963 total. [112]

In 1969, HPC sold out to a Petersburg-based consortium that renamed the plant Seward Fisheries, Inc. In the year that followed, the plant processed more than four million pounds of halibut–by far the largest annual volume for a Seward plant. Ever since that time, Seward Fisheries has been a major West Coast halibut processor. It has processed more than two million pounds of halibut in every year except one, and in both 1972 and 1973 it was the top halibut plant on the West Coast. [113] Since 1970, furthermore, the plant has consistently processed between five and fifteen percent of the West Coast halibut harvest. Of those that brought their catch into the Seward plant, Canadian vessels accounted for more than 30 percent of the volume during the 1970-1972 period. That proportion dropped soon afterward, however, and by the 1976-1978 period, Canadian vessels were contributing less than 20 percent of the Seward plant's fishing volume. Due to international treaty provisions, Canadian vessels no longer fished Central Alaskan waters after the 1980 season; Canadian ship captains, therefore, stopped off-loading halibut in Seward.

State fisheries experts have given varying opinions regarding the amount of commercial halibut fishing that has taken place near the Kenai Fjords National Park shoreline. Ted McHenry, an ADF&G sport fishing specialist who lived in Seward from 1969 to 1988, noted that the commercial halibut people "stayed way out there ... the only time they were forced close to the beach was in storms." But Tom Schroeder, an ADF&G commercial fisheries biologist based in Homer from 1974 to 1989, stated that smaller halibut boats fished in several places along the park shoreline. Specifically, he stated that halibut boats fished near the south end of Nuka Bay, near Pederson Lagoon (in Aialik Bay) and James Lagoon (on the east arm of Nuka Bay). He agreed with McHenry, however, that the vast majority of the halibut boats fished outside (i.e., on the Portlock Bank), "especially in more recent years." Sportsmen, Schroeder added, are now responsible for most of the halibut harvest from waters near the park shoreline. [114]

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Kenai Fjords

A Stern and Rock-Bound Coast: Historic Resource Study

Chapter 9:
COMMERCIAL FISH AND SHELLFISH HARVESTING (continued)

Other Commercial Fisheries

Herring

During the late nineteenth and early twentieth centuries, both Natives and non-Natives harvested Cook Inlet herring on a small-scale, subsistence basis. Then, in 1914, the commercial herring fishery began at Halibut Cove in Kachemak Bay. [115] The industry grew slowly until 1917, when the U.S. government successfully introduced a new method of processing herring, called scotch curing. Largely because of the new curing method, the industry boomed in 1918; there were 36 Alaska herring plants, 25 of which were located in Central Alaska (either in Cook Inlet, Prince William Sound, or Kodiak-Afognak islands). Fifteen of the 36 plants were in Kachemak Bay (see Table 9-11a). [116] The industry retrenched the following year. The number of plants fell sharply, although the value of the herring harvest fell only modestly.

Table 9-11a. Herring Harvesting in Lower Cook Inlet, 1918-1930

	Number of Plants		Harvest Yield (millions of dollars)	
	C AK	AK (all)	SC/AK	AK
1918	25	36	$0.748	$1.819
1919	6	11	0.451	1.676
1920	7	14	0.490	1.303
1921	8	13	0.838	0.934

	Number of Plants			Harvest Yield (millions of dollars)		
	LCI	C AK	AK (all)	SC/C AK	C AK	AK (all)
1922	n.a.	15	22	$1.650	$1.741	$2.329
1923	n.a.	12	19	0.800	0.936	1.602
1924	15*	22	32	1.342	1.496	2.458
1925	19*	40	54	1.960	2.174	3.852
1926	32*	45	61	1.421	1.512	3.554
1927	29*	48	68	1.149	1.213	2.850
1928	28*	37	65	0.396	0.558	3.098
1929	1*	7	30	0.013	0.154	2.794

1930	0	6	39	0.166	0.415	2.133

Guide to Abbreviations:

* - The location of plants in Lower Cook Inlet is shown in the table below.
AK - Alaska (entire territory)
C AK - Central Alaska (Cook Inlet, Prince William Sound, and Kodiak-Afognak)
LCI - Lower Cook Inlet (Kachemak Bay and vicinity)
SC — scotch cure (method of curing herring, introduced to Alaska in 1917)

Source: U.S. Bureau of Fisheries, *Alaska Fishery and Fur-Seal Industries*, annual issues.

From 1919 to 1926, herring was an Alaska growth industry. The number of plants rose from 11 to 61, and in Lower Cook Inlet, the number of plants rose from a mere handful to 32. Revenues rose accordingly; on a territory-wide basis, the herring harvest rose from $1.6 million to more than $3.5 million. Plants during this period were scattered all over the lower Inlet; as noted in Table 9-11b, most plants were located in Halibut Cove, but they were also sited in Portlock, Port Graham, Seldovia, and elsewhere.

Table 9-11b. Location of Lower Cook Inlet Herring Plants, 1924-1930

	Halibut Cove	Homer Spit	Port Graham	Portlock City	Seldovia	Tutka Bay	Floating	Total
1924	10		1		3	1		15
1925	6	1	1	1	6	1	3	19
1926	17	1	1	1	4	1	7	32
1927	12		1		6	1	9	29
1928	19		1		2		6	28
1929							1	1
1930								0

Source: U.S. Bureau of Fisheries, *Alaska Fishery and Fur-Seal Industries*, annual issues.

After 1926, the herring industry crashed even more quickly than it had grown. Overfishing was the cause. By 1929, the number of plants in Alaska was half of what it had been three years earlier, and revenues were slashed by one-third. In Lower Cook Inlet, fishers responded to the depleted stocks by heading west, and by 1928, Inlet-based fishers were harvesting Aleutian stocks. That however, was merely a temporary expedient, and it merely delayed the inevitable crash. That crash, as it turned out, was nothing less than catastrophic; of 32 herring plants that operated in 1926, only one remained in 1929. That last plant was gone by 1930. The herring fishery in Lower Cook Inlet never recovered. For years afterward, locals reminisced about the "good old herring days at Seldovia." [117] Beginning in the late 1930s, occasional harvests were made in the Seldovia area and in Kachemak Bay, chiefly for local use and for halibut bait. It remained a minor industry until the late 1960s. [118]

In Resurrection Bay, interest in the herring fishery appears to have begun in 1914. A newspaper item that November stated that "two tons of the delicious little fish known as herring sardines were caught Saturday.... The extraordinary run of the fish proves fully that there would be big money in the fishing business here." [119] Little more was heard of the herring resource until 1920. Perhaps caught up in the flurry of activity

taking place in Lower Cook Inlet, Seward interests publicized the local resource. That January, the *Gateway* editorialized that:

> The herring industry ... bids fair to almost outrival that of salmon in the near future. The waters of and contiguous to Resurrection Bay, close to the thriving town of Seward, are pronounced by experts and those who have closely investigated that field to offer unequalled inducements to those who may contemplate engaging in herring fishing. The fact remains that fish are Alaska's greatest and most valuable asset.

The *Pathfinder*, an arm of the Pioneers of Alaska, weighed in with similar hyperbole. It noted that "the Gulf of Alaska is literally alive with herring, a fish that bids fair to bring fame to this coast and much added prosperity to the port of Seward." [120] Despite that boosterism, Seward had no herring plants, and Resurrection Bay had little or no herring harvesting, for the remainder of the decade.

Events in Prince William Sound brought renewed attention to Resurrection Bay's herring resource. The Sound was a major herring harvest area during the 1930s; in the peak year of 1936, the herring reduction facility at Port Ashton (near Latouche) processed over 56,000 tons of herring. [121] Harvesting continued in the Sound for the remainder of the decade. Herring, during this period, was valuable, but not as a food fish. Instead, the harvested product underwent a reduction process from which oil and meal were made.

During the 1940s, attention in the herring fishery shifted over to Resurrection Bay, largely because fishery interests had fully explored Prince William Sound and sought new sites. The northern part of the bay–in the immediate Seward area–recorded a commercial harvest in 1941. Activity then ceased until 1944, when harvests were recorded both in the Seward area and at the bay's southern end. The area at the extreme southwestern end of the bay–between Aialik Cape and Bulldog Cove–was harvested in 1945. Herring harvesting in that area did not take place again for years afterward. But other parts of southern Resurrection Bay (i.e., areas south of Caines Head) were harvested off and on until 1959; in 1955, moreover, the present-day park coastline between Aialik Cape and Gore Point recorded a small (128,000-pound) harvest. The amount harvested in and around Resurrection Bay, to be sure, was not as large as that recorded in Prince William Sound; the bay's yield in the most productive years (1946 and 1955) did not exceed 7,500 tons, and the harvest total for the entire 16-year period was less than 25,000 tons. [122] The harvests, however, reaffirmed that commercial quantities of herring were available in waters both in and adjacent to the future Kenai Fjords National Park. [123]

