

COMPREHENSIVE BASELINE COMMERCIAL FISHING COMMUNITY PROFILES: UNALASKA, AKUTAN, KING COVE AND KODIAK, ALASKA

FINAL REPORT



PREPARED FOR:

North Pacific Research Board and
North Pacific Fishery Management Council

PREPARED BY:

EDAW with **northern economics inc**

March 31, 2005

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CHAPTER 1.0 INTRODUCTION

1.1 OVERVIEW

This project was developed under the title *“Pilot project for the development of comprehensive baseline commercial fishing community engagement and dependency profiles for the Bering Sea, Aleutian Islands, and Western Gulf of Alaska regions,”* funded by the North Pacific Research Board and the North Pacific Fishery Management Council. The goal of this project was, in part, to produce a template for the collection and analysis of community profile information for fishing communities of the North Pacific region, and to utilize that template to initially construct four key fishing community profiles. The objective in doing so was to provide resource managers and federal decision makers with information relevant to community impact analysis on an ongoing and timely basis. This project was intended to result in data and an analytic framework that will have direct applicability to the community level analysis of social and economic implications of rights-based and capacity reduction management initiatives as well as other management actions. The results of this work are also intended to provide information central to the understanding of community engagement in, and dependency on, the range of federally managed commercial fisheries, which will be useful as the basis for design of management alternative features directed toward fostering the sustained participation of fishing communities during changes in resource management strategies or under individual management actions. An explicit goal of this research was to reduce duplication of effort on issue-by-issue socioeconomic and social impact analyses that are being conducted for federal resource management agencies, and to increase the overall efficiency of socioeconomic analysis required under the National Environmental Policy Act (NEPA) and the Magnuson-Stevens Act (MSA).

These community profiles are guided, in part, by National Standard 8 under the MSA. National Standard 8 is part of a set of standards that apply to all Fishery Management Plans (FMPs) and regulations promulgated to implement such plans. Specifically, National Standard 8 states that:

Conservation and management measures shall, consistent with the conservation requirements of this [Magnuson-Stevens] Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities and (B) to the extent practicable, minimize adverse economic impacts on such communities (Sec. 301(a)(8)).

The MSA defines a “fishing community” as “... a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew, and United States fish processors that are based in such community” (Sec. 3 [16]). The National Marine Fisheries Service (NMFS) further specifies in the National Standard guidelines that a fishing community is “... a social or economic group whose members reside in a specific location and share a common dependency on commercial, recreational, or subsistence fishing or on directly related fisheries dependent services and industries (for example, boatyards, ice suppliers, tackle shops)” (63 FR

24235, May 1, 1998). “Sustained participation” is defined by NMFS as “... continued access to the fishery within the constraints of the condition of the resource” (63 FR 24235, May 1, 1998).

1.2 THE STUDY COMMUNITIES

Four key Alaska fishing communities were chosen to be profiled under this pilot project. The genesis of this project was the realization that while all are significantly engaged and dependent upon commercial fisheries of the Bering Sea/Aleutian Islands (BSAI) and/or western Gulf of Alaska, the nature of their individual engagement and dependency varies greatly, and is tied to the particular constellation of sectors and subsectors present in combination with other features of the community, including demographic and economic attributes. While each of these communities is fundamentally dependent on commercial fishing, a common fishery management action can have diametrically opposed impacts in the different communities, based on the attributes of the local fleet, local processing sector, local support service sector development, and local governance and public revenue structures, among other factors. These communities, and the main reasons for their selection, are:

- **Unalaska/Dutch Harbor** – as the Alaskan center of the processing and support sectors for the BSAI fisheries. This community has relatively minor involvement in the harvest sector in comparison to its processing involvement. It is the dominant processing community in the country, in terms of volume processed, and in the state, in terms of value of processing.
- **Akutan** – as a central community in terms of processing volume, but with very limited engagement via direct harvest participation and/or support service sector involvement. Akutan is unique in its blend of a developed processing location and Community Development Quota (CDQ) program status, and nature of the industrial enclave and traditional village distinctions seen in the community.
- **King Cove** – as a community heavily involved in a wide range of fisheries through both harvesting and processing, but which is not the type of industrial center seen in Unalaska or Kodiak. Like Akutan, it is a single processor community, but it is also the home of a significant residential fleet.
- **Kodiak** – as the Alaskan center of the western Gulf of Alaska fisheries, plus significantly engaged in the BSAI fisheries. The community also has the largest harvest fleet in the State and, like Unalaska, is the home to multiple processing entities and a well-developed support service sector. Unlike Unalaska, the processing labor force is drawn primarily from the local labor pool.

Figure INT-1 provides a map of the location of these four communities. These communities vary in their geographic relation to the fishery; their historical relationship to the fishery; the nature of their contemporary engagement with the fishery through local harvesting, processing, and support sector activity or ownership; their local governmental structures; their participation in the CDQ program; and their contemporary social and economic structures. Each of these factors alone and in combination influences the direction and magnitude of potential social impacts associated with any particular fishery management initiative.

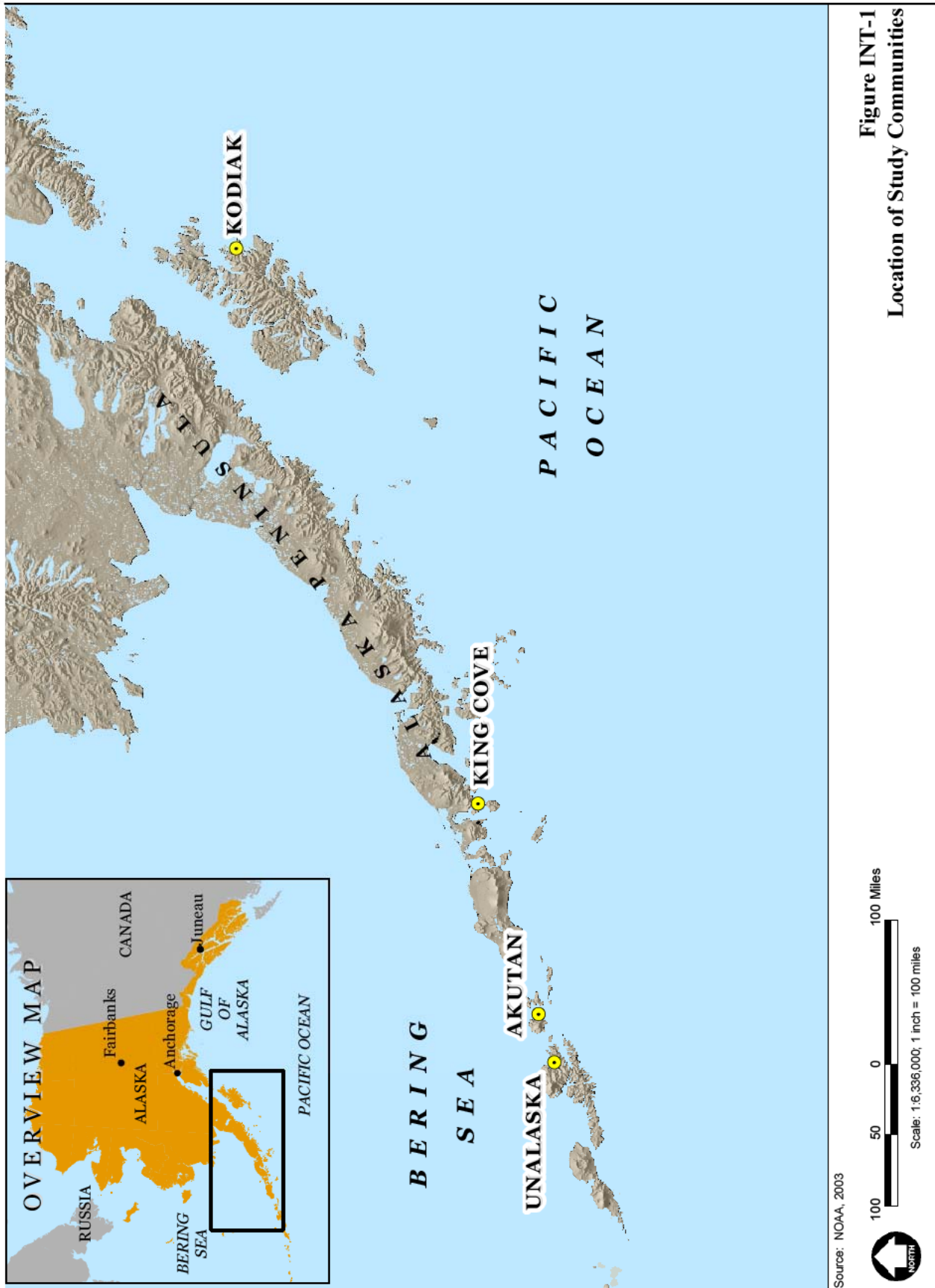


Figure INT-1
Location of Study Communities

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1.3 INFORMATION IN THE COMMUNITY PROFILES

The community profiles contain several different types of information. In broadest overview, this information comprises both quantitative data on fisheries engagement (and dependency within sectors) and narrative data that provides detailed description of the local community context that enables the quantitative data to be put in perspective. One of the goals of this project was to strike a balance between easily accessed data that are comparable across communities and data unique to specific communities that require more intense field-based collection. The specific types of information include:

- Detailed narrative on community socio-demographic context and harvest sector, processing sector, and support service sector entities and activities. Summary information is provided on public revenues as well.
- Quantitative information on fisheries harvest and processing activities.
- Spatial information on harvest activities.
- Photographs of the community and the various sectors.

1.3.1 Population and Demography

Each profile contains a detailed discussion on community population and demography, with information presented on the history of the community, total population, ethnicity, and community structure and housing types especially as relevant to, or influenced by, commercial fishing activities such as the presence of a local fleet or processing capacity. Table 1-1 provides summary information on population and housing type for the communities. In each of these communities, group quarters housing¹ is associated with processing labor force; however, as shown, these communities range widely in their overall distribution of population by housing type. As developed in the individual profiles, this distribution directly correlates with the type of development related to commercial fishing seen in the community. Akutan and Kodiak are the polar extremes in this regard. In Akutan, transient processing workers make up the large majority (almost 90 percent) of the total community population and live in group quarters in an enclave type of development removed from the historic residential community; in Kodiak, most processing workers are part of the local residential labor pool and very few people (only 2 percent of the community population) live in group quarters.

¹ All people not living in “housing units” are classified by the U.S. Census Bureau as living in group quarters. A “housing unit” is defined as a house, an apartment, a mobile home, a group of rooms, or a single room occupied (or if vacant, intended for occupancy) as “separate living quarters.” “Separate living quarters” are defined as those in which the occupants live separately from any other people in the building and that have direct access from the outside of the building or through a common hall. Under these definitions, the group quarters housing data would include processing workers living in “dormitory” or “bunkhouse” type housing with shared kitchen or mess hall facilities, etc., but may not capture all processing workers housed at the worksite in company provided housing if at least some of those residential structures are classified as apartment buildings.

Table 1-1. Population and Group Quarters Housing Information by Community, 2000

Community	Total Population	Group Quarters Population		Non-Group Quarters Population	
		Number	Percent of Total Population	Number	Percent of Total Population
Unalaska	4,283	2,192	51.18%	2,091	48.82%
Akutan	713	638	89.48%	75	10.52%
King Cove	792	299	37.75%	493	62.25%
Kodiak	6,334	146	2.30%	6,188	97.97%

Source: U.S. Bureau of the Census 1990 STF2, Census 2000 Summary File 1.

Figure INT-2 provides a visual summary of community demographic comparisons. This graphic displays the proportion of the population in group quarters, the Alaska Native and non-Native population split in non-group quarters housing (that is, among the long-term residents of the community), and the total minority population in group quarters housing (of relevance to fisheries development based on environmental justice considerations). As is also shown, these are indeed very different communities. The extremes in the distribution of population by group housing type is evident, as is the percentage of Alaska Native population in the non-group housing proportion of the community. As shown in the bar graphic, Kodiak has by far the largest Alaska Native population in terms of absolute numbers, but the smallest Alaska Native population in terms of percentage of non-group quarters residents. The group quarters data are also represented in a way that points out the demographic differences in the group quarters populations.