Herring harvesting activity at the southern end of Kenai Peninsula remained at a standstill from 1960 until 1969, when the fishery was reopened due to increased Japanese demands for herring and herring roe. Harvests for the first year or two took place primarily in Halibut Cove and the Seward Boat Harbor. By 1972, however, the search for herring resulted in expeditions to Nuka Passage and to Aialik, Two Arm, Thunder, Black, Nuka, Yalik, and other bays in the present-day park. [124] Almost 700,000 pounds (350 tons) of herring was harvested in park waters that year (see Table 9-12); the following year, the herring harvest totaled more than 770,000 pounds (385 tons). Much of this harvest was processed at the Seward Fisheries plant. In 1974, most of the area's herring fishing took place on the west side of Cook Inlet; the results were disappointing, and the Cook Inlet fishery–which, as in previous decades, provided consistently smaller returns than the Prince William Sound fishery–was closed because the resource had been exhausted. [125]

Table 9-12. Statistics on Park-Area Fishing, 1970-1995 (Non-Salmon Species)

Year	Herring (230, 234) Area 232 (pounds)	Octopus (870) Area 23 (#/pounds)	Dungeness Crab (910) Area 23 (#/pounds)	King Crab (920) Area 23 (#/pounds)	Tanner Crab (930) Area 23 (#/pounds)	GeneralShrimp (960) Area 23 (#/pounds)	Other Species/ Area 23 (pounds)
1970				430/ 4,429	500/ 1,742	2,365	
1971				1,625/17,534	448/ 1,258	13,024	

1972				134/ 1,605	65,486/ 205,659	79,506	
1973	697,988(HB)		260/954	370/ 3,623	333,891/ 852,322	138,999	
1974	773,379(HB)			240/ 1,875	680,935/1,623,306	265,286	
1975					106,614/ 247,919	1,293	
1976				1,191/10,269	49,200/ 129,178	595	
1977			(CD)	776/ 7,465	67,776/ 162,669	26,437	
1978				(CD)	84,249/ 197,411	10,154	
1979				(CD)	(CD)	(CD)	
1980			(CD)	(CD)	81,321/ 186,305*	(CD)	
1981				(CD)	67,047/ 159,451	(CD)	
1982		(CD)	335/685	2,005/14,967	127,333/ 300,843*	(CD)	
1983		19/ 641	(CD)	(CD)	99,195/ 220,211*	36,927*	
1984		(CD)			48,087/ 104,046*	552,136	
1985	(CD/SR)	(CD)			(CD)	(CD)	
1986	(CD/SR)				(CD)	(CD)	
1987	403,110(SR)	(CD)			48,863/ 108,864*	7,292*	Weathervane scallops(850)/1,128
1988	(CD/SR)	n.d./1,115			19,227/ 42,080*	(CD)	
1989						17,482*	
1990						(CD)	
1991		(CD)				(CD)	
1992		(CD)			7,124/ 15,244*	(CD)	[Waste fish/trawl shrimp(101)/(CD)
1993						(CD)	
1994						(CD)	Sea Cucumber (895)/(CD)
1995						n.d.	

Explanatory Notes for Table 9-12:

Area and Species Identification: crab, shrimp, octopus, and miscellaneous-species statistics are maintained for Area 23 (which includes the coastline all the way from Gore Point east to Cape Fairfield during the 1970-75 period and from Point Adam to Cape Fairfield in the 1976-1995 period). Herring statistics, however, are maintained for Area 232 (that is, the coastline between Gore Point and Aialik Cape during the 1968-1973, between Gore Point and Aligo Point during the 1974-75 period, and between Aligo Point and Point Adam during the 1976-1995 period). The three-digit numbers following each species name have been assigned by the ADF&G to identify the various species.

* - numbers and weights are actually for a particular subspecies within the general classification. Most tanner crabs in this category are for biardi tanner crabs (931), and most shrimp in this category are for spot shrimp (965).

(CD) — confidential data. When fewer than four permittees fished for a given species in a given year, ADF&G censors harvest data in order to protect the privacy of an individual permittee's harvest. The term "CD", therefore, shows that there were 1, 2, or 3 active permittees.

(HB) — herring by-products

(SR) — sac roe

n.d. — no data.

Source: Herman Savikko (ADF&G, Juneau) letter, June 12 and July 11, 1997.

For more than a decade, no commercial herring fishing took place in or near park waters. Then, in 1985, commercial harvesting began again, although on a smaller, more restrictive scale than before. Again, much of the herring harvest was processed in Seward. Commercial production continued each year until 1988. Since then, the park's herring fishery has been inactive. Seward fish plants, however, have benefited in recent years by processing harvests from neighboring districts. [126]

Shrimp

Kenai Peninsula's shrimp fishing industry has been active for more than fifty years. Back in 1935, the Seward newspaper noted that Resurrection Bay shrimp prospecting had been "carried on some years ago, and a small quantity of commercial size was found, but not in sufficient number to justify engaging in the business." Commercial operations stayed away from Resurrection Bay until the late 1950s. [127] West of the park, the first commercial shrimp harvest in Cook Inlet took place in Kachemak Bay in 1939. Thereafter, the industry remained small. From 1949 through 1952, for instance, the only Central Alaska shrimp operator harvested the waters of Kachemak Bay; and in 1955, the Fish and Wildlife Service noted that the Cook Inlet shrimp industry was limited to "a very few fishermen in Kachemak Bay." [128]

A major expansion in the Peninsula's shrimp industry took place in 1958. The Fish and Wildlife Service boat *John N. Cobb*, hoping to assist potential fishermen and processors, dragged selected waters of the southern Kenai that summer; waters in or near the present-day park included Nuka Bay, Nuka Passage, and the area surrounding Rugged Island. The agency noted that neither Nuka Bay nor Nuka Passage was on a par with Kachemak Bay. Both, however, were important shrimping areas; Nuka Passage contained pink, sidestripe and coonstripe shrimp, while Nuka Bay yielded pinks and sidestripes. [129] Fishermen that summer brought in 16,300 pounds of shrimp, which were processed at the Seward Fish and Cold Storage (SF&CS) plant. [130]

In response to the new activity, the Halibut Producers Co-op bought a shrimp-peeling machine (to take the shell off) and installed it at the SF&CS plant. Rapid industrial development followed, and by the end of 1959 four additional shrimp peelers had been installed at SF&CS, four at Seward Seafoods, and one at Seldovia. Shrimp that year was taken principally from a small area of Nuka Bay, from the Bear Glacier area of Resurrection Bay, the Kodiak area and Prince William Sound. [131]

For the next several years, the shrimp industry thrived. A December 1961 report on Seward's economic development prospects noted that shrimp was a much needed growth industry in a town where the salmon, halibut and herring industries were all undergoing a serious decline. "In the last 2-3 years," the report stated, "the processing of sea-caught shrimp has come into prominence. There have been 3 shrimp canneries started in the area at this time." One of the canneries was still operating full time, a second operated seasonally, and the third had shut down. [132] In order to sustain operations, the shrimp harvesters had to seek out locations that were increasingly distant from Kachemak and Resurrection bays. It is likely that the park's waters were harvested off and on during the early 1960s. Kodiak Island and other Cook Inlet waters (perhaps Kamishak Bay) were also relied on to an increasing extent during this period. The plants in both Seward and Seldovia remained active through the 1963 season. The March 1964 earthquake, however, destroyed all of the shrimp-processing facilities and killed the industry. [133]

The Cook Inlet shrimp industry did not reawaken until 1968. A total of 26,660 pounds of shrimp was harvested that year; a mere 418 pounds of that came from the waters of the Outer District (i.e., between Point Adam and Aialik Cape). The industry remained small for the next three years (see Table 9-12). From 1972 through 1974, however, the waters between Gore Point and Cape Fairfield yielded more than 75,000 pounds of shrimp each year. (The most productive harvest was in 1974, when shrimp fishers caught more than 265,000 pounds of shrimp.) Yields of this volume apparently injured the resource to such an extent that few shrimp were caught in park waters for the remainder of the decade. During this period, the only Cook Inlet shrimp boats belonged to a Homer-based seafood company. No Seward fishermen participated. The Seward Fisheries plant, however, apparently benefited from the short-lived boom because many of the shrimp were harvested in peelers that had been installed in the facility in 1971. [134]

Since 1980, the shrimp industry has continued its boom-and-bust cycle. Although confidentiality concerns prevent the drawing of an accurate industry description, it appears that the shrimp industry, both in park waters and adjacent areas, boomed between 1982 and 1986, inclusively (see Table 9-13). More than 200,000 pounds of shrimp–primarily pink shrimp–were harvested annually during this period in the Outer and Eastern districts (i.e., between Point Adam and Cape Fairfield). The peak year was in 1984, when the Outer and Eastern districts yielded more than 1.9 million pounds and the area between Gore Point and Cape Fairfield yielded more than 550,000 pounds. Since 1988, the Outer and Eastern districts have yielded fewer than 25,000 pounds of shrimp each year. Most of what has been caught in recent years has been sidestripe shrimp. [135]

Table 9-13. Shrimp Harvests in Cook Inlet (Outer and Eastern Districts), 1977-1995

Outer Cook Inlet, or Area "G," is comprised of the Outer and Eastern Districts. Harvests are in pounds. Pot shrimp figures are harvests for the given calendar year, while trawl shrimp harvests are for the season beginning in the given calendar year.

The letters "(CD)" indicate that data cannot be supplied because of confidentiality concerns.