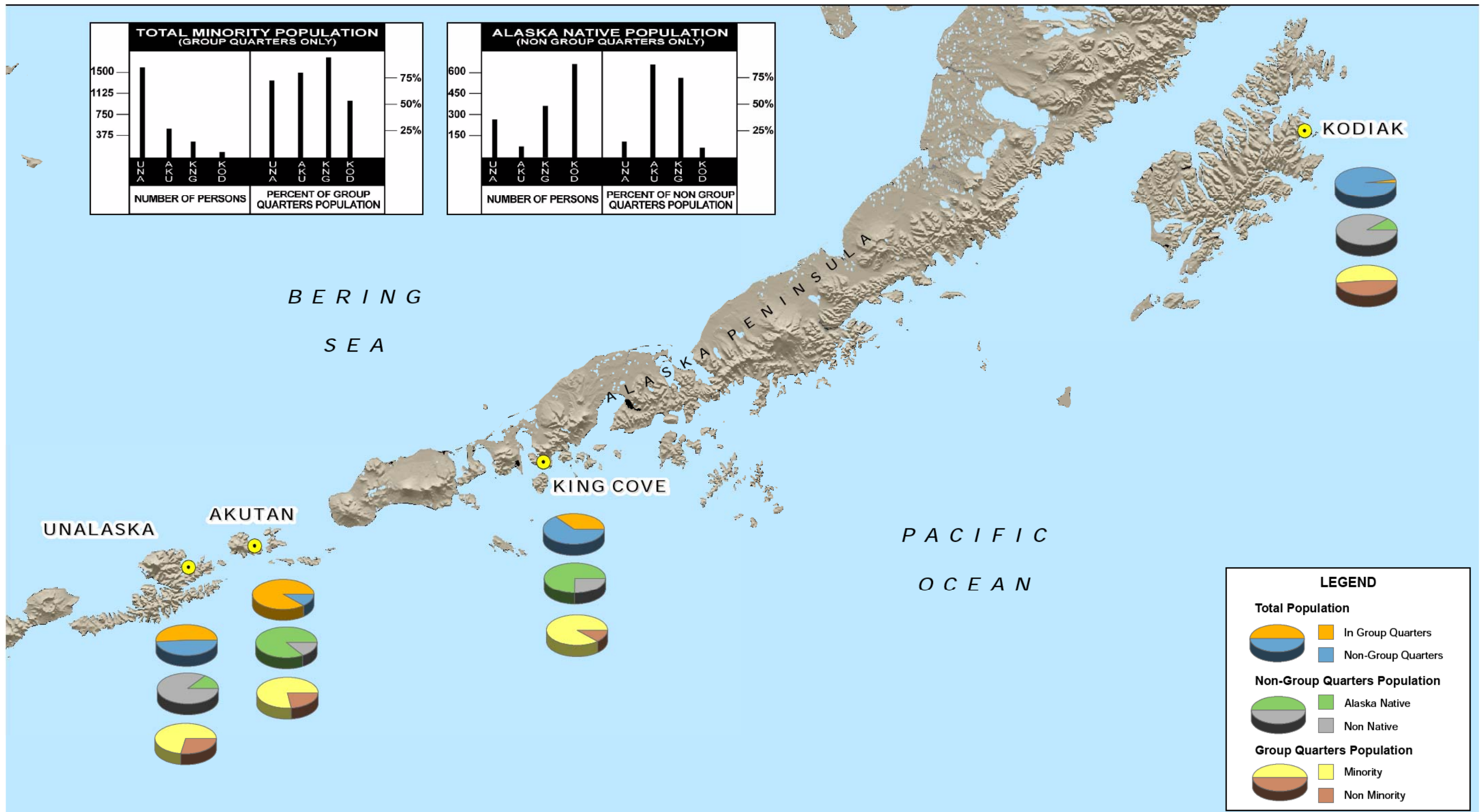
Age and sex information is also presented for each community and is summarized in Table 1-2. As shown, Unalaska, Akutan, and King Cove have marked differences in male-to-female ratios, and this can be directly attributed to fisheries development, as described in the individual profiles. The school enrollment statistics for each community are also presented in the individual profiles, along with a discussion of the influence of fisheries development on family versus adult worker migration patterns.

Table 1-2. Population by Age and Sex by Community, 2000

Attribute	Unalaska		Akutan		King Cove		Kodiak	
	N	%	N	%	N	%	N	%
Male	2,830	66%	549	77%	472	60%	3379	53%
Female	1,453	34%	164	23%	320	40%	2955	47%
Total	4,283	100%	713	100%	792	100%	6334	100%
Median Age	36.5 years		40.2 years		34.9 years		33.5 years	

Source: U.S. Bureau of Census.

Table 1-3 presents summary household information presented for each community. As shown, the communities also vary widely along a number of household and income dimensions, with the communities with the greatest degree of support service and indirect sector development (Unalaska and Kodiak) having much higher median family incomes than the other communities.



Source: NOAA, 2003

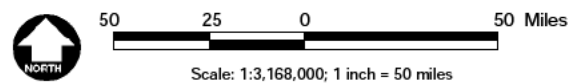


Figure INT-2
Community Demographic Comparisons, 2000

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Table 1-3. Selected Household Information, 2000

Community	Total Housing Units	Vacant Housing Units	Total Households	Average Persons Per Household	Median Household Income	Family Households	Average Family Size	Median Family Income
Unalaska	988	154	834	2.51	\$69,539	476	3.27	\$80,829
Akutan	38	4	34	2.21	\$33,750	18	3	\$43,125
King Cove	207	37	170	2.9	\$45,893	117	3.53	\$47,188
Kodiak	2,255	259	1,996	3.1	\$55,142	1,362	3.64	\$60,484

Source: U.S. Bureau of Census.

1.3.2 Quantitative Description of the Harvest Sector: Local Vessels and Permit Holders

Quantitative information on the local vessel fleet, as represented by local vessel ownership, is presented for each community. This information is derived from the data on vessels owned by residents of any given community that is collected by the Commercial Fisheries Entry Commission (CFEC) when owners renew their vessel registration. These data are not considered confidential and are available on the Internet at www.cfec.state.ak.us/Mnu_Summary_Info.htm. By request, analysts at CFEC extracted data for residents of the profiled communities for the years 1995 through 2002 to show trends over that time span. Table 1-4 summarizes the information for the most recent available year (2002) and shows the large difference between the study communities in terms of the size and attributes of the local fleets. As discussed in the individual community profiles, however, there were some challenges with these data, where vessels owned by individuals not residing in the community would show up in the individual community statistics. This could only be uncovered through specific knowledge of the communities and is more problematic for communities with smaller fleets where the presence of a few vessels can have a dramatic impact on overall community data.

Table 1-4. Vessel Characteristics of Vessels Owned by Residents by Community, 2002

Characteristics	Unalaska	Akutan	King Cove	Kodiak
Total Number of Vessels	50	6	80	592
Number of Vessels Fishing	28	3	32	283
Number of Vessels by Size				
0-26 feet length overall	15	5	48	254
27-32 feet length overall	16	1	0	63
33-49 feet length overall	10	0	21	148
50-59 feet length overall	5	0	9	65
60-124 feet length overall	4	0	2	57
125+ feet length overall	0	0	0	5
Average Age of Vessels (years)	23	11	19	19
Number of Vessels by Hull Type				
Aluminum	16	6	25	242
Wood	7	0	20	32

Characteristics	Unalaska	Akutan	King Cove	Kodiak
Fiberglass	21	0	31	213
Steel	6	0	4	92
Number of Vessels with Refrigeration	4	0	15	139
Number of Vessels Using Diesel	37	0	46	368

Source: CFEC Vessel Registration Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Note: CFEC analysts provided vessel registration data of all resident vessel owners by community and year. Vessel registration data are available at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm. The data were summarized by Northern Economics, Inc.

Information on the distribution of permit holders is also presented for each community. The data in the tables in the individual profiles provide an indication of the diversity of ownership permit patterns based on major fishery types. Table 1-5 displays summary information on the number of persons in each community who own permits in one, two, three, or all four of the major fishery groups in Alaska for 2002.

Table 1-5. Distribution of Permit Holders across Fisheries by Community, 2002

Fishery	Unalaska	Akutan	King Cove	Kodiak
Persons with Permit in only One Major Fishery Group				
Salmon (SM)	8	-	24	202
Groundfish (GF)	9	2	7	64
Halibut and Sablefish (HS)	13	4	4	64
Crab/all other species (CO)	8	-	3	74
Persons with Permits in Two Major Fishery Groups				
SM, GF	3	-	11	16
SM, HS	2	-	4	24
SM, CO	-	-	1	41
GF, HS	10	1	-	32
GF, CO	10	1	-	45
HS, CO	2	-	-	11
Persons with Permits in Three Major Fishery Groups				
SM, GF, HS	-	-	7	8
SM, GF, CO	-	-	2	23
SM, HS, CO	2	-	-	23
GF, HS, CO	6	-	-	48
Persons with Permits in All Four Major Fishery Groups				
SM, GF, HS, CO	1	-	1	54
Total of All Permit Holders				
All Fisheries	74	8	64	729

Source: CFEC Permit Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Note: CFEC analysts provided permit ownership of residents of each community by year, although these data are available at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm.

Information is also presented on estimated earnings by permit holders by community. This information is based on the annual CFEC data report called "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City." As described at the CFEC site on the Internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm, these reports, commonly referred to as the *Census Area Reports*, show information on the number of permits issued and fished; the number of permit holders; and the number of fishermen, pounds, and estimated gross earnings. In 2002, CFEC issued and tracked 171 different fishery permits, each representing a specific fishery as defined by primary species, gear, area, and vessel size. Table 1-6 shows a summary of the CFEC Census Area Reports by community for 2002, in which specific permits are aggregated into 14 gear and species groups. For consistency, the same 14 groups are shown for each community in this report regardless of activity levels. Detailed tables that show each of the permit types owned and fished by residents are contained in Appendix A. As described in the individual community profiles, there were problems with permit addresses not corresponding with actual residence that, in turn, confound interpretation of economic results. This was particularly true for Akutan, where permits owned by a single high-producing non-resident vessel owner sporadically show up in the data, seriously skewing community totals for an otherwise very small pool of local vessels and permits, and in Unalaska/Dutch Harbor, where the number of non-residents listing the community as their residential address on permits seems to be much greater than encountered in the other project communities. As was the case with vessel data, it would appear there is no way to screen for these issues other than acquiring a close working knowledge of the communities themselves.

Table 1-6. Summary Catch and Earnings Estimates for Permit Holders by Species Group, 2002

Year	Unalaska	Akutan	King Cove	Kodiak
Fishery	Permits Fished			
Halibut	24	5	10	213
IFQ Sablefish	8	-	-	44
Salmon Seine	-	-	15	77
Salmon Drift Net	3	-	8	22
Salmon Set Net	-	-	10	60
Salmon Other Gear	-	-	-	1
Herring	15	-	-	35
Groundfish Longline	7	-	-	23
Groundfish Jig	5	1	5	49
Groundfish Pot	3	-	15	50
Groundfish Trawl	-	-	7	34
Tanner Crab	2	-	2	177
King Crab	5	-	4	40
All Other Fish/Shellfish	3	-	-	35
Total All Permits Fished	75	6	76	860
Fishery	Estimated Gross Revenue (dollars)			
Halibut	\$1,015,498	\$236,284	\$491,559	\$23,074,404
IFQ Sablefish	\$766,264	-	-	\$3,848,203
Salmon Seine	-	-	\$655,015	\$4,896,203
Salmon Drift Net	\$86,212	-	\$170,731	\$453,004
Salmon Set Net	-	-	\$200,148	\$1,517,924
Salmon Other Gear	-	-	-	\$16,280
Herring	\$53,718	-	-	\$751,749
Groundfish Longline	\$35,678	-	-	\$795,113

Year	Unalaska	Akutan	King Cove	Kodiak
Groundfish Jig	\$13,342	\$7,595	\$58,243	\$429,640
Groundfish Pot	\$276,163	-	\$1,049,864	\$4,938,840
Groundfish Trawl	-	-	\$533,677	\$10,549,802
Tanner Crab	\$328,396	-	\$333,995	\$4,642,355
King Crab	\$736,216	-	\$618,668	\$7,580,406
All Other Fish/Shellfish	\$28,215	-	-	\$664,458
Total (All Species)	\$3,339,703	\$243,880	\$4,111,900	\$64,158,380
Fishery	Percentage of Estimated Gross Revenue			
Halibut	30.41%	96.89%	11.95%	35.96%
IFQ Sablefish	22.94%	-	-	6.00%
Salmon Seine	-	-	15.93%	7.63%
Salmon Drift Net	2.58%	-	4.15%	0.71%
Salmon Set Net	-	-	4.87%	2.37%
Salmon Other Gear	-	-	-	0.03%
Herring	1.61%	-	-	1.17%
Groundfish Longline	1.07%	-	-	1.24%
Groundfish Jig	0.40%	3.11%	1.42%	0.67%
Groundfish Pot	8.27%	-	25.53%	7.70%
Groundfish Trawl	-	-	12.98%	16.44%
Tanner Crab	9.83%	-	8.12%	7.24%
King Crab	22.04%	-	15.05%	11.82%
All Other Fish/Shellfish	0.84%	-	-	1.04%
Total (All Species)	100.00%	100.00%	100.00%	100.00%

Source: Commercial Fishing Entry Commission "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City" from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

While CFEC makes every effort to provide as much information as possible in the Census Area Reports, they do not release catch and earnings information for a particular permit if fewer than four permit holders participate in the fishery in a given year. Because of these confidentiality restrictions, catch and revenue estimates for smaller communities for a particular permit type are often not available. In these cases, the study team used an algorithm based on average catch and earnings for that permit to provide estimates where data are otherwise not reported. (A more detailed explanation of the algorithm used is provided in the introduction to the detailed table in the Appendix A.) By assuming that "confidential data" for the community are likely to be close to the average for the permit, the team is able to produce "reasonable estimates" of total catch and earnings, even when exact data are not available. It should also be noted that halibut revenues were not available for 2002. Revenues were estimated based on estimated prices from 2001. Of critical note is that there are sharp differences in reported earnings by vessel owners and permit holders for Unalaska, as described in that profile.

Information on gross landing patterns of the local fleet and permit holders is also presented for each community. This is an important factor in characterizing the economic relationship of the local harvesters to the larger economy of the community. When a vessel owner or permit holder delivers catch to processors inside their home community, revenues will accrue to that community in different ways than if local vessel or permit holders deliver to processors outside of their home community (that is, to processors located in other communities). This would include both tax revenue accruing to local jurisdictions as well private sector economic benefits deriving from activities related to the deliveries, such as processing, shipping, support service demand, and the like. Characterizations of landings by local vessels were based on information provided through a

special information request made to the CFEC. In the individual profiles, breakouts are available by vessel owners and permit holders by species/fishery and gear type. The data are based on “residence” information maintained by CFEC² on all persons who register vessels or own state-issued fishing permits, and on fish-ticket information originally provided to CFEC by the Alaska Department of Fish and Game (ADFG). Landing location information—whether the landing was made inside or outside the community—was based on lists of processors in each community developed by the study team³ from a variety of sources, including ADFG intent to operate files, ADFG Commercial Operator Annual Reports, ADFG Fish-Tickets, and from personal knowledge and experience dealing with Alaska fisheries.⁴ Summary level information on landings inside and outside of the communities by their resident vessels is shown in Figure INT-3. As shown, the pattern varies widely by community, with Kodiak (a much larger volume of landings made outside the community) and King Cove (a much larger volume of landings delivered inside the community) being at opposite ends of the continuum. Crew member information is also presented for each community, as communities also directly benefit from the harvest sector through participation of residents as crew, as well as through the engagement of local vessel owners and permit holders. Beginning in 2000, CFEC has produced estimates of crew members by community, based on the number of permit holders in the community, plus the community residents who have applied for a Crew Member License with ADFG. A full description of the report and information communities across the state can be found in the CFEC Report: “Permit Holder and Crew Member Counts by Census Area and City of Residence” at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm. The estimates for crew members and permit holders are calculated as follows:

Crew Members

- Crew member license data for this report were provided by ADFG. Note: any corrections, updates or changes made to the crew member license file will not appear on this report.
- Crew members who are permit holders in other fisheries are not required to purchase a crew license; therefore, they may not appear in the crew member license data.
- Individuals who, despite the above, had both a permit and a crew license are not counted as crew members in this report to avoid double counting.
- Crew members who did not provide a social security number when purchasing a crew license are not included in this report.

² While CFEC makes every effort possible to collect and maintain accurate records, it does not verify the accuracy of residence information submitted by vessel owners or permit holders. CFEC specifically asks vessel owners and permit holders to provide both their permanent address and, if necessary, a temporary mailing address. The information is believed to be accurate to the extent that vessel owners and permit holders provide accurate information to CFEC.

³ An official and verified list of processors physically located in communities was not available for this study.

⁴ In this study, processors associated with a given community included all processors that were known to have a processing facility physically located in, or adjacent, to the community. Buyers of fish that did not also process fish in the community were excluded, as were catcher processors whose owners listed the community as their place of residence. In the case of Dutch Harbor, floating processors that operate every year in bays adjacent to the community were included; these four processors were Northern Victor, Bering Star, and Arctic Star, all currently owned by Icicle Seafoods, and Arctic Enterprise (1995-1998 only) currently owned by Trident Seafoods. (For the years 1999-2003, Arctic Enterprise was associated with the community of Akutan.)

- Residency of crew members is based on the address they provided on their crew member license application.

Permit Holders

- Residency of permit holders is based on the residency claimed on their permit application.
- Only current holders of permits were included in this report.

Holders of vessel permits and special use permits such as experimental, test fishing, educational, reservation, and hatchery are excluded from this report. Summary information by community is provided in Table 1-7.

Table 1-7. Estimated Number of Permit Holders and Crew Members by Community, 2003

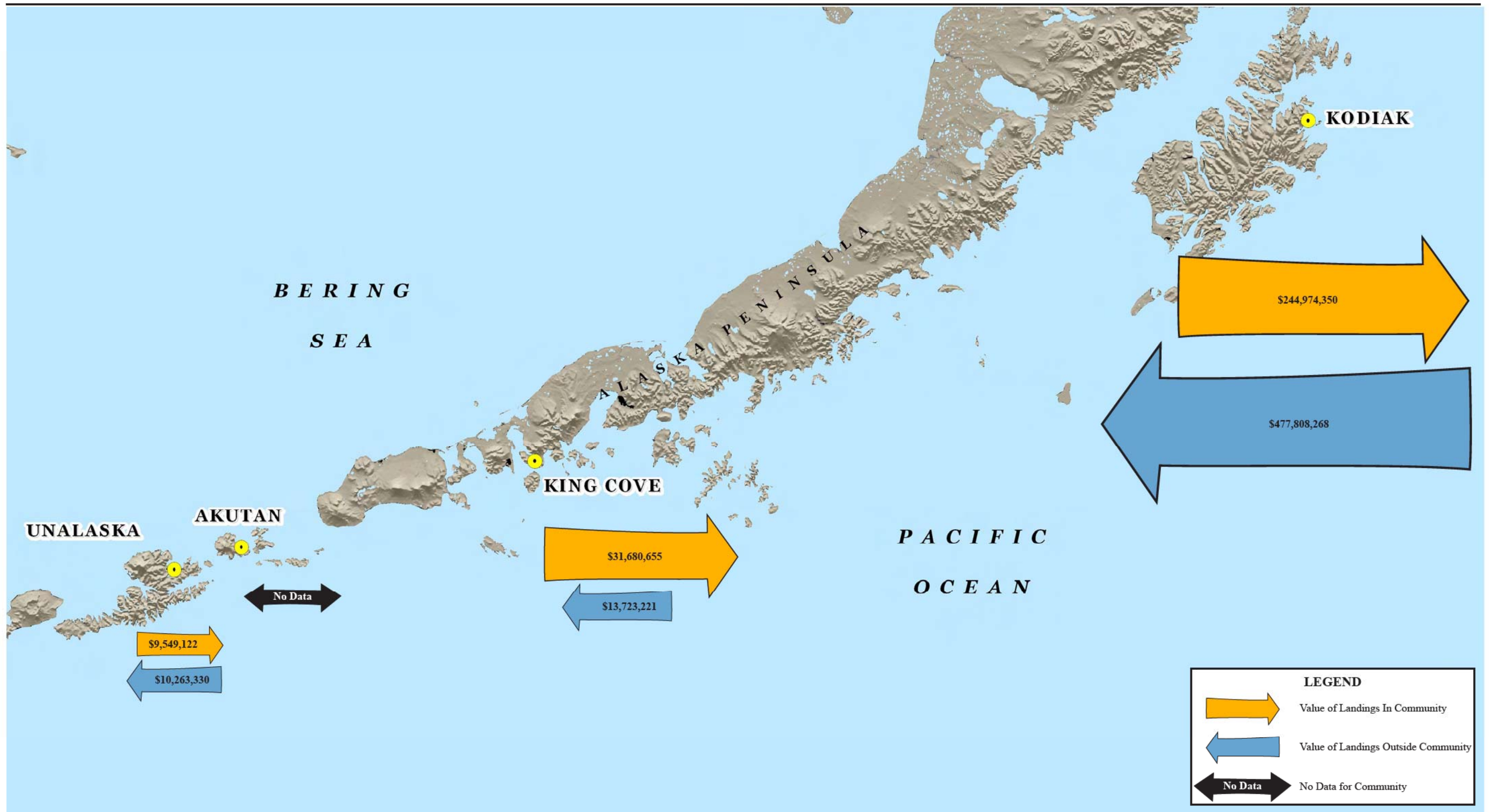
Community	Permit Holders	Crew Members	Total
Unalaska	54	187	241
Akutan	10	15	25
King Cove	54	110	164
Kodiak	600	752	1,352

Source: CFEC permit holder and crew member counts by census area and city of residence report, accessed via www.cfec.state.ak.us/Mnu_Summary_Info.htm.

1.3.3 Spatial Distribution of Harvester Effort

To the extent permitted within confidentiality restrictions, spatial distribution of harvest effort by local fleets was mapped for each community. Figure INT-4 provides an overview of groundfish harvest patterns by community, and Figure INT-5 provides an overview of salmon harvest patterns by community. Within each community profile, changes in patterns over time are shown, as well as a breakdown by gear type. As shown in the overview maps, the “footprint” of the community fleets varies widely, with Kodiak vessels ranging over a broad area, and other community’s fleets fishing closer to home.

While the use of spatial data was a central part of the effort on this project, they proved problematic in several respects. Confidentiality restrictions did not permit a disclosure of the full footprint of activity for any of the communities; this was especially problematic for the communities with smaller fleets. Second, halibut data were inconsistent in areas recorded and at times appear in the groundfish data and at other times do not. Crab data were also problematic, and a usable dataset for analysis consistent with groundfish and salmon analysis could not be obtained within the time and resource constraints of this project. At best, the data that are displayed show general trends for the areas of highest use for each of the communities. This information is considered important in future analyses of potential conservation area closures.



Source: NOAA 2003 and Northern Economics



Figure INT-3
Comparison of Value of Landings
Inside and Outside Home Community
by Local Vessel Owners, 1995-2002

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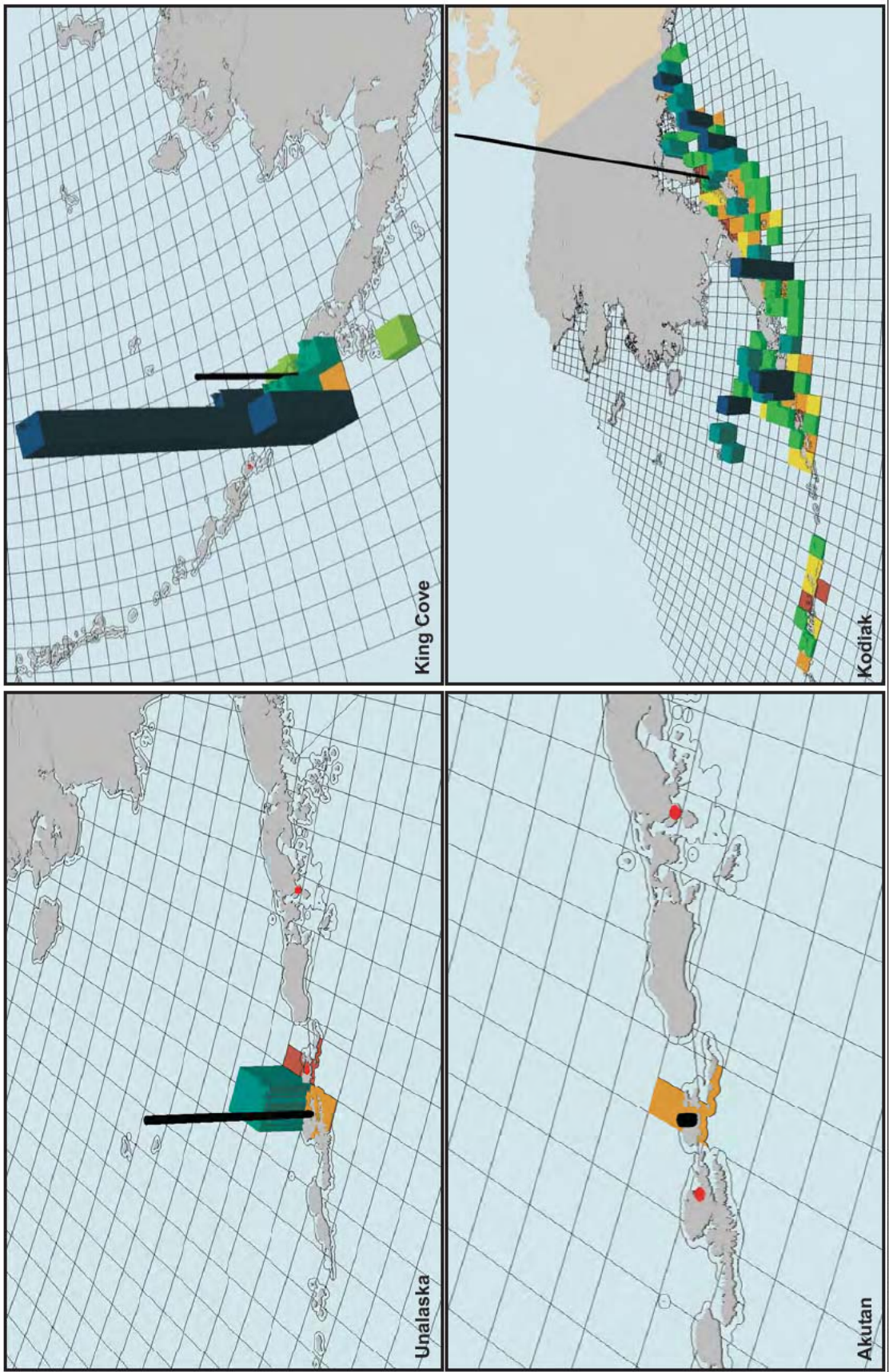


Figure INT-4
Spatial Distribution of Groundfish Catch
by Locally Owned Vessels by Community, 1995-2002

Source: Northern Economics, Alaska Department of Fish and Game, ESRI

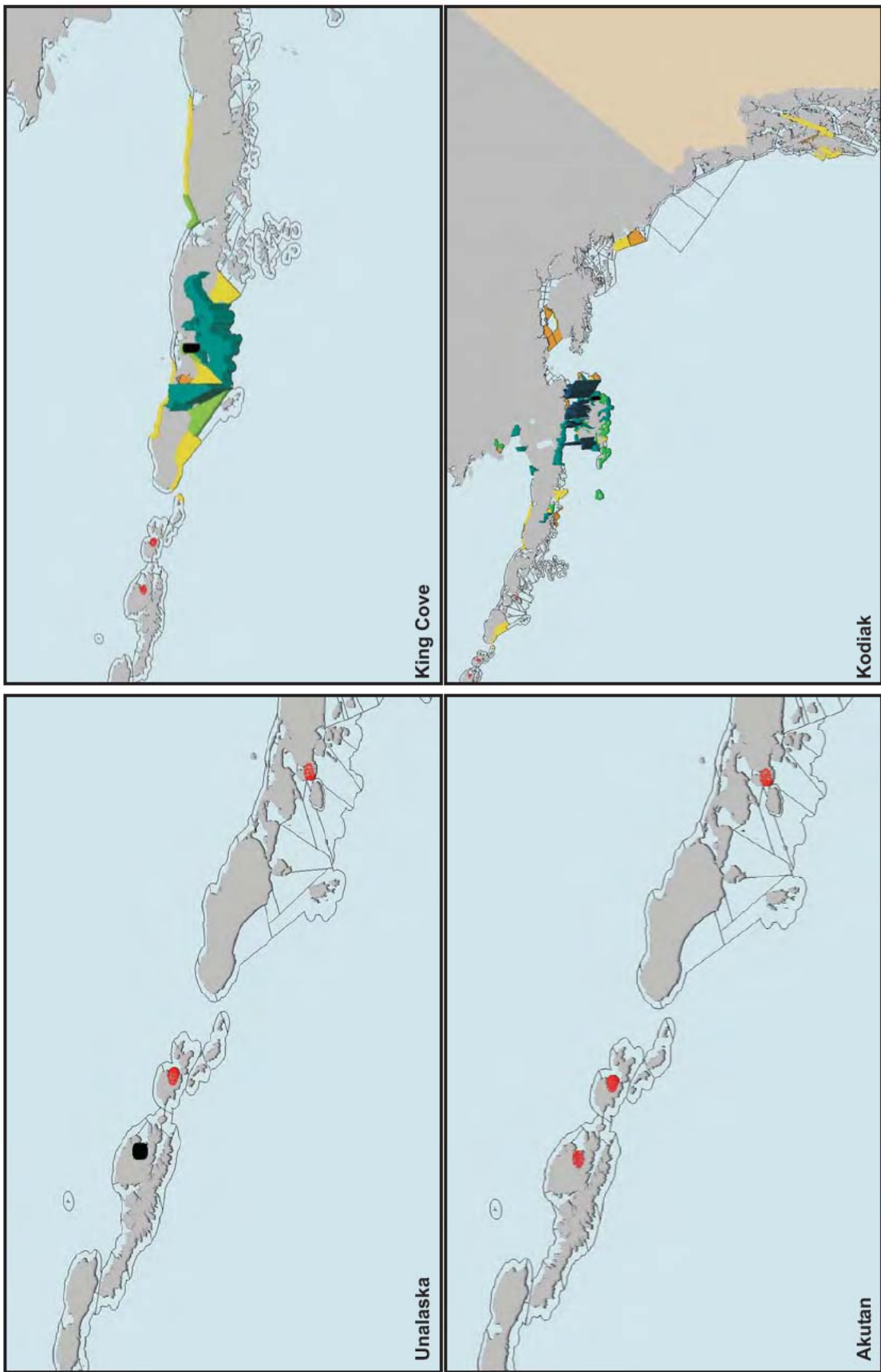


Figure INT-5
Spatial Distribution of Salmon Catch
by Locally Owned Vessels by Community, 1995-2002