Year	Pot Shrimp	Trawl Shrimp
1977	1,776	26,556
1978	10,157	1,245
1979	4,211	0
1980	2,911	4,000
1981	2,031	19,454
1982	2,805	239,584
1983	18,679	760,430
1984	5,504	1,957,959
1985	3,305	421,063
1986	2,967	297,762
1987	12,458	22,231
1988	13,445	4,878
1989	20,500	0
1990	8,853	0
1991	7,315	(CD)

1992	2,804	(CD)
1993	8,356	(CD)
1994	(CD)	32,591
1995	0	(CD)

Source: ADF&G, Division of Commercial Fisheries, *Cook Inlet Area, Annual Shellfish Management Report*, issues of 1992-93 (November 1993, appendices H and J) and 1995-96 (August 1996, pp. 61 and 63).

Statistics issued by state regulatory authorities provide few clues on shrimp fishing in park waters. Local residents, however, suggest that most activity–for shrimp caught in both trawls and pots–took place in Aialik Bay, with additional activity in Northwestern Fjord and McCarty Fjord. Tom Schroeder, the Homer-based ADF&G biologist, recalled that shrimp trawlers were active in Aialik Bay during the late 1970s and early 1980s. Longtime Seward fisherman Seward Shea recalled that there were "lots of shrimp pots out there." "A few made a living at it," he stated, "but they had to work at it." An NPS report confirms the presence of shrimp pots in Aialik Bay in 1980; a former park employee recalls that recreational fishermen were the primary shrimp pot users, although commercial shrimpers may have been active there as well. [136]

Crab

The first Cook Inlet crab harvest–and one of the earliest Alaska crab harvests–took place in 1920, when the Arctic Packing Company in English Bay put up 75 cases of so-called "spider crabs." That pack was an isolated event; a similar spike in interest took place in 1937, when a Halibut Cove cannery processed king crab. In the late 1940s, Resurrection Bay was the site of occasional dungeness harvests. During the same period, king crab was finally becoming a recognized market commodity, and beginning in 1953 Pacific Coast harvest levels for the species began a long-term growth curve. That growth, however, was not immediately reflected in activities along the Kenai Peninsula. Both Resurrection Bay and Kachemak Bay, though not the coast between them, may have been harvested from time to time; harvest volume, however, remained small. King crab accounted for most if not all crab production during the 1940s and 1950s. [137]

In 1960, the king crab industry jumped into prominence when 60 boats signaled their interest in the species. During the 1960-1961 season, some four million pounds of crab–far more than ever before–were harvested from the Cook Inlet management district. During that season, Cook Inlet boats made several exploratory fishing trips into Outer District waters, mainly to Port Dick and Nuka Bay. Those trips resulted in an Outer District harvest of 118,067 pounds, about 3.1 percent of the Cook Inlet total (see Table 9-14). [138]

Table 9-14. Outer District and Eastern District Crab Harvest, 1960-1995

Figures given are in pounds, while percentages are those of the entire Cook Inlet catch. An asterisk (*) signifies a percentage less than 0.1%. Source: ADF&G, *Annual Management Report on Shellfish, 1981-1982*, Appendix, Tables 8 and 15; ADF&G, *Cook Inlet Area, Annual Shellfish Management Report, 1995-96*, 54, 57.

Season	King Crab Harvest, Outer District	Tanner Crab Harvest, Outer and Eastern Districts
1960-61	118,067 (3.1%)	
1961-62	368,909 (6.6%)	
1962-63	343,505 (4.0%)	
1963-64	59,352 (0.9%)	
1964-65	963 (*)	

1965-66	14,491 (0.4%)	
1966-67	89,510 (3.2%)	
1967-68	239,518 (7.4%)	
1968-69	87,302 (3.4%)	816 (0.1%)
1969-70	73,644 (2.2%)	104,191 (7.9%)
1970-71	9,468 (0.3%)	3,000 (0.2%)
1971-72	12,657 (0.2%)	804,765 (19.0%)
1972-73	1,966 (*)	1,266,937 (16.8%)
1973-74	5,613 (0.1%)	1,891,021 (24.6%)
1974-75	2,035 (*)	656,660 (13.8%)
1975-76	45,293 (1.2%)	850,964 (15.6%)
1976-77	16,384 (0.4%)	824,520 (17.9%)
1977-78	1,350 (0.1%)	502,049 (9.3%)
1978-79	1,753 (0.2%)	694,728 (12.1%)
1979-80	4,871 (0.4%)	595,645 (11.8%)
1980-81	8,022 (0.4%)	463,201 (14.2%)
1981-82	4,143 (0.3%)	524,897 (22.2%)
1982-83	15,280 (1.9%)	682,919 (23.1%)
1983-84	4,504	443,384 (15.8%)
1984-85	No Cook Inlet Harvest	259,083 (8.6%)
1985-86	"	177,041 (6.7%)
1987	"	251,174 (10.3%)
1988	"	168,969 (11.0%)
1989	"	No Cook Inlet Harvest
1990	"	Closed (0%)
1991	"	Closed (0%)
1992	"	53,049 (13.0%)
1993 and 1994	"	Closed (0%)
1995	"	No Cook Inlet Harvest

For the next several years, the fortunes of the crab fishery largely paralleled those of the shrimp industry; both remained healthy, although both required increasing effort, as the years wore on, to maintain harvest levels. Outer District king crab harvest levels during both the 1961-62 and 1962-63 seasons exceeded 300,000 pounds; those totals, though record-setting, continued to comprise a small proportion (four to seven percent) of the Cook Inlet harvest total. Crabbers during this period probably exploited the crab population along much of the park coastline. Some of the harvesters lived in Seward: Seward Shea once harvested Dungeness crab in James Lagoon, and Ben Suddath kept crab pots out in Aialik Bay, James Lagoon, and Nuka Bay. [139]

The March 1964 earthquake brought the Kenai Peninsula's crab-harvesting industry to a temporary standstill. Because most of the Kodiak crab fleet had been destroyed, Cook Inlet crabbers headed south and harvested the

Kodiak Island resource. [140] Less than a thousand pounds of Outer District king crab, therefore, were harvested during the 1964-65 season. Before long, however, the Kodiak fleet was rebuilt and the Kenai crab industry roared back into prominence. More than 80,000 pounds of king crab were harvested each year during the 1966-67 through 1968-69 seasons, and during the 1967-68 season the harvest exceeded 230,000 pounds–7.4 percent of the Cook Inlet total. Outer District king crab harvests continued at a respectable level until the 1969-1970 season; after that date, however, harvest volumes dropped dramatically. Since 1970, Outer District king crab harvests have exceeded 20,000 pounds only once (during the 1975-76 season); during the same period, the Outer District's contribution to the Cook Inlet harvest, moreover, has never exceeded two percent. Since 1984, the Cook Inlet management district has been off-limits to king crab harvesting.

In 1968, Cook Inlet fishers began to harvest a new crab species: the tanner or snow crab. Commercial interests had ignored the species previously, but as a contemporary management report noted, "due to the shortened king crab season, a tanner crab fishery developed to keep the fishermen and canneries in operation." At first, tanners were an incidental part of the king crab harvest, and tanner harvesters generally avoided the Outer and Eastern districts. [141] Beginning in 1971, however, tanner crabs were no longer considered an incidental species; as a result, harvest levels erupted to new heights. From the 1971-72 season to the 1973-74 season, inclusively, Outer and Eastern district tanner crab harvests exceeded 800,000 pounds annually; the 1972-73 season was particularly productive, with a harvest level that neared 1.9 million pounds. Thereafter, harvest levels dropped, but not dramatically. During the ten-year period between the 1974-75 season and the 1983-84 season, annual harvest levels consistently exceeded 400,000 pounds and occasionally exceeded 800,000 pounds. The industry sputtered along, at a much-reduced level, for a few additional years. Beginning in 1989, however, regulatory authorities closed the Outer and Eastern districts. With a single exception, the tanner crab fishery has remained closed ever since.

Statistical data on the volume of tanner crab harvest levels during the 1972-1988 period (Table 9-15) show that the park's waters have contributed a widely varying amount of the total catch along the southern Kenai Peninsula coast. In 1975, for example, the park was responsible for more than half (56.8%) of the south coast harvest; five years later, however, the park yielded just 5.3% of the south coast harvest. Within the park, the statistics suggest that the eastern part of the park–between the Pye Islands and Aligo Point–is the district that has yielded a majority of the tanner crab harvest during more than half of the years between 1972 and 1988. Areas west of Nuka Island, and the southern portion of Nuka Bay, have been less important tanner crab harvesting areas. Virtually all of the park's waters have yielded tanner crab on at least an occasional basis.

Table 9-15. Statistics of the Kenai Fjords Tanner Crab Fishery, 1972-1988

Figures are number of tanner crab harvested. Percentages (in parentheses) in the various subareas are of the Statisti-cal Area 232 total, while the percentage in the "Totals for Statistical Area 232" column is of the Statistical Area 23 total.

NOTE: The area enclosed within Statistical Areas 232 and 23 has changed over time. In 1972 and 1973, Statistical Area 232 stretched from Gore Point to Aialik Cape, and Statistical Area 23 stretched from Gore Point to Cape Fairfield. In 1974 and 1975, Statistical Area 232 stretched from Gore Point to Aligo Point, while Statistical Area 23 continued to be the area from Gore Point to Cape Fairfield. After 1975, Statistical Area 232 stretched from Point Adam to Aligo Point, while Statistical Area 23 stretched from Point Adam to Cape Fairfield.