Source: Northern Economics, Alaska Department of Fish and Game, ESRI

1.3.4 Narrative Community Fleet Characterization

For each community, a narrative characterization of the local fleet is provided. This information is based primarily on data gathered during fieldwork in the communities themselves. This type of information has proven critical for the understanding of fleet dynamics. Further, this work has pointed out the limitations of the quantitative data, where the quantitative data vary sharply from observational and interview data regarding conditions on the ground in the communities. For example, in the case of Unalaska, clearly the quantitative data, especially for permit holders but also for vessel owners, include individuals who are not residents of the community, but who do fish out of the community during at least some fishing seasons. One of the lessons learned, or reinforced, during this project was that while quantitative data are necessary for analysis, there is no substitute for a ground-based, detailed understanding of community dynamics in order to adequately characterize the local fleet well enough to understand likely outcomes of any given future fishery management action.

1.3.5 Quantitative Description of the Processing Sector

Unique counts of processors for each community were developed from lists of processors that submitted fish-tickets to ADFG indicating that the delivery was made in the community shown, as provided by CFEC analysts. In theory, only shore-based processors will indicate in the fish-tickets that landings were in a particular community—fish-tickets submitted by floating processors and catcher processors either do not indicate a port in this field or should indicate they were at-sea. In general, floating processors were excluded; however, several processors regularly anchored in and around Unalaska and Akutan and processed groundfish and/or crab over long stretches of the years. These processors were included as local processors. Table 1-8 provides a summary of the number of processors active in the profiled communities over the years 1995 through 2002. Although Akutan shows two processors for some of the years, these were in fact operated by a single owner. Akutan and King Cove then represent one processor towns, while Unalaska and Kodiak represent communities with a diversity of processors. In the case of Akutan, there is a single processor with a very small local fleet, while in King Cove, there is a relatively strong local fleet delivering to the processor. Among the multi-processor communities, Unalaska has a small local fleet, and Kodiak has the largest fleet in Alaska. These differences, as described in the individual community profiles, substantially influence the nature of community engagement and dependence on the fisheries.

Table 1-8. Number of Active Processors by Community, 1995-2002

Community	1995	1996	1997	1998	1999	2000	2001	2002	Unique Count over All Years
Unalaska	11	9	10	10	11	10	10	9	15
Akutan	1	1	1	1	2	2	2	2	2
King Cove	1	1	1	1	1	1	1	1	1
Kodiak	16	11	11	10	14	12	11	9	25

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Detailed processing information by species is also presented by community, derived from data collected from all processors by ADFG in the form of a Commercial Operators Annual Report (COAR). Each processor must submit this report to ADFG in the month following the end of each year. Unfortunately, for the purposes of understanding the differences in processor-based engagement and dependency, data for Akutan and King Cove are confidential. Table 1-9 summarizes COAR data for processors in Kodiak and Unalaska for 2002.

Table 1-9. Processing Summary for Unalaska and Kodiak, 2002

Species	Community	
	Unalaska	Kodiak
Number of Processors		
cod, Pacific (gray)	7	8
crab, tanner, bairdi	-	6
halibut, Pacific	6	8
herring, Pacific	3	4
king crab, all species	6	3
other species	7	8
pollock, walleye	4	8
sablefish (blackcod)	8	7
salmon, chinook	1	4
salmon, chum	1	6
salmon, coho	-	6
salmon, pink	-	6
salmon, sockeye	1	6
Pounds Purchased		
cod, Pacific (gray)	46,212,551	98,904,875
crab, tanner, bairdi	-	351,093
halibut, Pacific	3,970,066	7,560,330
herring, Pacific	x	2,288,620
king crab, all species	8,084,136	x
other species	19,186,083	36,457,641
pollock, walleye	937,675,051	57,259,237
sablefish (blackcod)	1,453,266	1,671,338
salmon, chinook	x	166,966
salmon, chum	x	3,611,517
salmon, coho	-	3,114,165
salmon, pink	-	57,693,880
salmon, sockeye	x	7,452,904
Ex-Vessel Value		
cod, Pacific (gray)	\$9,390,728	\$29,542,404
crab, tanner, bairdi	-	\$772,834
halibut, Pacific	\$8,119,898	\$16,790,831
herring, Pacific	x	\$529,089
king crab, all species	\$41,791,928	x
other species	\$21,741,954	\$4,929,973
pollock, walleye	\$110,229,714	\$6,203,733
sablefish (blackcod)	\$4,355,778	\$4,925,115

Species	Community	
	Unalaska	Kodiak
salmon, chinook	x	\$56,640
salmon, chum	x	\$594,894
salmon, coho	-	\$514,615
salmon, pink	-	\$5,142,074
salmon, sockeye	x	\$4,485,340

Source: ADFG Commercial Operator Annual Report Summary, provided to Northern Economics, Inc. in September 2004 by ADFG.

Note: An "x" indicates the data are confidential and cannot be released.

For Unalaska and Kodiak (Akutan and King Cove data are again confidential) a relative local processing sector dependency is calculated in the individual community profiles, using a "value added" approach. The idea behind this calculation is that the difference between ex-vessel value and wholesale value is small for some species and great for other. While ex-vessel values are useful as a proxy for relative importance in terms of local tax revenues, they do not necessarily accurately reflect the "worth" of any given species to the processor, as some species are likely to be more profitable than others. Table 1-10 displays "value added" information for Unalaska and Kodiak processors for 2002, and percentage "dependency" calculations based on total added value. Added value, as used in this table, is simply the difference between ex-vessel and wholesale value. Processor costs, of course, would need to be taken into account to truly arrive at an accurate value added figure, but these costs are unknown. As a result, the figures presented should be taken as a very rough look at the issue of added value, and viewed in conjunction with the ex-vessel and wholesale value information also presented in the individual profiles. Nevertheless, sharp differences between the nature of processing in Unalaska and Kodiak are highlighted by these data, with the central importance of pollock in Unalaska being evident, as is the more diversified nature of Kodiak processing.

Table 1-10. Processing Value Added and Processor Percentage Dependency for Unalaska and Kodiak, 2002

Species	Community	
	Unalaska	Kodiak
Total Value Added		
cod, Pacific (gray)	\$19,277,041	\$1,191,452
crab, Tanner, bairdi	-	\$316,703
halibut, Pacific	\$1,032,026	\$4,115,384
herring, Pacific	x	\$875,381
king crab, all species	\$9,766,094	x
other species	\$13,498,264	\$14,458,612
pollock, walleye	\$142,975,310	\$11,638,076
sablefish (blackcod)	\$908,066	\$1,614,862
salmon, chinook	x	\$45,391
salmon, chum	x	\$585,267
salmon, coho	-	\$1,353,009
salmon, pink	-	\$10,073,639

Species	Community	
	Unalaska	Kodiak
salmon, sockeye	x	\$7,255,496
All Species	\$187,456,801	\$53,523,272
Percentage of Value Added		
cod, Pacific (gray)	10.3%	2.2%
crab, tanner, bairdi	-	0.6%
halibut, Pacific	0.6%	7.7%
herring, Pacific	x	1.6%
king crab, all species	5.2%	x
other species	7.2%	27.0%
pollock, walleye	76.3%	21.7%
sablefish (blackcod)	0.5%	3.0%
salmon, chinook	x	0.1%
salmon, chum	x	1.1%
salmon, coho	-	2.5%
salmon, pink	-	18.8%
salmon, sockeye	x	13.6%
All Species	100.0%	100.0%

Source: ADFG Commercial Operator Annual Report Summary, provided to Northern Economics, Inc. in September 2004 by ADFG.

Note: "Value added" is calculated by subtracting Total Ex-Vessel Value from Total Wholesale Value.

Negative value added indicates that a significant proportion of the amount purchased was custom processed outside the community.

An "x" indicates the data are confidential and cannot be released.

1.3.6 Narrative Community Processor Characterization

For each community, a narrative characterization of the local processing sector is provided. This information is based primarily on data gathered during fieldwork in the communities themselves. Like the narrative local fleet characterization, this type of information has proven critical for the understanding of local processor dynamics. Further, this work has pointed out the limitations of the quantitative data, especially for those communities where processing is centrally important to understanding community level fisheries engagement and dependency and where processing data are confidential. Additionally, this type of information is useful for understanding the dynamics of local fleet and processor interactions. One of the lessons learned, or reinforced, during this project was that while quantitative data are necessary for analysis, there is no substitute for a ground-based, detailed understanding of community dynamics in order to adequately characterize the local processing sector well enough to understand likely outcomes of any given future fishery management action.

1.3.7 Spatial Distribution of Harvests Delivered to Processors

The study team was unable to obtain processing "footprint" information for the communities parallel to the harvest footprint information for the local fleet. A part of the original study design was to define the spatial relationships of processing effort in the communities to their delivery fleet's efforts

(that is, to answer the question, in its most basic form, of “where do the resources come from that get processed in this community?”). The inability to obtain these data was a major “lesson learned” during the study process. This lack of information is a serious impediment to understanding the spatial nature and extent of community engagement and dependency on fisheries in general, and the potential impacts of area-based fishery conservation measures on any particular community specifically. It is the intent of the study team to continue to pursue avenues that would facilitate this type of analysis.

1.3.8 Local Support Service Sectors

A narrative discussion of the support service sector is provided for each community. Depending on the community, these businesses are major contributors to the local economy, and they provide a mechanism whereby “multiplier effects” are realized in the communities. Information on support services is not readily accessible from existing sources and was gained through field efforts in each of the communities. These businesses are sensitive to changes in fisheries management and overall fisheries trends and influence many aspects of community life. As described in the community profiles, Unalaska and Kodiak have well-developed support service sectors. King Cove also has a significant amount of support service activity for its size, while Akutan is nearly devoid of these types of businesses, which clearly has an impact on the way commercial fishing related economic activity is felt, or not felt, in the community.

1.3.9 Local Governance and Municipal Revenues

Each community profile contains a discussion of the impact of commercial fishing on municipal revenues. Table 1-11 shows some of the general differences between the communities profiled in terms of relative contribution of different revenue sources for 2003.

Table 1-11. Municipal Revenues by Community, 2003

Revenue Source	Unalaska	Akutan*	King Cove	Kodiak
Local Operating Revenues				
Taxes	\$13,957,188	\$614,300	\$926,188	\$7,879,249
License/Permits	\$18,610	\$0	\$850	\$38,063
Service Charges	\$650,198	\$79,303	\$303,212	\$2,050,628
Enterprise	\$13,377,296	\$334,749	\$1,225,156	\$5,972,076
Other Local Revenue	\$3,059,837	\$116,482	\$34,079	\$742,066
Total Local Operating Revenues	\$31,063,129	\$1,144,834	\$2,489,485	\$16,682,082
Outside Operating Revenues				
Federal Operating	\$321,496	\$0	\$31,729	\$0
State Revenue Sharing	\$106,094	\$24,987	\$26,020	\$63,501
State Municipal Assistance	\$79,220	\$7,523	\$14,910	\$203,517
State Fish Tax Sharing	\$7,021,677	\$720,466	\$460,245	\$627,719
Other State Revenue	\$0	\$0	\$12,146	\$51,667
Other Intergovernmental	\$1,114,823	\$139,994	\$0	\$3,650
State/Federal Education Funds	\$3,729,094	\$0	\$0	\$0
Total Outside Revenues	\$12,372,404	\$892,970	\$545,050	\$950,054
Total Operating Revenues	\$43,435,533	\$2,037,804	\$3,034,535	\$17,632,136

Revenue Source	Unalaska	Akutan*	King Cove	Kodiak
Operating Revenue Per Capita	\$9,899	\$2,724	\$4,117	\$2,973
State/Federal Capital Project Revenues	\$0	\$408,219	\$294,907	\$1,310,547
TOTAL ALL REVENUES	\$43,435,533	\$2,446,023	\$3,329,442	\$18,942,683

*Note: 2002 revenues are used for Akutan as 2003 data are not yet available.

Source: DCED Website, 2001, 2002; personal communication, 2004.