Subareas Within Statistical Area 232

Year	-10 (W and SW of Nuka Island)	-15 (W Shoreline of Nuka Island)	-21 (Nuka Bay S of Harrington Point)	-23 (East Arm of Nuka Bay)	-30 (between Pye Ids. and Aligo Point)	TOTALS for Statistical Area 232
1972	0 (0.0%)	0 (0.0%)	1,660 (29.1%)	0 (0.0%)	4,040 (70.9%)	5,700 (8.7%)

1973	0 (0.0%)	0 (0.0%)	650 (2.5%)	0 (0.0%)	25,228 (97.5%)	25,878 (7.8%)
1974	9,440 (3.5%)	0 (0.0%)	31,034 (11.5%)	0 (0.0%)	230,268 (85.1%)	270,742 (39.8%)
1975	0 (0.0%)	0 (0.0%)	16,536 (27.3%)	0 (0.0%)	44,001 (72.7%)	60,537 (56.8%)
1976	NO HARVEST IN STATISTICAL AREA 232					
1977	0 (0.0%)	0 (0.0%)	4,131 (7.8%)	2,705 (5.1%)	46,220 (87.1%)	53,056 (32.6%)
1978	0 (0.0%)	0 (0.0%)	3,560 (7.0%)	0 (0.0%)	47,105 (93.0%)	50,665 (25.7%)
1979	NO HARVEST IN STATISTICAL AREA 232					
1980	8,386 (84.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1,495 (15.1%)	9,881 (5.3%)
1981	13,082 (62.7%)	0 (0.0%)	160 (0.8%)	0 (0.0%)	7,619 (36.5%)	20,861 (13.1%)
1982	6,943 (11.1%)	1,075 (1.7%)	9,068 (14.5%)	3,539 (5.7%)	42,012 (67.1%)	62,637 (49.2%)
1983	7,220 (15.3%)	3,671 (7.8%)	15,981 (33.8%)	0 (0.0%)	20,422 (43.2%)	47,294 (47.7%)
1984	803 (4.3%)	0 (0.0%)	508 (2.7%)	0 (0.0%)	17,176 (92.9%)	18,487 (38.4%)
1985	0 (0.0%)	7,846 (23.3%)	17,537 (52.0%)	0 (0.0%)	8,338 (24.7%)	33,721 (n. a.)
1986	2,720 (19.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	11,446 (80.8%)	14,166 (n. a.)
1987	9,299 (20.9%)	13,184 (29.6%)	2,762 (6.2%)	328 (0.7%)	18,583 (41.8%)	*44,484 (40.9%)
1988	3,661 (38.5%)	0 (0.0%)	2,170 (22.8%)	0 (0.0%)	3,683 (38.7%)	9,514 (22.6%)

* 1987 total also includes 328 crabs harvested in Subarea 232-22, which includes the North Arm and West Arm of Nuka Bay. Source: Charles Trowbridge, Shellfish Specialist, ADF&G, Homer.

Dungeness crab has also been harvested in park waters, although to a smaller degree than either tanner or king crab. As noted above, the species may have been taken in Resurrection Bay during the late 1940s, nd early harvests were also recorded in Kachemak Bay. The first known harvests in the park took place in James Lagoon during the early 1960s. In the late 1960s, crabbers increased their interest in the species due to the success of the fishery in California, Oregon, and Washington. As a result, harvests over the next few years continued in Kachemak Bay, while newly harvested areas included Homer Spit, Seldovia, and Port Graham. By 1975, Bluff Point (between Anchor Point and Homer) had become the largest Cook Inlet harvest area. Harvests in and around the park, however, have been sporadic. In both 1968 and 1969, a small Outer District harvest was recorded. Since then, commercial dungeness harvests along the stretch of coastline between Gore Point and Cape Fairfield have been recorded only five times. Each of those harvests took place between 1973 and 1983, inclusive; so far as is known, all of the harvests were minor, none exceeding one thousand pounds per year. [142]

Miscellaneous Species

Several fish and shellfish species have been harvested for only short-term periods in and around the present park. Scallops, for example, came under scrutiny in the late 1960s, when scallop beds were discovered in the Gulf of Alaska. In 1968, the Alaska Department of Fish and Game brought in a New England scallop vessel. The vessel collected some 50,000 pounds of scallops and brought them to the Halibut Producers Co-op plant in Seward. The success of the venture brought several New Bedford, Massachusetts fishing companies to the area. They were so successful that the Seward plant, by November 1968, had processed more than a million pounds of scallop meat. Further increases took place in 1969, and the Seward Fisheries plant also began processing scallops. The industry, however, lasted only until the mid-1970s before exhausting the resource. Beginning in 1983, a revival in Cook Inlet scallop harvesting took place. Most of that activity, however, was limited to the area surrounding Augustine Island, on the west side of Cook Inlet; the Outer District witnessed scallop harvesting only in 1987, and then to only a minor degree (see Table 9-12). [143]

Clams and octopus have also been harvested in the vicinity of the park. In 1925, a clam fishery was located in Resurrection Bay. Before long, the federal government had established regulations on its use, and a Stanford University professor named F. W. Weymouth had investigated the beds' economic possibilities. So far as is known, however, the clam resource was not commercially developed. No significant clam resources are known to exist within the present park boundaries. [144]

Of more recent vintage, octopus has been harvested in Area 23 (i.e., the stretch of coastline between Gore Point and Cape Fairfield), as well as elsewhere in Cook Inlet. Since relatively few people have harvested this resource, few statistics are available. Statistics show, however, that harvests were recorded during eight of the eleven years between 1982 and 1992. Octopus has not been fished for its own sake; instead, those seeking groundfish, tanner crab, and other species have caught the species incidentally. [145]

During the early 1960s, and again in the 1970s, the ADF&G had a fish counting tower near the mouth of Delight Creek. *Alaska Geographic 10:3 (1983), 9.*

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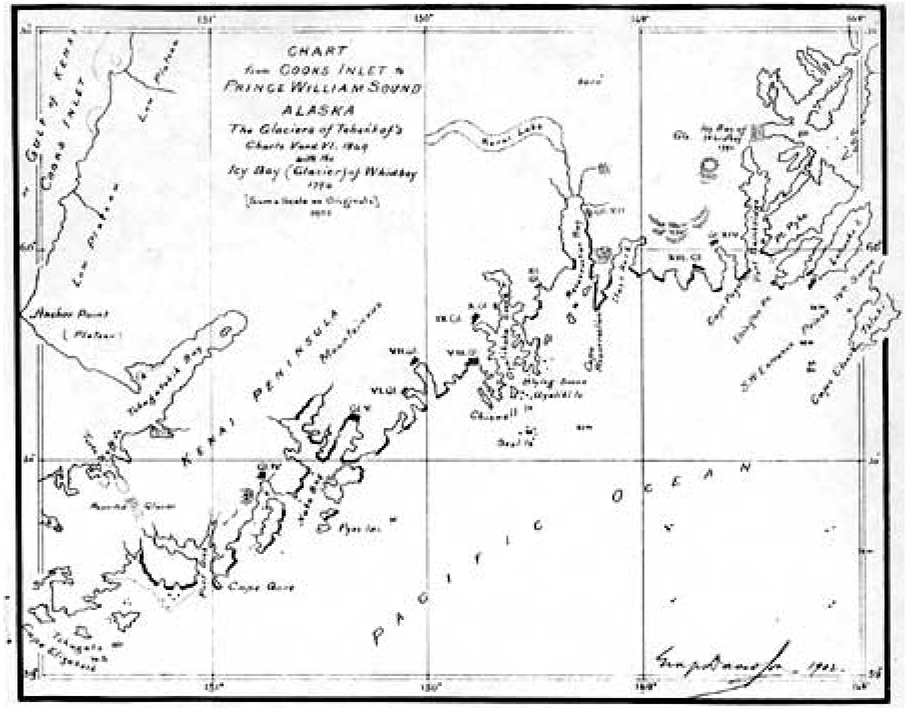
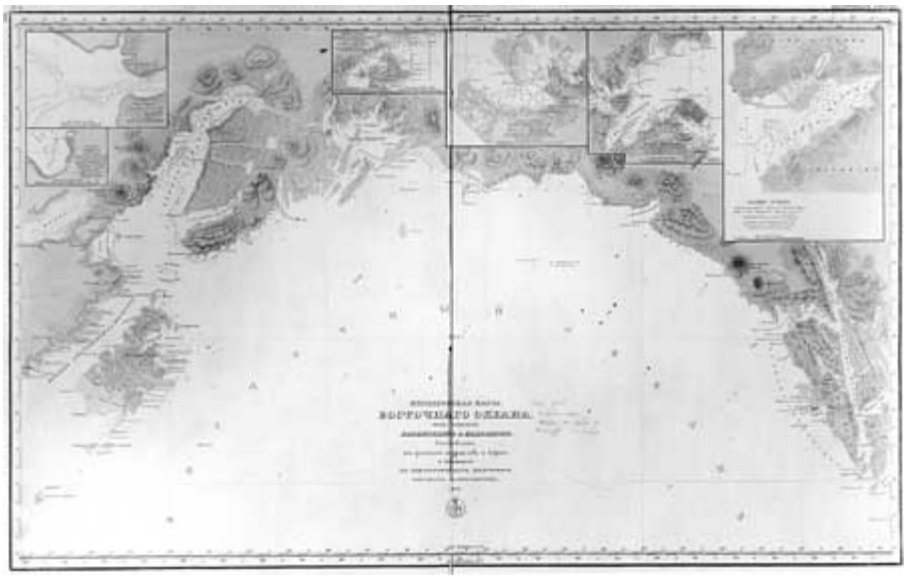
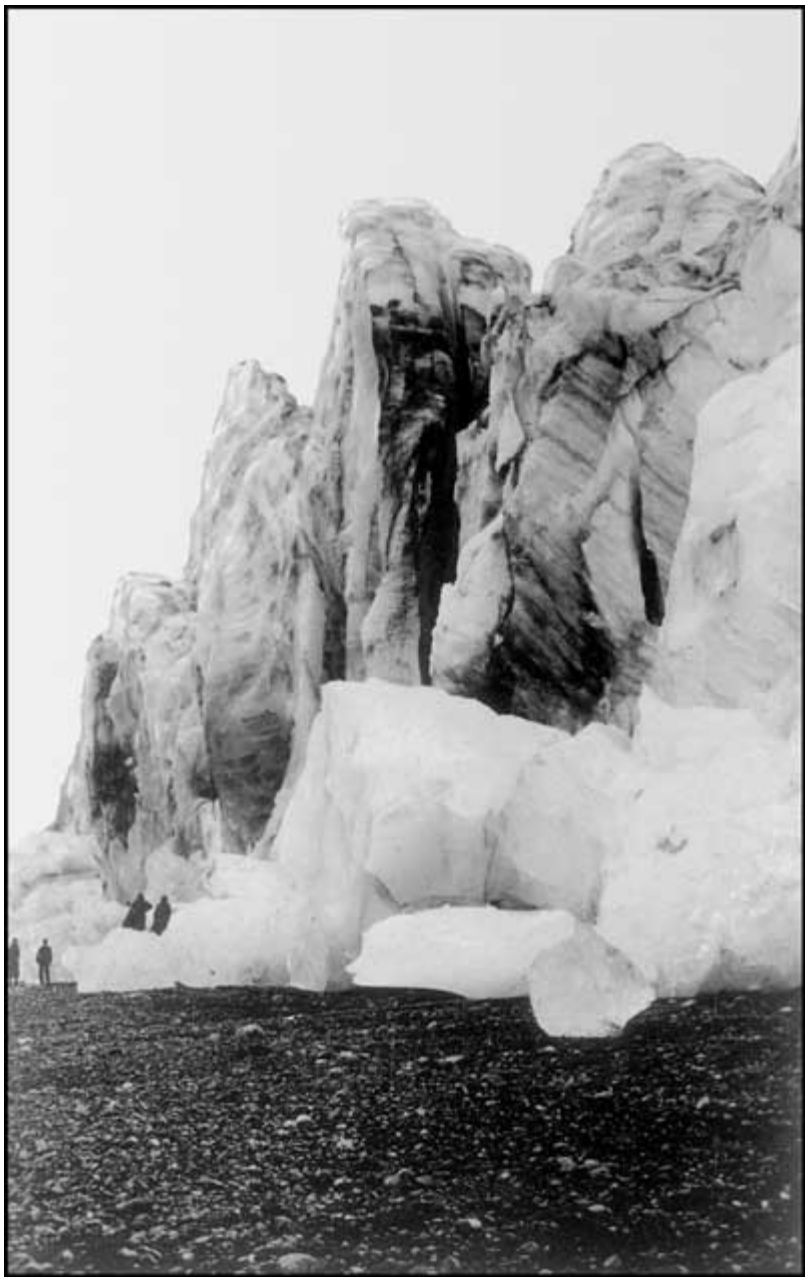
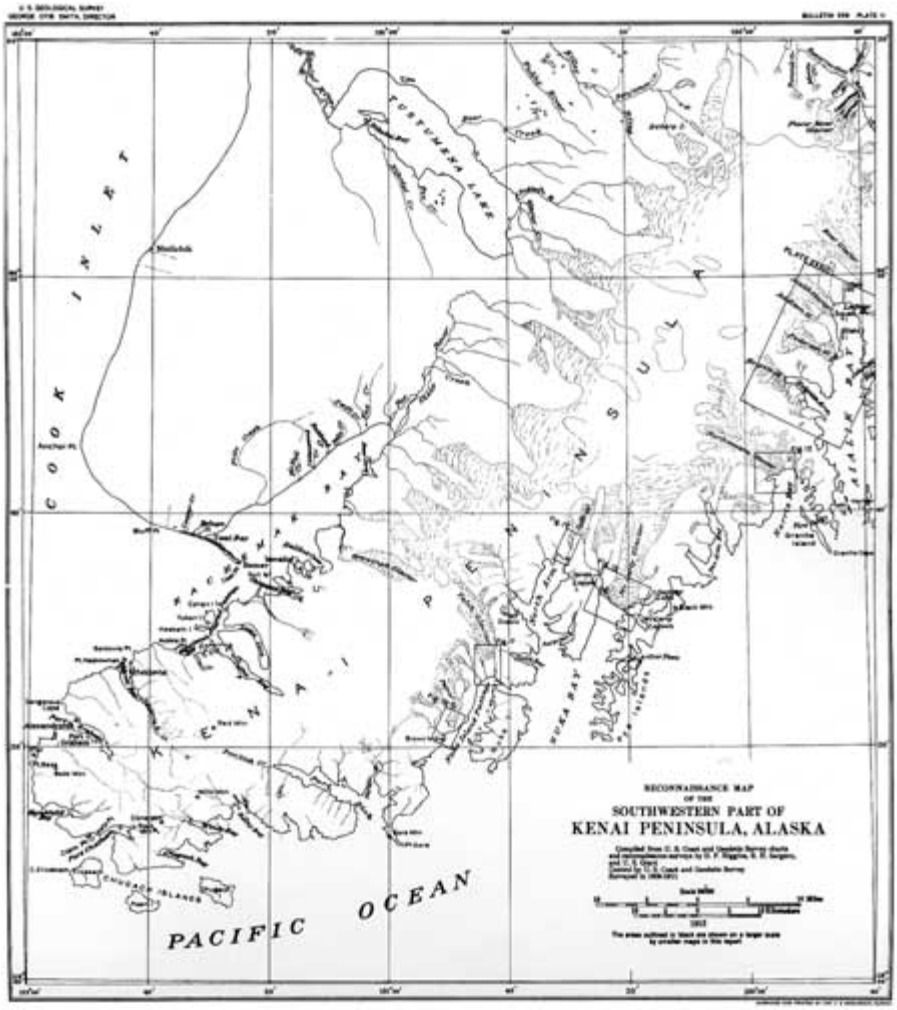
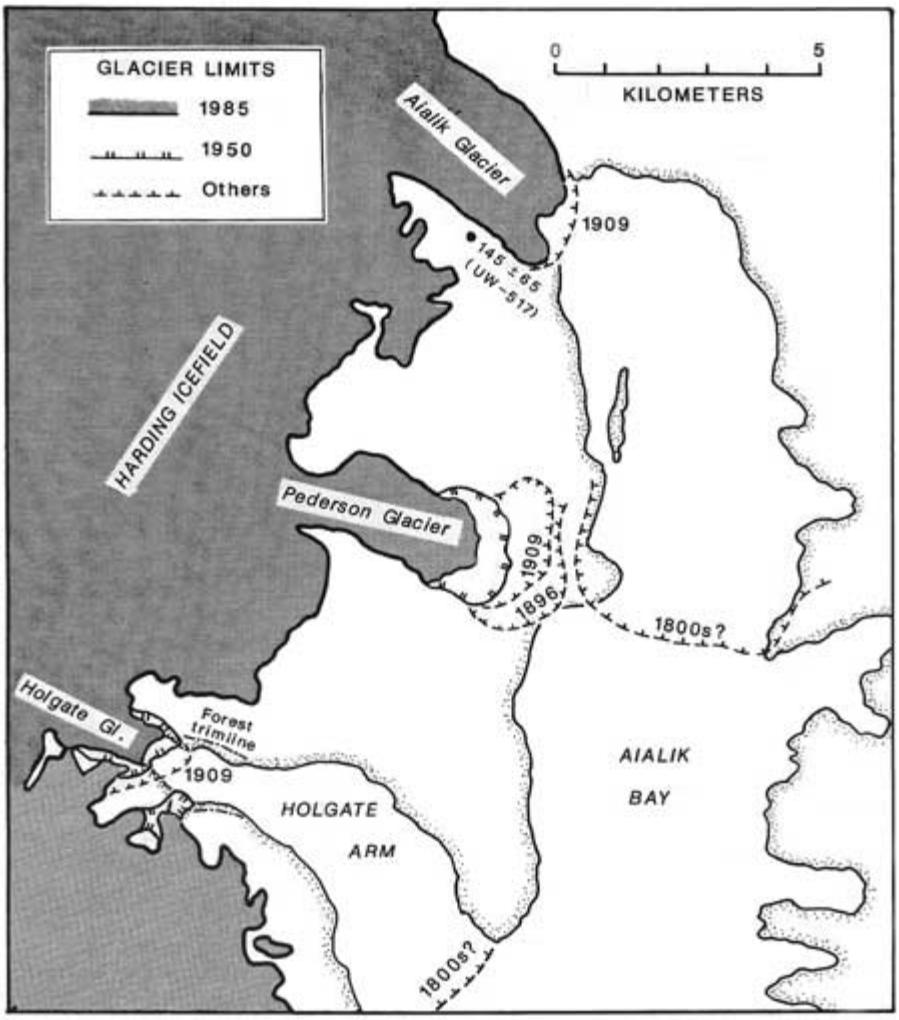
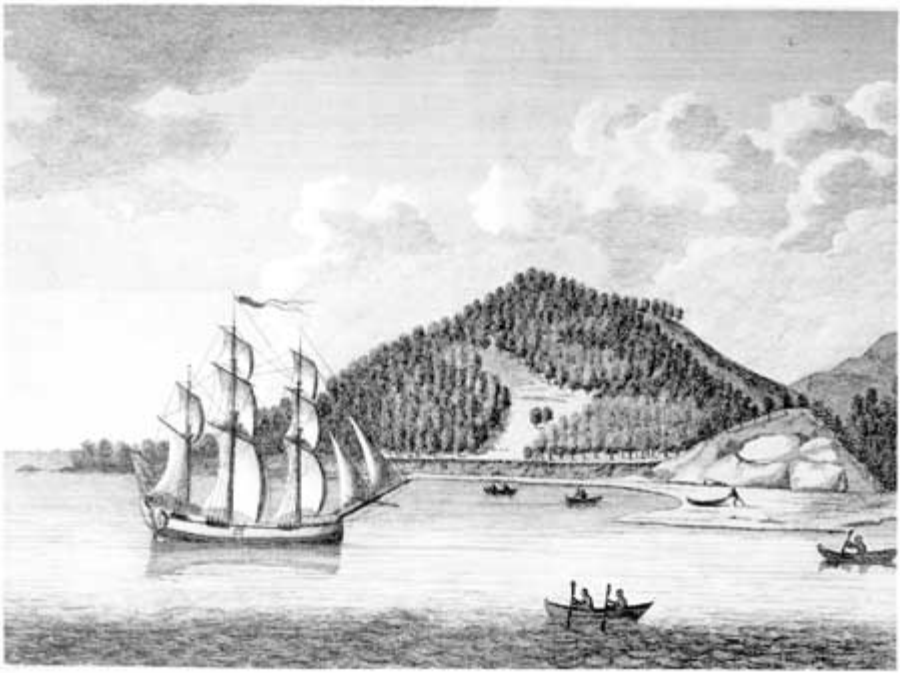