In terms of local governance, each profile describes the nature and structure of local jurisdictions. Beyond the differences in the localized structure of the fisheries and the associated private sector businesses in the communities that tend to channel fishery management related social or socioeconomic impacts, there are also differences in public sector structures and these also influence the nature and magnitude of potential localized social impacts. Whether or not communities are within a borough has a direct impact on the way that fishery-associated tax revenues are distributed among and between communities, including regional communities not directly involved with the fishery. Unalaska is the only community profiled that is not located within an organized borough, and detailed information on municipal revenues directly linked to local fishing activity is presented in that community profile. Kodiak is a part of the Kodiak Island Borough (KIB), and KIB revenues, and their relationship to fishery related activity, are described in that community profile. Akutan and King Cove, on the other hand, are part of the Aleutians East Borough (AEB), and fishery related revenues for the AEB are not described in the individual profiles but are presented in overview in Appendix B.

1.4 INSIGHTS GAINED

Over the course of this project, a number of insights were gained, or lessons learned. In general, the quantitative data manipulation proved to be more challenging than expected. Three specific insights have come out of this:

Insight 1: Regulations regarding the confidentiality of data significantly complicate the ability to obtain data about communities⁵. Because the pilot community profiles were not explicitly related to ongoing management actions, direct access to confidential primary data was not an option⁶. The catch and revenue data acquisition process used for development of the pilot community profiles was overly ambitious—undoubtedly because researchers at EDAW and Northern Economics have had direct access to primary confidential data for many other projects and know first-hand the types of information that can be developed and presented. The experience gained in development of the profiles for NPRB in 2003-2004 will be used to streamline future data acquisition processes and ultimately will result in more useful information overall for the profiles developed.

⁵ State of Alaska regulations regarding confidentiality of catch and revenue information prohibit the ADFG or the CFEC from providing information to the public that includes fewer than four entities, while federal regulations use a standard of three or fewer entities. The regulations allow employees of these agencies access to the primary data; access to the primary data is also granted on a case-by-case basis, to outside consultants or researchers that are working on projects explicitly related to ongoing management actions.

⁶ A stated objective of these projects is to demonstrate the types of information that can be developed by “the public” without direct access to primary data.

Insight 2: Given the confidentiality restrictions, there is no single approach to data acquisition and development that is appropriate for all communities. The approach taken for a community with large numbers of both harvesters and processors must be very different from the approach taken for communities with lower levels of participation. There must also be recognition and acceptance, early in the development of the profiles, that the level of detail provided can vary significantly depending on levels of participation.

Insight 3: A step-wise and iterative data acquisition process tailored to each community will result in more information overall and will also be more cost effective than a process that attempts to acquire all information for all communities in a single comprehensive data request. In particular, data requests must focus on obtaining the highest-priority pieces of information early on. Once the highest-priority information is obtained, then requests for successively lower-priority information should be submitted. This approach, while it may initially appear more cumbersome for both researchers and the data providers, will undoubtedly streamline the complexity of the data requests and eliminate many of the problems that occur if the opposite approach is taken.

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UNALASKA



CHAPTER 2.0

UNALASKA/DUTCH HARBOR

Unalaska is located approximately 800 miles southwest of Anchorage and 1,700 miles northwest of Seattle. Unalaska is the 11th largest city in Alaska, with a reported year-round population of just over 4,000. Dutch Harbor is the official name of the city's port and is also often applied to the portion of the city of Unalaska located on Amaknak Island, which is connected by bridge to the rest of the community on Unalaska Island. The geographic feature of Dutch Harbor itself, along with Amaknak Island, is fully contained within the municipal boundaries of the city of Unalaska, which encompasses 115.8 square miles of land and 98.6 square miles of water. Not part of an organized borough, Unalaska falls within the Aleutians West Census Area.

The Unalaska region of the Aleutians experiences a cool, wet, and windy maritime climate. Typical winter temperatures hover around freezing with January temperatures ranging from 25 to 35°F. Typical summertime temperatures range from 43 to 53°F. Average annual precipitation is 57.7 inches. Wind, light rain, and fog are common in the summer, but the wettest conditions generally occur October through December. Moderate to high winds occur throughout the year. The mean wind speed is 17 miles per hour (mph) with a prevailing wind direction of south-southeast. High winds can occur during the winter and have been recorded up to 172 mph (December 26, 1988).

2.1 OVERVIEW

Unalaska is in a unique position with respect to the Bering Sea and Aleutian Islands (BSAI) fisheries. It is the site of both the most intense direct and indirect fishery economic sector activity among all the communities in the region. More BSAI crab and groundfish are processed in Unalaska than in any other port, and the support service sector is developed to a greater degree in Unalaska than any other community on the Bering Sea. As a result, Unalaska is a community whose economy is strongly tied to Bering Sea commercial fisheries in general, as well as to several individual fisheries. Incorporated as a First Class City in 1942, Unalaska has been variously described as a growing, developing, and maturing community. Whatever descriptor is chosen, during the span of years since the development of the crab fishery, Unalaska has seen a great deal of community development. The changes that have accompanied this development are both obvious and subtle. Scenes of the physical setting of Unalaska may be found in Plate UNAK-1a and Plate UNAK-1b. Some of the physical layout of the community is portrayed in Plate UNAK-2, and a map of the community is provided in Map UNAK-1.

2.2 COMMUNITY DEMOGRAPHICS

Unalaska is a demographically complex community. Prehistorically and historically a traditional Aleut village, contemporary Unalaska has a diverse population that saw a great deal of growth in the last quarter of the twentieth century. This growth and diversification was directly attributable to the commercial fishing industry. Some of the attributes of the contemporary community may be seen in Plate UNAK-3a, Plate UNAK-3b, Plate UNAK-3c, and Plate UNAK-3d.

2.2.1 Total Population

It has always been difficult to ascertain total population figures for Unalaska or, to state it more accurately, it is difficult to interpret and compare time series figures given for the population of Unalaska. Over the years, Unalaska has been a “less than permanent” home to many individuals whose length of stay in the community has varied. Some individuals may stay in Unalaska only a fishing season or two; others may stay for many years before moving on. These individuals have been counted in different ways, or not counted at all, in a number of censuses. Caution must therefore be used in interpreting total population figures from various sources.¹ Table 2-1 provides census figures for each decade from 1900 through 2000. As shown, the population only exceeded 400 in one census year (1900) and did not surpass 300 in any census year from the turn of the century up until 1980 (while noting that these data do not take into account the thousands of military personnel stationed in and around the community during World War II when Unalaska was a significant base for both Army and Navy forces). The growth seen from 1980 onward can be directly traced to the development of the contemporary commercial fishery processing and support activity that has its roots in the Bering Sea crab fishery and subsequently diversified into other fisheries in general and the pollock fishery, which has proven to be a local economic mainstay, in particular.

Table 2-1. Unalaska Population by Decade, 1890-2000

Year	Population
1890	317
1900	428
1910	281
1920	299
1930	226
1940	298
1950	173
1960	218
1970	178*
1980	1,322
1990	3,089
2000	4,178

*Note: Other sources put the 1970 census figure at 342 residents.

Source: Historic data from Alaska Department of Community and Economic Development, 2000 data from U.S. Bureau of the Census.

¹ As an example, one can find different counts by the City of Unalaska, the Alaska Department of Labor, the Alaska Department of Community and Regional Affairs (more recently the Department of Community and Economic Development), and the U.S. Census for various recent years. While one might assume that the U.S. Bureau of the Census data would be more rigorous than other efforts, it appears that this may not be the case at least for some years. Concerning the 1970 census, for example, a community leader considered a solid source has written that census “was done by the census taker from memory, sitting at home, and it was not accurate to any degree” (Impact Assessment 1987:64). Some sources list the 1970 census population as 342, while other sources list it as 178. Bureau of the Census correspondence from the period (Fay 1972) confirms the official figure as 178, but questions remain regarding whether the census did or did not include short-term residents or transient workers who were present at the time. In 1972, the Alaska Department of Labor apparently tried unsuccessfully to “correct” the census number to a total count of 336 (Fay 1972).

UNAK-1a

Physical Setting

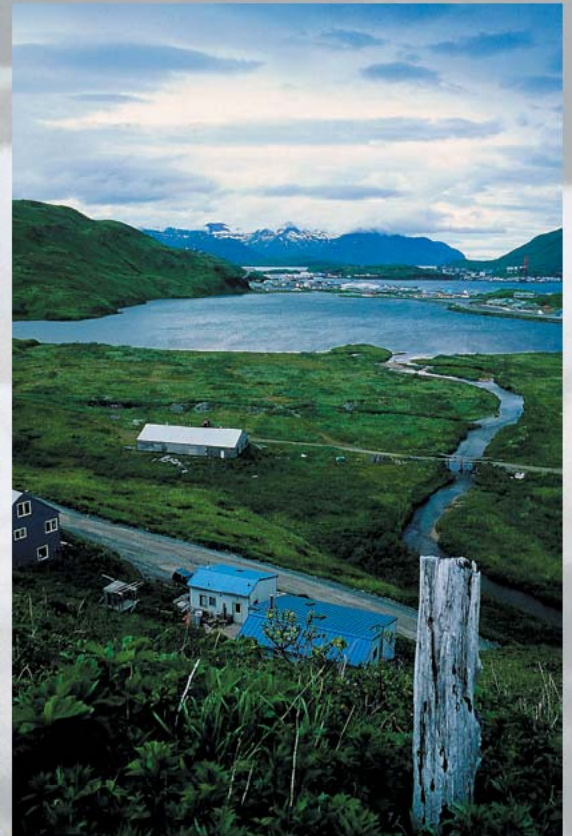
Clockwise from upper left:
View of downtown Unalaska,
community from Nirvana
Hill, beach at Morris Cove,
and Unalaska Bay from
WWII artillery structure



UNAK-1b

Physical Setting

Clockwise from upper left: View of Unalaska Bay from Mt. Ballyhoo, Unalaska Lake and the town from Unalaska Valley, and Priest Rock



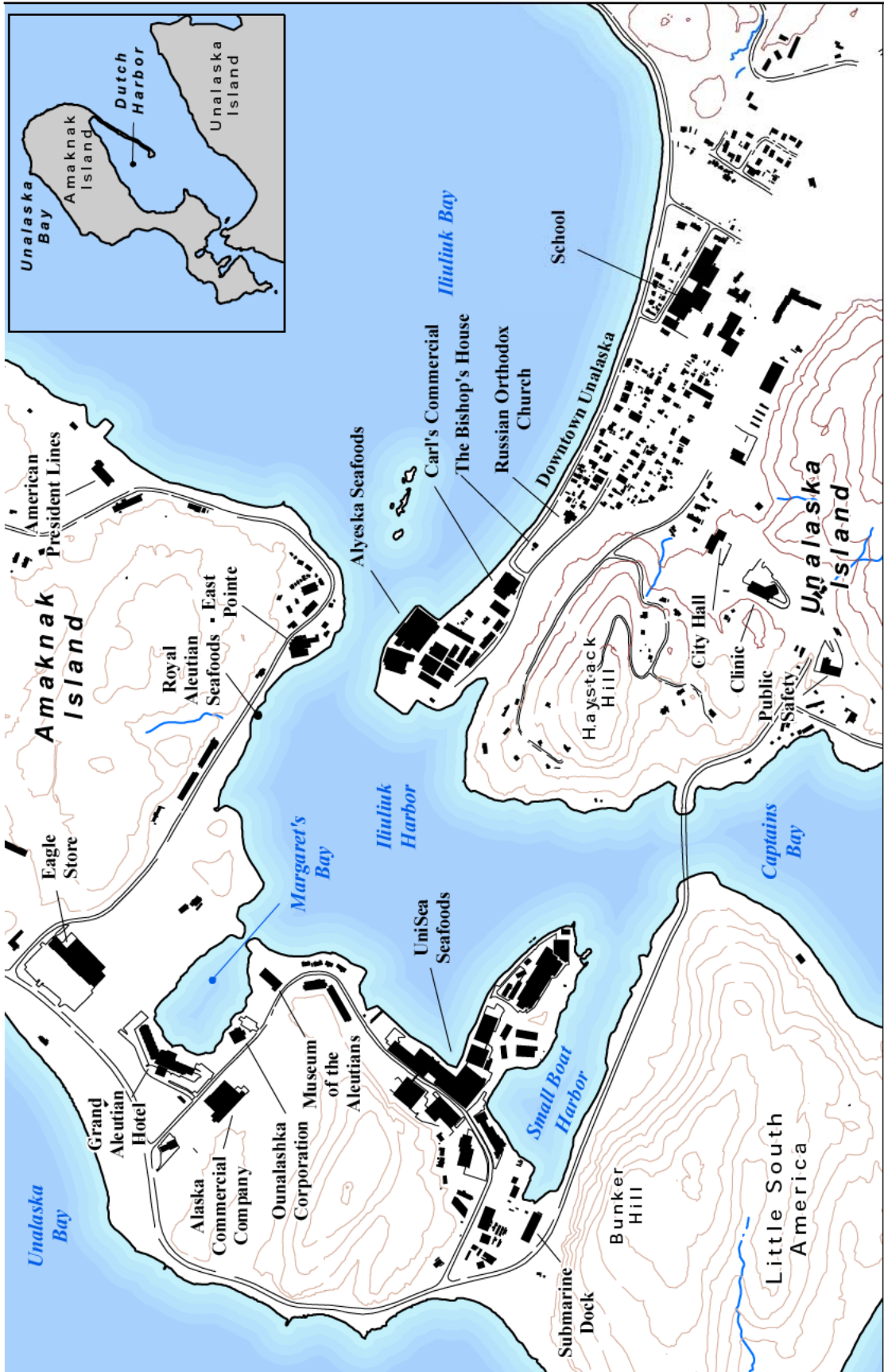
UNAK-2

Physical/Spatial Relationship

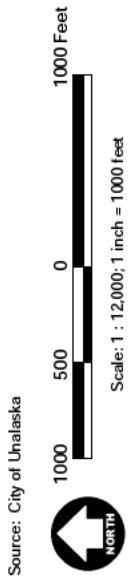
Clockwise from upper left:
View of UniSea plant from
Bunker Hill, harbor and
bridge from Bunker Hill,
downtown Unalaska from
Haystack Hill, and Dutch
Harbor from Ballyhoo