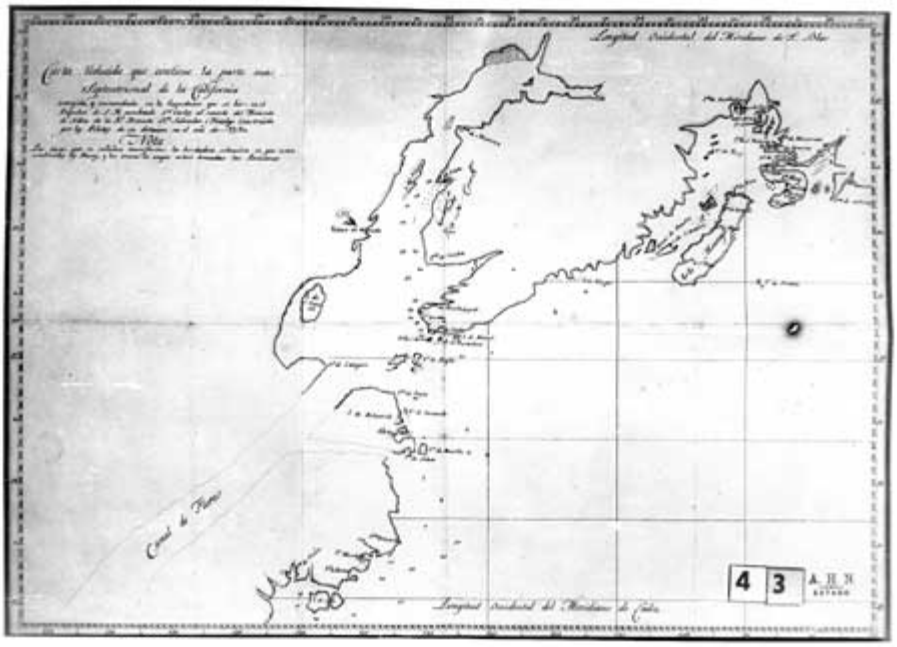


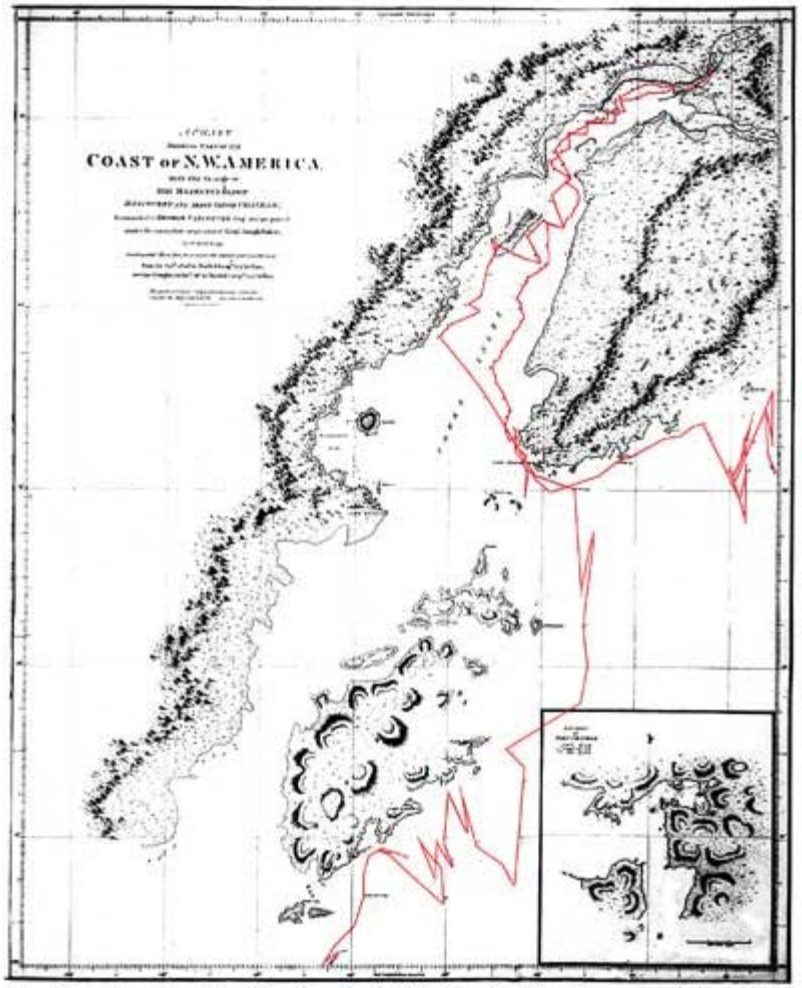


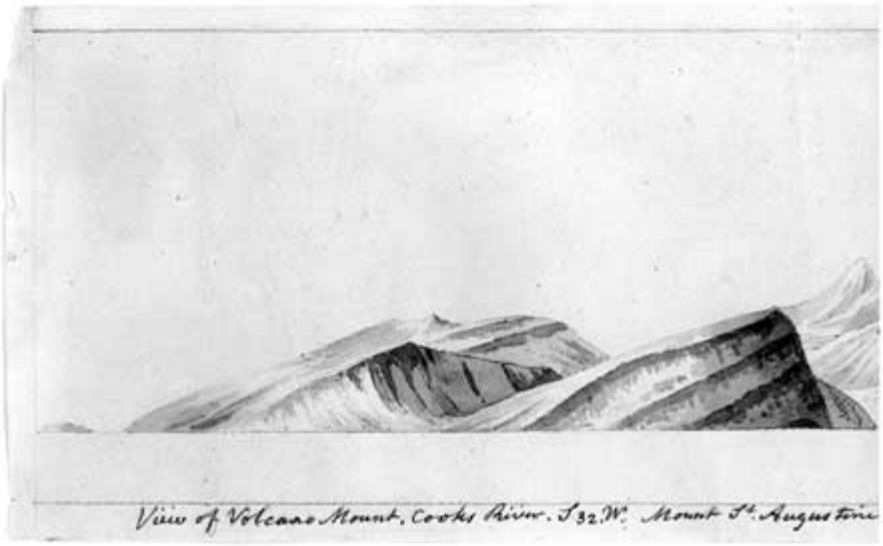


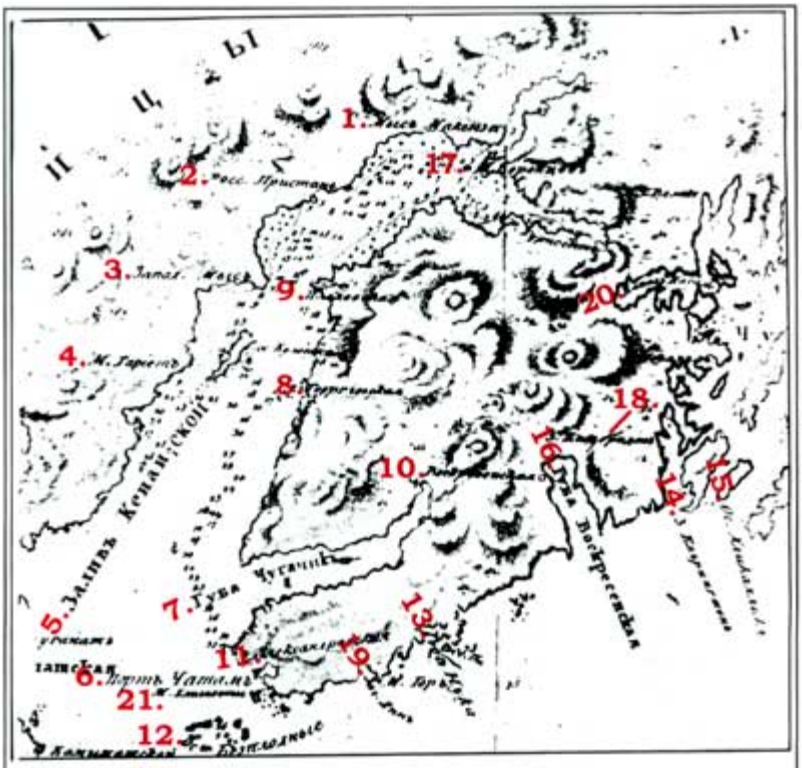





Longitud Occidental del Meridiano de S. Blas
Canal de Todos
4 3
Longitud Occidental del Meridiano de Cadiz


COAST of N.W.AMERICA



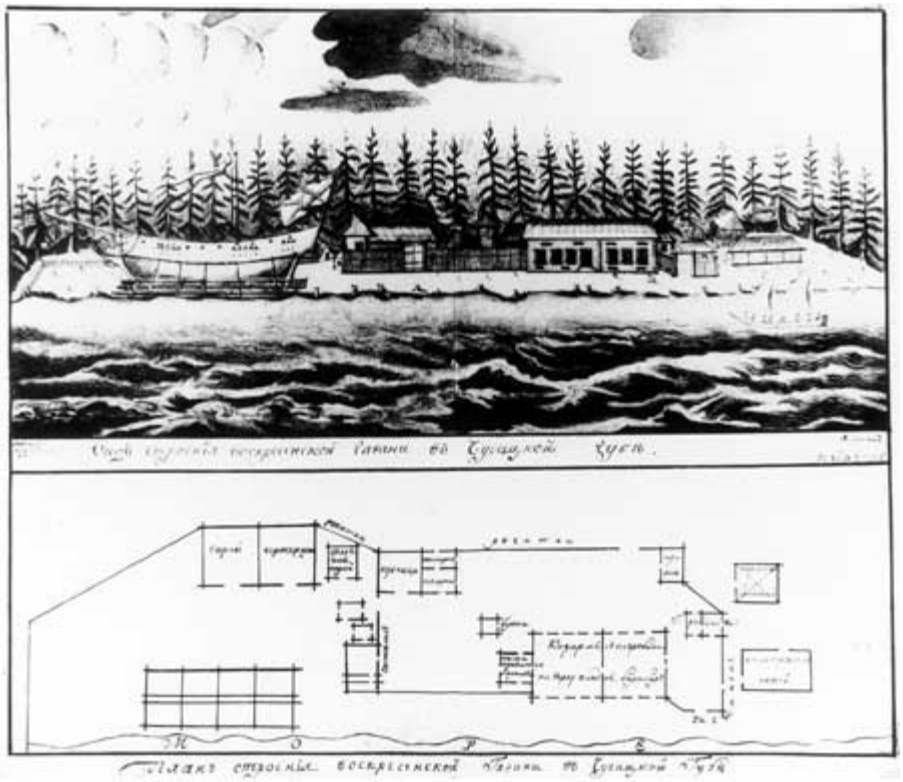


Sarychev Atlas, c. 1826, showing Outer Kenai Coast.

1. Cape Makenza
2. Ross Wharfe
3. Zapadnuiy (West) Cape
4. Gariet Cape
5. Kenai Inlet
6. Port Chatam
7. Chugachik Bay
8. Georgievskaya*
9. Pavlovskaya (?)*
10. Voskresenskaya*
11. Aleksandrovskaya*
12. Bezplodnuie (Barren) Islands
13. Nuka Bay
14. El'pington Bay
15. Hlikahlak Island
16. Voskresenskiy (Resurrection) Bay
17. Cape Vorontsov
18. Kambridge Bay
19. Lin' Bay
20. Passage Channel
21. Elisaveta Cape

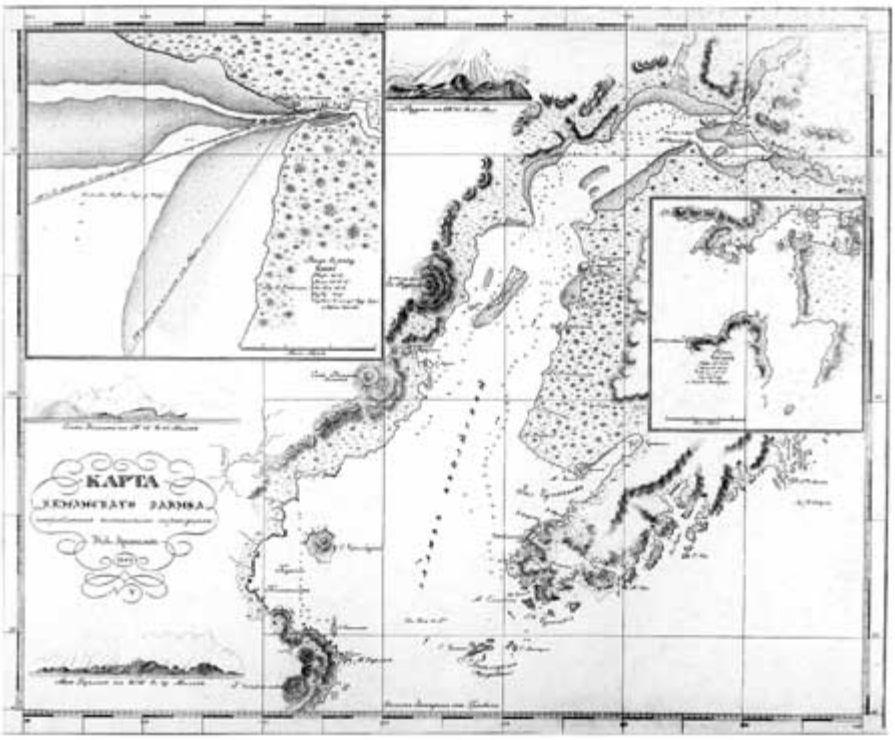
* The Russian ending of these place names suggest their use as "Fort" or "Single man post."

Translation by Katerina S. Wessels, NPS.



ВИДЪ СЕЛЕНІЯ ПРИ УГОЛЬНЫХЪ КОПЯХЪ ВЪ КЕНАЙСКОМЪ ЗАЛИВѢ.

съ нижней стороны.


КАРТА


4-8 Lowell Bay Landing. Mrs Lowells Home
in center. Scurrys camp on Left


a-4-5 Cains Hill on Admiralty Sound
Divides point between outer, an inner Harbors

Engl. Bay, Septbr. 4th 1885

Alaska Com. Co. Kodiak

To Comp. Store Dr.

To Account of J. Lowell.				
" Store Bill of July	305	67		
" " " August	37	50		
" " " Septbr.	760	20	1106	37
" " " " 24th			860	65
			1967.	2
" 29 Sea Otter and 2 pups				
" 2 Blk Bear Skins				

King's Bay. Septbr 21st 1885

Frank Lowell

To Comp. Store Dr

To	1 Lantern		2	50
"	57y Oil Print	20	12	35
"	35 " Cardinal Red	25	8	87
"	51 " Blue Drill	30	15	30
"	1 Paint Brush		2	–
"	2 Pr Hatchets #3	1.50	3	–
"	26 " Gingham	30	7	95
"	1 pr Grey Blankets		8	–
"	2 " " Economy	5.00	10	–
"	5 Yds Casimere	1 –	5	–
"	56y " Blea Cotton	25	14	19
"	26y " Red Flannel	70	18	73
"	13 " Lace Brocade	35	4	55
"	1 doz Hdkfs		3	60
"	2 " "	4.80	9	60
"	3 " Spool Cotton	1.20	3	60
"	4 Jumpers	1 –	4	–
"	2 Calico Shirts	1.50	3	–
"	2 O. Shirts	2.50	5	
"	2 Womens Shawls to 2.75		5	50
"	3 Misses "	1.50	4	50
"	4 Mt Army Caps	4 –	16	–
"	2 " C.B. "	3 –	6	–
"	2 Paper Teapots	75	1	50
"	2 Tin Kettles #4	60	1	20
"	2 " " #3	50	1	
"	3 Agate Milk Pans	40	1	20
"	[illegible]			

http://www.nps.gov/history/history/online_books/kefj/hrs/images/fig4-6.jpg[3/19/2013 5:47:18 PM]