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Map UNAK-1
Unalaska



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UNAK-3a

Community Attributes

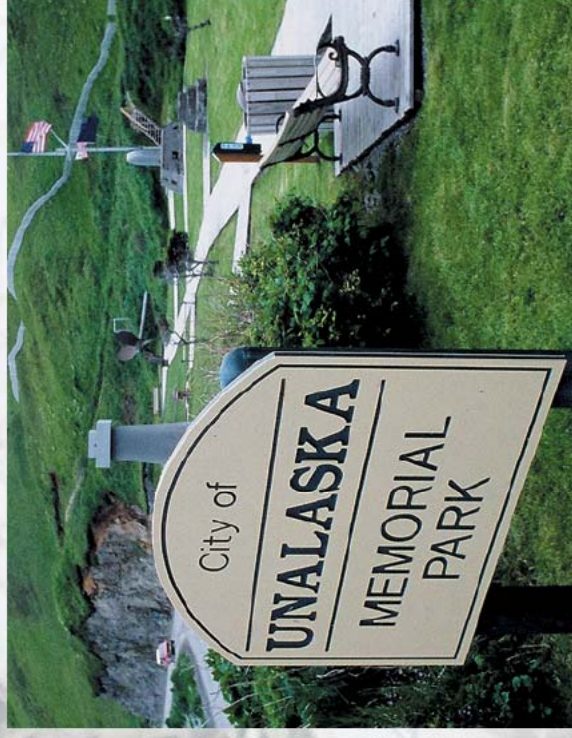
Clockwise from upper left:
Russian Orthodox church and
town creek, Haystack Hill,
WWII structures atop Bunker
Hill, and The Bridge to the
Other Side



UNAK-3b

Community Attributes

Clockwise from upper left:
Aleut memorial, fishermen's
memorial, memorial park,
and community cemetery



UNAK-3c

Community Attributes

Clockwise from upper left:
Holy Ascension Cathedral
Russian Orthodox church,
St. Christopher by the Sea
Roman Catholic church,
Unalaska Christian Fellow-
ship church, and United
Methodist church



UNAK-3d

Community Attributes

Clockwise from upper left:
Houses on front beach,
bishop's house, and examples
of single-family houses



Table 2-2 provides local population counts on an annual basis for the years 1990 through 2003. As shown, the annual growth seen in the early 1990s peaked in 1993-1994. While there has been some downward fluctuation since, the population was only 71 individuals greater in 2003 than it was a decade earlier.

Table 2-2. Unalaska Annual Population, 1990-2003

Year*	Population
1990	3,089
1991	3,450
1992	3,825
1993	4,317
1994	4,317
1995	4,083
1996	4,087
1997	4,251
1998	4,285
1999	4,178
2000	4,283
2001	4,283
2002	4,051
2003	4,388

* Counts are taken/calculated in July of each year and are utilized as the official community count for the following fiscal year (e.g., the 1990 count was taken in July 1990 and appears as the community population for FY 1991 in City documents).

Source: City of Unalaska spreadsheets, supplied by Unalaska City School District, December 2001 and December 2004.

While the total population of Unalaska has grown considerably from the early fishery boom years, the contemporary community maintains a relatively high transient population. This transient population includes workers at shore processing plants, although this particular population segment is notably less transient as the nature of the business of the shore plants has changed. Once characterized by rapid turnover during the king crab processing boom in the late 1970s, the local pattern evolved to more-or-less year-round processing during the early years of full-scale pollock processing. The current pattern has marked peaks and valleys coinciding primarily with the pollock and, to a lesser extent, crab seasons, along with maintenance of a “core crew” of year-round individuals who process lower volume species that are harvested at other times of the year in addition to maintaining the plant.

In addition to the resident population, there are also a number of individuals who may be thought of as a “floating population” associated with the community. These individuals are from catcher vessels, catcher processors, and floating processors that work the Bering Sea and Aleutian Islands area and call on Unalaska for resupply or constitute a “service population” for Unalaska in one form or another (e.g., potential patients for emergency medical services care). Table 2-3 provides an estimate of the direct fisheries harvesting and processing component of this floating population for 2000. Although

these estimated 5,400 individuals are not true residents of Unalaska, this “floating population” does have an impact on the community. They are associated with business and revenue generated in and for the city, and with services required of the city. There is also a potentially large number of other infrequent or “floating” visitors associated with the port. Some of these are more or less directly fishery related, such as the crews on domestic and international cargo vessels that have company facilities in the community, freighters affiliated with specific seafood companies, and independent trampers. (While there are no current estimates available, in 1990 the cargo vessel freighter/tramper component of a floating population was estimated at 8,750 individuals, derived from an assumed 350 vessels with an average crew size of 25 [Professional Growth Systems, Inc. 1990:12]. If this estimate is still valid, a floating population of fishery plus fishery transport related individuals of 14,143 would be assumed.) Additionally, there are various other transient vessels that may or may not be directly affiliated with the fishery, such as barges, cruise ships, and ferries, that call on the community of Unalaska and the Port of Dutch Harbor and add to an effective service population or floating population for the community. While the calculation of such a population is less than straightforward, whatever the actual numbers are for any given season or year, it is the case that Unalaska services a floating population that is very large in relation to its resident population base, and a great number of these individuals are directly or indirectly associated with commercial fisheries.

Table 2-3. Estimates of Direct Fisheries Related “Floating Population” of the Community of Unalaska, 2000

Vessel Type	Estimated Number of Vessels	Average Crew Size	Floating Population
Trawlers			
Catcher Vessels	123	4.5	554
Catcher/Processors - Surimi/Fillet	16	101	1,616
Catcher/Processors - Head & Gut	24	35	840
Floating Processors Only	2	100	200
Longline			
Catcher Vessels	18	5	90
Catcher/Processors	38	16	608
Crab/Pot			
Catcher Vessels	254	5.5	1,397
Catcher/Processors	8	11	88
Total Direct Fisheries Related Floating Population			5,393

Notes: (1) Trawl catcher/processor data (only) is for 1999. Surimi/fillet trawl catcher/processor category includes 12 primarily surimi-oriented vessels with an average crew size of 108 and 4 primarily fillet-oriented vessels with an average crew size of 79. (2) All catcher/processor crew figures are full-time equivalents (FTEs) and based on observer data. Estimates of employment on catcher vessels are based on crew-size factors for each vessel class, based on previous studies and interviews with knowledgeable members of the industry.

Source: NPFMC Sector Profiles Update 2001; Northern Economics; Mark Fina (NPFMC).

The characterization of Unalaska’s “non-transient” population has its own difficulties, as the nature of the community has changed over the years. Discussion and analytical categorization of the less transient portions of the Unalaska population differ in various publications on the community.

“Permanent” residents of the community have been described as those individuals for whom Unalaska is their community of orientation, independent of their employment status. “Semi-permanent” or “long-term transient” residents are those individuals for whom Unalaska is now their community of residence, but for whom residency decisions are based virtually exclusively on employment criteria. In other words, a “permanent” resident is an individual who considers Unalaska “home” and is highly unlikely to move from the community due to termination of a particular job. These individuals tend to remain in the community and seek other employment if a specific job ends, and they also typically remain in the community after their retirement from the labor force. A “semi-permanent” or “long-term transient” resident, on the other hand, is an individual who typically has moved to Unalaska for a particular employment opportunity and is highly likely to leave the community if that specific employment opportunity is terminated for any reason. These individuals may indeed remain in the community for a number of years, but their residency decision-making process is predicated on Unalaska being first and foremost a worksite. Obviously, the categories “permanent” and “semi-permanent” or “long-term transient” resident are not precise terms, nor do they necessarily correspond to administrative/regulatory decisions about “official” residency (e.g., whether or not one is classified as an “Alaska resident” for employment statistical reporting or taxation purposes) nor do they correspond to U.S. Census count methodology,² but they are analytically useful where they conform to specific orientations toward the community that serve to shape community politics, development objectives, community perception, etc. While distinctions are often drawn between the processing associated population in the community and other residents of the community, several persons interviewed were quick to point out that a number of those in management positions at the processing plants are active in the community in leadership roles, and that a number of other leaders in the community who currently hold positions in non-processing economic sectors originally came to the community for processing related employment and then subsequently transitioned to other employment. This type of transition does not appear to occur frequently, if at all, among non-management workers within the processing sector.

² The technical classification of residency has been a contentious issue in recent years specifically with respect to the fishing industry related workforce. In terms of U.S. Bureau of the Census methodology, the first U.S. decennial census in 1790 established the concept of “usual residence” as the main principle in determining where people were to be counted. This concept has been followed in all subsequent censuses. Usual residence has been defined as the place where the person lives and sleeps most of the time and is not necessarily the same as the person’s voting or legal residence. Also, noncitizens who are living in the United States are included, regardless of their immigration status. The State of Alaska uses a specific set of criteria for determining residents of the state (i.e., those who qualify for Permanent Fund dividends). According to the state publication *Nonresidents Working in Alaska* (Alaska Department of Labor and Workforce Development 2001), using these criteria, the highest concentration of non-Alaska resident workers are found in the southwest region of Alaska and were primarily engaged in seafood processing. According to this document, 70.9 percent of the workers in this sector in Alaska were not state residents. Of the top private sector employers of non-state resident workers within the “manufacturing” sector, all five were seafood processing firms with ties to the Alaska Peninsula/Aleutian Islands region, if not Unalaska itself. These firms (in alphabetical order) were Icycle Seafoods, Peter Pan Seafoods, Inc., Trident Seafoods Corporation, UniSea, Inc., and Wards Cove Packing Company, Inc. Of the combined total of 11,006 workers reported for these firms, 8,669 individuals or 78.77 percent of the total number of workers were not classified as Alaska residents. The workforce at the individual firms ranged between 71 and 86 percent non-Alaska resident. The relative importance of state resident classification has been the subject of heated debate during recent NPFMC management decision-making processes (for example, during the series of Inshore/Offshore decisions), but in practical terms for the purposes of a social impact assessment, the nature of interaction and relationship between these workers and their worksite community appears to depend more on living quarters configuration (i.e., industrial enclave style or more integrated with the rest of the community), work schedules, and individual decisions regarding the allocation of personal time, among other factors, than it does on formal state residency status for originally non-local workers - whether they be from elsewhere in Alaska or from another state.

2.2.2 Ethnicity

Unalaska may be described as a plural or complex community in terms of the ethnic composition of its population. Although Unalaska was traditionally an Aleut community, the ethnic composition has changed with people moving into the community on both a short-term and long-term basis. Not surprisingly, in the latter half of this century, population fluctuations have coincided with periods of resource exploitation and scarcity.³ For example, the economic and demographic expansion associated with the king crab boom in the late 1970s and early 1980s brought many non-Aleuts to Unalaska, including Euroamericans, Filipinos, Vietnamese, Koreans, and Hispanics. The Euroamerican population shows a distinct change over the years, comprising around 30 percent of the population in 1970, over 60 percent in 1980 and 1990, and then back to 44 percent in 2000. The growth of the Asian/Pacific Islander population (over 30 percent by 2000) is closely associated with the increasingly residential nature of the seafood processing sector workforce. Further, the specific makeup of the local processing workforce also varies at least over the short term with world events that result in economically or politically based immigration to the United States, as processing work often represents a means of entry into the American employment economy for recently arrived individuals. An example of a (so far) short-term fluctuation has been a reported increase in the number of processing workers from eastern African nations in the early 2000s. The ethnic composition of Unalaska's population for the census years 1970, 1980, 1990, and 2000 appears in Table 2-4.

Table 2-4. Ethnic Composition of Unalaska's Population: 1970, 1980, 1990, and 2000

Race/Ethnicity	1970		1980		1990		2000	
	N	%	N	%	N	%	N	%
White	56	31.0%	848	64.1%	1,917	62.1%	1,893	44.2%
African American	0	0.0%	19	1.5%	63	2.0%	157	3.7%
Native American/Alaskan	113	63.4%	200	15.1%	259	8.4%	330	7.7%
Aleut	107	60.1%	-	-	223	7.2%	-	-
Eskimo	5	2.8%	-	-	5	0.2%	-	-
American Indian	1	0.5%	-	-	31	1.0%	-	-
Asian/Pacific Islander*	-	-	-	-	593	19.2%	1,336	31.2%
Other**	9	5.6%	255	19.3%	257	8.3%	567	13.2%
Total	178	100%	1,322	100%	3,089	100%	4,283	100%
Hispanic***	NA	NA	NA	NA	394	12.7%	551	12.9%

* In the 2000 census, this was split into Native Hawaii and Other Pacific Islander (pop 24) and Asian (pop 1,312)

** In the 2000 census, this category was Some Other Race (pop 399) and two or more races (pop 168).

*** "Hispanic" is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

Source: 1970 data, University of Alaska, 1973; 1980, 1990, and 2000 data, U.S. Bureau of Census.

³ The most dramatic population shift of this century, however, was brought about by World War II. The story of the War, and the implications for the Aleut population of Unalaska and the other Aleut communities of Unalaska Island, is too complex and profound for treatment in this limited community profile. It may be fairly stated, however, that the events associated with World War II, including the Aleut evacuation and the consolidation of the outlying villages, forever changed the community and Aleut sociocultural structure.

Apart from the World War II years, prior to the growth of the current commercial fisheries-based economy that traces its present configuration back to 1970s, Unalaska was traditionally an Aleut community. With the growth of the non-Aleut population, Aleut representation in the political and other public social arenas declined significantly. For example, in the early 1970s, Aleut individuals were in the majority on the city council; by the early 1980s, only one city council person was Aleut (IAI 1987:65). If one looks at Aleuts (or Alaska Natives) as a percentage of the total population, the change over the period of 1970 through 1990 is striking.