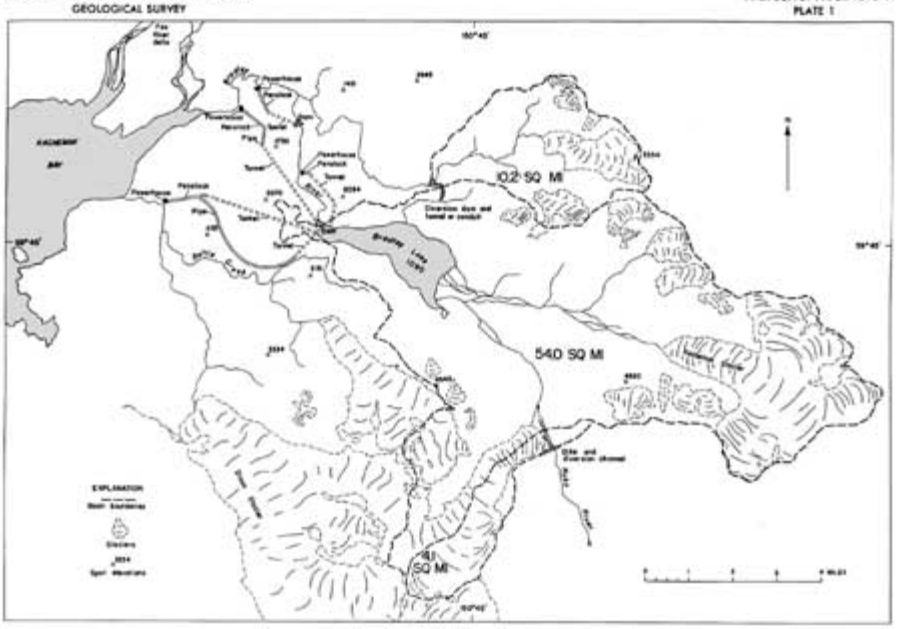
Outstandings of Engl Bay
nd Surroundings pr 1st April 1875

Engl Bay	2896	80		
Jalech & Ackmilick	429	40		
Soldovia Bay	320	10		
Ostrowky Catchikmack	188	50		
Illiada	189	15	4023	95
<u>Outstanding Stores.</u>				
Jalech Store	296	5		
Illiada Store	40	–		
Ostrowky Store	206	10	542	15
	✓	✓	4566	10
Maxw. Cohen		✓	316	55.
Oliver Smith Agt. Nenchenk		✓	6	.

Outstanding Demands per April 1st 1893
English Bay Station

Pavel Akunyngun	39	
Peter Akangae	74	80
Nicoli Aprokchee	36	10
Peter Akankook	47	
Andrea Alaly	25	76
Stephan Apavelook	18	90
Pavel Anangan (with J Lowell	11	60
Alexy Akakhee	117	85
Pehan Chingakook	105	60
Alexander Calynac	154	60
Peter Charashook	61	95
Stephan Choolyk	12	60
Pavel Choolyaak	104	.
Alexander Kamlook	64	90
Evan Kanykak	86	50
Nicoli Kashagak	59	60
Stephan Langevalyk	290	
Tyfym Monin	163	40
Metry Monin	161	40
Denis Malzoff	55	
Nasar (with J Lowell	40	50
Wasyrion Ofkew	91	85
Pavel Ofkew	74	50
Simeon Tanapee	124	25
Stephan Tovchyk	25	50
Egor Tuquebio (with J Lowell	78	60


U.S.S. MAIL STEAMER STAR - SEWARD ALASKA


102 SQ MI
540 SQ MI
SQ MI

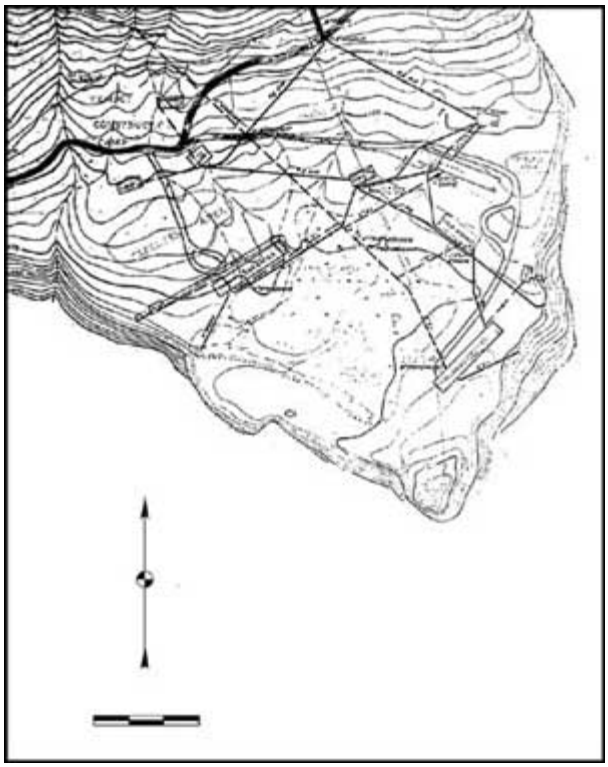

ROLF H. III

RICH STRIKE MADE BY FRANK SKEEN AT NUKA BAY

VEIN TWO AND A HALF FEET IN WIDTH AND FAIRLY PLASTERED WITH GOLD

Frank Skeen returned from Nuka Bay last evening with two hundred pounds of the richest gold-bearing quartz ever shown in this vicinity.

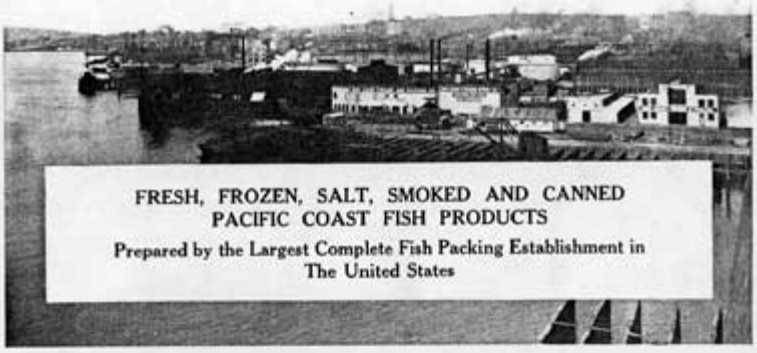

89 8 12



SAN JUAN FISHING & PACKING CO.

—INCORPORATED—

SEATTLE, U. S. A.



FRESH, FROZEN, SALT, SMOKED AND CANNED
PACIFIC COAST FISH PRODUCTS

Prepared by the Largest Complete Fish Packing Establishment in
The United States

WHOLESALE DEALERS, PACKERS and SHIPPERS

ALASKA HERRING

Halibut — Salmon — Cod

Express and Car-lot shipments to all parts of the United States and Canada

Producing Branches:

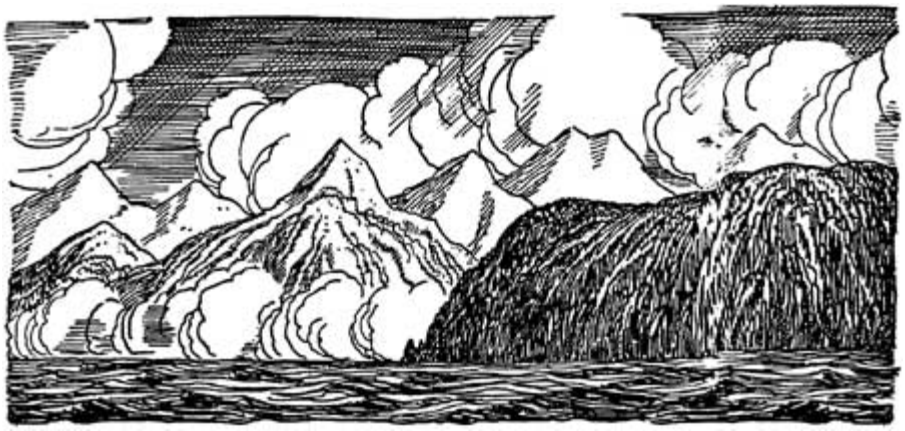
Seward, Alaska Ketchikan, Alaska Saw Mill Bay, Alaska Port O'Brien, Alaska

Pacific Fisheries Co., Ltd.
Prince Rupert, B. C.

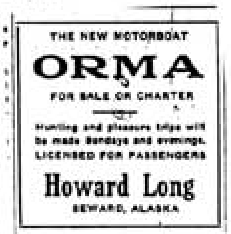

MARINE VIEW
HOWKAN


COMMERCIAL SALMON FISHING
REGULATORY
MARKER

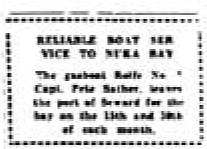

THE HALIBUT FLEET SEWARD ALASKA



Seward Gateway, May 7, 1927, 6.

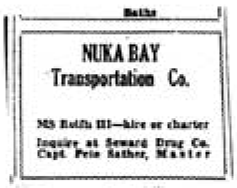


Seward Gateway, June 25, 1923, 2.



Seward Gateway, July 25, 1929, 7.

Seward Gateway, June 4, 1927, 6.



Seward Gateway, May 9, 1935, 8.

Seward Gateway, August 27, 1923, 2.