In 1970, Aleut individuals made up slightly over 60 percent of the total community population (and Alaska Natives accounted for a total of 63 percent of the population). In 1980, Alaska Natives, including Aleuts, accounted for 15 percent of the population; by 1990, Aleuts comprised only 7 percent of the total community population (with Alaska Natives as a whole accounting for 8 percent of the population). Overall representation was similar in 2000. This population shift is largely attributable to fisheries and fisheries related economic development and associated immigration. The fact that there is a “core” Aleut population of the community with a historical continuity to the past also has implications for contemporary fishery management issues. These include the activities of the Unalaska Native Fisherman’s Association and active local involvement in the regional Community Development Quota (CDQ) program. While neither of these undertakings excludes non-Aleuts, Aleut individuals are disproportionately actively involved (relative to their overall representation in the community population).

During recent field interviews for this project and other NPFMC projects, a number of persons, including local governmental officials and individuals from various private sector enterprises, commented that it appeared to them that there were less people overall in the community in the post-2000 period than in the recent past, although there are no hard data available to verify this. Speculation included that with the apparent slowdown in the local support service economy with the American Fisheries Act (AFA) related cessation of the race for fish within the pollock fishery, there has been some out-migration among the permanent population (along with the non-appearance of some former seasonal regulars in the community). Again, there is no quantitative information available to check this speculation. Anecdotal evidence cited by interviewees includes less participation in city-sponsored recreational sports (e.g., the basketball league has seen a drop in the number of teams), and an easing of the shortage of housing (discussed below).

2.2.3 Age and Sex

In the recent past, and particularly with the population growth seen in association with the development of the commercial fishing industry, Unalaska’s population has had more men than women. Historically, this has been attributed to the importance of the fishing industry in bringing in transient laborers, most of whom were young males. Table 2-5 portrays the changes in proportion of males and females in the population for the years 1970, 1980, 1990, and 2000.

Table 2-5. Population by Age and Sex, Unalaska: 1970, 1980, 1990, and 2000

Attribute	1970		1980		1990		2000	
	N	%	N	%	N	%	N	%
Male	98	55%	858	65%	2,194	71%	2,830	66%
Female	80	45%	464	35%	895	29%	1,453	34%
Total	178	100%	1,322	100%	3,089	100%	4,283	100%
Median Age	26.3 years		26.8 years		30.3 years		36.5 years	

Source: 1970 data, University of Alaska, 1973; 1980, 1990, and 2000 data, U.S. Bureau of Census.

Census data from the period 1970 through 1990 showed a climb in median age from 26.3 years to 30.3 years and then a further jump to 36.5 years in 2000. This is commonly attributed to the relative size of the workforce in comparison to resident families. That is, there is quite a large proportion of adult residents included in the census counts who are not raising children in the community, thereby raising the median age. On the other hand, what the median age information does not portray is that older age bracket residents (i.e., those individuals typically past their “working years”) tend to be underrepresented in Unalaska compared to the general population, as few non-lifetime residents of the community choose to stay in Unalaska in their retirement years.

School district enrollment figures are presented in Table 2-6. This is another indicator of the changing nature of Unalaska’s population over the time period portrayed. One can see in the enrollment figures, for example, the enrollment decline that followed the economic decline of the fishing industry in the early 1980s, following the crash of locally important king crab stocks. Enrollments have increased from the late 1980s onward, reflecting two trends, according to school staff. One is the overall growth of the community, and the other is the increase in the number of people who are making Unalaska home for their families. After 12 years of steady expansion beginning in 1986-1987, enrollments dipped in the 1998-2001 period. In late 2001, the school was significantly expanded, including construction of a new elementary school/ administrative offices structure on a non-contiguous portion of the campus. The issue of whether to proceed with the expansion during a time when community population was experiencing a plateau if not decline, and a leveling off of student population in particular, was the subject of debate and a highly contested ballot measure in the community, with the decision to proceed with the expansion passing by a handful of votes. In subsequent years, enrollments have again increased, with 2004-2005 enrollment level being nearly triple that seen at the low point in the mid-1980s. Another example of the local commitment to the local educational system was provided by a city official who noted that the City of Unalaska currently (2004-2005) provides more funding of the school district (over \$2 million per year) than does the State of Alaska.

Table 2-6. Unalaska City School District Enrollment, Fiscal Years 1978-2005

Fiscal Year	School Enrollment
FY 1978	133
FY 1979	140
FY 1980	200
FY 1981	186
FY 1982	191
FY 1983	151
FY 1984	140
FY 1985	140
FY 1986	137
FY 1987	159
FY 1988	159
FY 1989	159
FY 1990	225
FY 1991	256
FY 1992	290
FY 1993	330
FY 1994	359
FY 1995	356
FY 1996	353
FY 1997	373
FY 1998	380
FY 1999	353
FY 2000	352
FY 2001	352
FY 2002	369
FY 2003	393
FY 2004	399
FY 2005	399

Note: Fiscal year designation refers to the calendar year in which the school year ended (e.g., FY 1978 refers to the 1977-1978 school year).
 Source: Spreadsheet supplied by Unalaska City School District, December 2004.

The link between the fisheries and school population can in part be seen through a categorization of the employment, by sector, of parents of Unalaska schoolchildren as ascertained by the Unalaska School District for the 2003-2004 school year and shown in Table 2-7. Information for a designated “primary wage earner” as well as for both parents is displayed. As shown, the largest single sector for the primary wage earners was fish processing (about one-quarter of all primary wage earners), with government/public employment also accounting for roughly the same percentage, but it is important to note that “fish processing” and “fishing support” when added together accounted for nearly 4 out of 10 jobs among all primary wage earners. According to school staff, the assignment of individual employers/entities to the various categories (especially the “fishing support” category) is not exact but gives an indication of the relative strength of ties of the different sectors to the school population. (Unalaska is very different in this respect from other major processing communities in the region. In Akutan and King Cove, for example, there are virtually no students

at either school who come from processing worker families.) When both parents are included in the analysis, the combined fish processing and fishing support sector employment drops to around 25 percent of the total, and the important role of government/public employment in the community is more apparent as it is easily the largest single sector.

Table 2-7. Parent Employment by Sector, Unalaska City School District, Fiscal Year 2004

Parent Employment Sector	Primary Wage Earner		Both Parents	
	Number	Percent	Number	Percent
Fish Processing	96	25.33%	101	15.16%
Fishing Support	52	13.72%	72	10.81%
Retail/Restaurant/Services	73	19.26%	120	18.02%
Self Employed/Unemployed	20	5.28%	--	--
Stay-at-Home/Self-Employed/Unemployed	--	--	126	18.92%
Government/Public	90	23.75%	189	28.38%
Transportation/Freight	48	12.66%	58	8.71%
Total	379	100.00%	666	100.00%

Note: "Primary" wage earner typically counts the parent whose job provides housing.
 Source: Unalaska City School District Spreadsheet, November 2004.

One trend that senior staff did note during interviews was an increase in students for whom English is a second language; this is linked largely to fishing related opportunities in the community in general and processing related employment opportunities in particular. According to senior school staff interviewed for a previous update of this profile, 47 percent of the 2000-2001 kindergarten class were ESL (English as a second language) students, and this trend has apparently continued in more recent years. Also, according to school staff the Unalaska City School District was recently named in a poll as one of the top 100 school districts in the country and placed first in the state in exit exam scores, which has spurred an increase in enrollment of students from smaller villages in the region. For the most part, these are individuals who have chosen to stay with relatives in Unalaska to take advantage of the local educational opportunities, but with an easing of the housing shortage there is also now more opportunity for families to relocate to Unalaska from other regional communities than was the case even in the relatively recent past.

2.2.4 Housing Types and Population Segments

Another reflection of the diversity of the community and the distribution of different subpopulations within the community may be seen in the population differentiation by housing type. Group housing in the community is largely associated with the seafood processing workforce. As shown in Table 2-8, 52 percent of the population lived in group housing in 1990 and 51 percent of the population did so in 2000. Plate UNAK-4 includes photographs of group and individual housing in the community.

UNAK-4

Housing Types

Clockwise from upper left:
Processor group quarters
at UniSea, group quarters
at Westward Seafoods, and a
single-family home in the
Unalaska valley area and a
home in the downtown area
constructed from WWII-era
buildings



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Table 2-8. Group Quarters Housing Information, Unalaska, 1990 and 2000

Year	Total Population	Group Quarters Population		Non-Group Quarters Population	
		Number	Percent of Total Population	Number	Percent of Total Population
1990	3,089	1,614	52.25%	1,475	47.75%
2000	4,283	2,192	51.18%	2,091	48.82%

Source: U.S. Bureau of the Census 1990 STF2, Census 2000 Summary File 1.

The population residing in group housing in the community is demographically quite different from the population of the community in non-group housing. Table 2-9 provides information on group housing and ethnicity for Unalaska for 1990 and Table 2-10 provides similar information for 2000. In 1990, the total minority population proportion was substantially higher in group quarters (49 percent) than in non-group quarters (31 percent). In 2000, the total minority population in group quarters was 72 percent, with the analogous figure being 45 percent in the non-group quarters population. Beyond there being a general growth of minority populations from 1990 to 2000 as a proportion of population in both types of housing (and there being a greater difference between housing types in 2000 than in 1990), the minority population distribution between and within housing types changed substantially in the 1990 through 2000 period. For example, “white” residents of Unalaska comprised 54 percent of the group quarters population in 1990, but only 30 percent in 2000 (and declined, to a lesser but still substantial degree, from 71 percent to 59 percent of the population within non-group quarters housing). Although demographic categories changed somewhat between the 1990 and 2000 census, some relatively large changes are readily apparent. For example, in 1990, the “Asian or Pacific Islander” category accounted for 27 percent of group quarters population, but had risen to 42 percent by 2000. In general, in 2000 Unalaska had a substantially greater minority population in absolute and relative terms than it did in 1990, and this is readily apparent within the group quarters population that is largely associated with seafood processing workers.

Table 2-9. Ethnicity and Group Quarters Housing Information, Unalaska, 1990

Race/Ethnicity	Total Population		Group Quarters Population		Non-Group Quarters Population	
	Number	Percent	Number	Percent	Number	Percent
White	1,917	62.06%	870	53.90%	1,047	70.98%
Black	63	2.04%	55	3.41%	8	0.54%
American Indian, Eskimo, Aleut	259	8.38%	20	1.24%	239	16.20%
Asian or Pacific Islander	593	19.20%	434	26.89%	159	10.78%
Other race	257	8.32%	235	14.56%	22	1.49%
Total Population	3,089	100.00%	1,614	100.00%	1,475	100.00%
Hispanic origin, any race	394	12.75%	337	20.88%	57	3.86%
Total Minority Population	1,252	40.53%	795	49.26%	457	30.98%
Total Non-Minority Population (White Non-Hispanic)	1,837	59.47%	819	50.74%	1,018	69.02%

Source: U.S. Bureau of the Census 1990 STF2.

Table 2-10. Ethnicity and Group Quarters Housing Information, Unalaska, 2000

Race/Ethnicity	Total Population		Group Quarters Population		Non-Group Quarters Population	
	Number	Percent	Number	Percent	Number	Percent
White	1,893	44.19%	665	30.34%	1,228	58.73%
Black or African American	157	3.67%	146	6.66%	11	0.53%
Alaska Native/Native American	330	7.71%	62	2.83%	268	12.82%
Native Hawaiian/Other Pacific Islander	24	0.56%	22	1.00%	2	0.10%
Asian	1,312	30.63%	931	42.47%	381	18.22%
Some Other Race	399	9.32%	318	14.51%	81	3.87%
Two Or More Races	168	3.92%	48	2.19%	120	5.74%
Unknown	0	0%	0	0%	0	0%
Total	4,283	100.00%	2,192	100.00%	2,091	100.00%
Hispanic*	551	12.86%	372	16.97%	179	8.56%
Total Minority Population	2,503	58.44%	1,568	71.53%	935	44.72%
Total Non-Minority Population (White Alone, Not Hispanic or Latino)	1,780	41.56%	624	28.47%	1,156	55.28%

Source: U.S. Census, 2000.

* "Hispanic" is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

Household types in Unalaska vary by population segment, although this has changed in recent years. In the early 1990s, it was a truism that virtually all permanent residents lived in single-family dwellings; whereas, short-term workers lived in group housing at worksites or, in a lesser number of cases, in single dwellings or duplexes leased by employers. This pattern has changed somewhat over the years with the construction of a number of multi-unit complexes not associated with particular employers. It is still the case, however, that seafood company processing workers tend to live in housing at the worksite and longer-term workers at the shoreplants tend to live in company housing adjacent to worksites. One seafood processor, however, owns multi-family dwellings in what is otherwise primarily a single-family residential area, so its workforce tends to be differently distributed geographically than other workforces. Some residents of the community have drawn the distinction, with respect to processing firms, that one is not fully a resident of the community unless one has a private residence in the community (i.e., that the "test" of "real" residency is tied to whether one lives in company-provided housing). This distinction breaks down, however, when one examines the issue on a detailed level, as a number of companies (and not just seafood firms) provide or subsidize housing for employees in Unalaska both adjacent to and separate from their worksite locations; also, the persons living in such residences may, in fact, stay in the community for considerable lengths of time (outstaying many in "private" residences) and become centrally involved in community life. Still, in various political arenas, one hears claims made for the virtue of particular points of view based on whether individuals own homes and pay property taxes in the community.

Unalaska's housing market per se has changed in the recent past. Through the mid-1980s and the 1990s, housing was at a premium in the community, with virtually zero vacancy rates and waiting lists for rental opportunities. According to city staff, however, by 2000, housing and rental prices had not appreciably dropped; however, demand has slackened considerably such that there are no longer waiting lists maintained by some of the larger housing owners. According to the City of Unalaska appraiser and planning staff, home sales are slower than in the past, and there is some concern about declines in value, but those concerns have not been realized yet. Also according to the City, although rental demand is off, rents have not yet begun to drop in response to decrease in demand. This "softening" of the housing market is directly attributed by most to recent changes in the local fishery, including the slowing of the "race for fish" in the pollock fishery that was made possible by the AFA and the formation of co-ops, among other fishery related factors.

A housing market survey completed by the City of Unalaska in 2000 as the market was softening noted that there has been "some curiosity expressed" about how 31 new units in the community will affect the rental market. These units include 16 apartments and 15 single-family dwellings for low-income residents (with the single-family dwellings further restricted to Alaska Native/Native American residents). Until very recently, the impact of the addition of new units to the community housing stock on rental rates would not have arisen as an issue. This same survey found that "while only one participant [in the survey] acknowledged lowering rental rates, several of the others acknowledged changing some of their rental policies, e.g., no last month deposit or renting to the general public if units are not required for employees." According to interview data, some landlords are now including fuel or utilities costs in the rental price, with the owner of the largest stock in the community including utilities. The housing survey also found that the upper range for housing costs had decreased slightly between 1997 and 2000 for apartments; whereas, the costs for single-family dwellings increased slightly over this same period. The most recent housing market survey conducted by the City was completed May 2003 (City of Unalaska Planning Department Spreadsheet) and shows mixed changes in housing costs since 2000. For example, rental rates for one- and three-bedroom apartments at the high end of the range increased between 2000 and 2003, but those for two-bedroom apartments decreased; low end rental figures increased for all apartment sizes. Among single-family dwellings during this same time period, one-, two-, and three-bedroom rentals showed a decrease in the low range figures. For high range figures, rents for one-bedroom dwellings declined, for two-bedroom dwellings remained about the same, and for three-bedroom dwellings increased. Duplex rental rates decreased between 2000 and 2003 in both the high and low range for units of all sizes.

Another recent change in housing mentioned in interviews is that companies (other than the major seafood processors) are less likely to supply housing for workers than was the case in the past. This is reportedly due to there being more housing available on the market now, such that companies do not feel forced to tie up housing units for the entire year to be able to meet employee housing needs during peak demand periods, and the fact that support sector businesses are using many fewer seasonal employees than in the past. While there are no systematic data available to document this common assertion, the City of Unalaska has discontinued the practice of holding long-term housing leases, which until very recently was a common practice due to the local housing shortage. According to city staff, as of 2001, the City retained just one lease for housing, and this was on a month-to-month basis. At present (2004) there are units available for rent and there have been for the past several years. One long-term resident noted that the local access television channel now

commonly runs postings for rental opportunities; whereas, in the recent past virtually all rental opportunities were communicated by word of mouth and openings never had a chance to hit the open market.

Table 2-11 displays basic information on community housing, households, families, and median household and family income for Unalaska in 2000. The figure for vacant housing units is consistent with anecdotal evidence regarding market demand softening.

Table 2-11. Selected Household Information, Unalaska, 2000

Community	Total Housing Units	Vacant Housing Units	Total Households	Average Persons Per Household	Median Household Income	Family Households	Average Family Size	Median Family Income
Unalaska	988	154	834	2.51	\$69,539	476	3.27	\$80,829

Source: U.S. Bureau of Census.

2.3 LOCAL ECONOMY AND LINKS TO COMMERCIAL FISHERIES

In the late 1970s and early 1980s the community prospered significantly from the king crab fishery. The crab boom resulted in a dramatic increase in both fishing boats and processors in town. In the mid-1970s there were from 90 to 100 commercial vessels regularly fishing the Bering Sea. By 1979 the number had jumped to between 250 and 280, an increase so dramatic that it was difficult for skippers to find crew members. The king crab fishery subsequently declined precipitously and fishermen and processors alike have had to diversify their businesses in order to survive economically. One of the avenues of diversification was the pollock fishery, which has provided an economic mainstay for the community in subsequent years. While local vessels are of a relatively small scale, local processing plants are large and receive landings from vessels from elsewhere in Alaska and from the Pacific Northwest (and at least a few from further afield). Economic activity in the community is cyclic, with busy periods coinciding with major fishery openings and closings. Table 2-12 provides a list of dates of openings as of 2004 for the major commercial fisheries in the area. Fishery openings do change over time; a current example of this is that with BSAI crab rationalization scheduled to begin in October 2005, the openings of all of the included fisheries will move to October 15 for subsequent years.

Table 2-12. Bering Sea/Aleutian Islands Major Fisheries Openings, 2004

Species	Opening
Opilio Tanner Crab	January 15
Brown King Crab	August 15
Baridi Tanner Crab	October 15
Bristol Bay Red King Crab	October 15
Pribilof Blue King Crab	September 15
St. Matthew Blue King Crab	September 15
Pribilof Red King Crab	September 15
Foot/Bait Herring	July 15
Halibut IFQ	March 1
Sablefish IFQ	March 1
Pollock AFA Inshore 'A'	January 20
Pollock AFA Inshore 'B'	June 10
Pollock Catcher Processor 'A'	January 20
Pollock Catcher Processor 'B'	June 10
Pollock Mothership 'A'	January 20
Pollock Mothership 'B'	June 10
Atka Mackerel Eastern 'A'	January 20
Atka Mackerel Eastern 'B'	September 1
Atka Mackerel Central 'A'	January 20
Atka Mackerel Central 'B'	September 1
Atka Mackerel Western 'A'	January 20
Aka Mackerel Western 'B'	September 1
Pacific Cod Catcher Processor (trawl) 'A'	January 20
Pacific Cod Catcher Processor (trawl) 'B'	April 1
Pacific Cod Catcher Processor (trawl) 'C'	June 10
Pacific Cod Catcher Vessel (trawl) 'A'	January 20
Pacific Cod Catcher Vessel (trawl) 'B'	April 1
Pacific Cod Catcher Vessel (trawl) 'C'	June 10
Pacific Cod Catcher Processor (hook & line) 'A'	January 1
Pacific Cod Catcher Processor (hook & line) 'B'	June 10
Pacific Cod Catcher Vessel (hook & line) 'A'	January 1
Pacific Cod Catcher Vessel (hook & line) 'B'	June 10
Pacific Cod (pot) 'A'	January 1
Pacific Cod (pot) 'B'	September 1

Note: "Hook & line" is also commonly known as "longline."

Source: Adapted from International Port of Dutch Harbor facilities and services poster, 2004.

Table 2-13 shows the volume and value of fish landed at Unalaska over the period 1977 through 2003. This span encompasses the high year of the king crab fishery and shows the decline of the fishery thereafter, and the growth of the pollock fishery. Average value per pound is an artificial figure in that it combines a number of different variables, but it is useful for an overall look at how volume and value have varied over the years (particularly as pollock, a relatively high volume, low value per unit species grew in importance as a component of the community processing base). As

shown, Unalaska has ranked as the number one U.S. port in volume of landings since 1992 and ranked first in value of landings from 1988 to 1999.⁴ In 2000, Unalaska dropped to second in value of landings behind New Bedford, Massachusetts, and has remained there in the subsequent years.⁵

Table 2-13. Volume and Value of Fish Landed at Unalaska, 1977-2003

Year	Volume		Value		Average Value (\$/lb)*
	Millions of Pounds	U.S. Ranking	Millions of Dollars	U.S. Ranking	
1977	100.5	-	61.4	-	0.61
1978	125.8	-	99.7	-	0.79
1979	136.8	-	92.7	-	0.68
1980	136.5	3	91.3	10	0.67
1981	73.0	5	57.6	11	0.79
1982	47.0	6	47.8	14	1.02
1983	48.9	9	36.4	15	0.74
1984	46.9	20	20.3	13	0.43
1985	106.3	18	21.3	8	0.20
1986	88.3	9	37.2	10	0.42
1987	128.2	4	62.7	8	0.49
1988	337.3	3	100.9	1	0.30
1989	504.3	2	107.4	1	0.21
1990	509.9	2	126.2	1	0.25
1991	731.7	2	130.6	1	0.18
1992	736.0	1	194.0	1	0.26
1993	793.9	1	161.2	1	0.20
1994	699.6	1	224.1	1	0.32
1995	684.6	1	146.2	1	0.21
1996	579.0	1	118.7	1	0.20
1997	587.8	1	122.6	1	0.21
1998	597.1	1	110.0	1	0.18
1999	678.3	1	140.8	1	0.21
2000	699.8	1	124.9	2	0.18
2001	834.5	1	129.4	2	0.15
2002	908.1	1	136.1	2	0.15
2003	908.7	1	156.9	2	0.17

*Average value derived from volume and value data.

Source: 1977-1979 data from NMFS data as cited in IAI 1991; 1980-1996 data from NMFS data cited in City of Unalaska FY 97 Annual Report (December 1997); 1997-2003 data via personal communication from NMFS Fisheries Statistics and Economics Division, Silver Spring, MD (accessed through NMFS Website - <http://www.st.nmfs.gov/st1/commercial/landings/lport_hist.html>).

⁴ If ports in U.S. territories are included, Unalaska/Dutch Harbor ranks second behind Pago Pago in American Samoa for at least some of these years. As the center of the U.S. flag tuna fishery, value of landings at that port in 1998 (approximately \$232 million) more than doubled Unalaska/Dutch Harbor's total for that same year, the last full year for which data are available (NMFS 2001b).

⁵ In 2003, New Bedford value of landings totaled \$176.2 million on a much lower volume (155.4 million pounds) than landed in Unalaska.

The commercial fishery provides a very large component of the employment base in Unalaska. According to the City of Unalaska Comprehensive Annual Financial Report for the fiscal year ending June 30, 2001, “The Unalaska economy is driven by the seafood industry. About half of the Unalaska labor force is employed by the seafood industry, and 90 percent of the workers consider themselves dependent on the seafood industry.” This pattern has not changed significantly since that time. According to a telephone survey conducted by the City and included in the fiscal year ending June 30, 2004 report, the top four employers in the community are seafood industry businesses (Table 2-14). The City is the fifth largest employer, and the next two are shipping firms that rely virtually exclusively on the seafood industry. These firms are followed by the school district, which is followed by a fuel and vessel support firm that relies very heavily on the fishing industry. It is only at the tenth position on the list that one comes to an employer that is not a seafood company, a direct/exclusive support firm for commercial fishing sector firms, or a government entity. Nevertheless, this firm does derive a portion of its business from supplying fishing vessels.

Table 2-14. City of Unalaska, Ten Principal Employers, June 30, 2003

Employer	Type of Business
UniSea, Inc.	Seafood, Hotel, Retail
Westward Seafoods, Inc.	Seafood
Alyeska Seafood, Inc.	Seafood
Royal Aleutian Seafoods, Inc.	Seafood
City of Unalaska	Local Government, Utilities, Ports
Horizon Lines, Inc.	Transportation
American President Lines, Ltd.	Transportation
Unalaska City School	Primary, Secondary Education
Western Pioneer, Inc.	Fuel, Vessel Support
Alaska Commercial Company	Grocery, Retail

Source: City of Unalaska, Comprehensive Annual Financial Report for the Fiscal Year ending June 30, 2004.

Beyond employment, fishing and fishing support define a substantial portion of the identity of the community, and fishing related issues extend into many other areas of community life. An example of the engagement of the community with the direct and fisheries support sectors and vice versa may be seen in the composition of local government decision makers. In 2004, of the seven city council plus mayor positions, four were held by employees or spouses of employees of direct fishery support service businesses (shipping, hydraulics, vessel provisioning, and diving/welding and boat watch services), and one was held by a retired individual who previously worked in both the processing and fishery support service (welding) sectors. Only two council persons had no direct ties to the fishery or the primary fishery support sector (one is a retired City of Unalaska employee and the other has multi-generational family roots in Unalaska).

Table 2-15 provides summary data on employment and poverty from the 2000 census. As shown, there was virtually no unemployment in 1990, but over 11 percent unemployment in 2000. These numbers should be treated with some caution, however, as it may well be the case that persons counted as unemployed included seafood processing workers temporarily idled between seasons. While this unemployment may have been “real” in the sense that processing workers were present

and not actively working when the census was taken, it is most likely an artifact of the timing of the census as processing workers are not typically present in the community when the plant is idle for any extended period of time. That is, under normal conditions, there are no unemployed seafood processing workers present in the community (by design). These workers are transported to and from the community by their employer to meet labor demand at the plant. As part of the employment agreement, seafood processors typically provide room and board for workers, so it is uneconomic to have idled workers at the site unless the plant downtime is relatively brief (i.e., the cost of housing and feeding the employees during the idle interval does not exceed transportation, recruiting, training and other costs associated with sending workers out and bringing them back in, including some level of turnover that always occurs in these situations). This pattern has changed somewhat in recent years as at least some seafood processing employees choose to remain on-site during slack periods, according to processing company staff. These individuals enjoy the benefits of living in company housing, and the company enjoys the benefit of having an on-call labor pool available for intermittent small processing runs and a reduction of transportation expenses and logistical challenges involved in bringing people in at the start of a new season.

Table 2-15. Employment and Poverty Information, Unalaska, 1990 and 2000

Year	Total Persons Employed	Unemployed	Percent Unemployment	Percent Adults Not Working	Not Seeking Employment	Percent Poverty
1990	2518	26	1.0%	7.8%	186	15.3%
2000	2675	414	11.1%	27.93%	625	12.5%

Source: U.S. Bureau of Census.

The following discussion of the fishing industry is divided into the harvesting and processing sectors, as each has significance for the Unalaska economy and community. A third section provides information on fishing industry support services.

2.3.1 Harvesting

Community Fleet Quantitative Description

Table 2-16 provides information on the characteristics of vessels owned by Unalaska residents for the period 1995 through 2002. This information is collected by the CFEC when vessel owners renew their registration. As shown, the number of vessels declined between 1995 and 2000, but increased over the last 2 years shown. A similar pattern of decline and increase is seen in the number of vessels fishing. Also as shown in the table, the most numerous vessels in the community are the smallest vessel classes, with comparatively few vessels greater than 50 feet in length overall. In recent years there have been almost equal numbers of vessels in the 0- to 26-foot and the 27- to 32-foot classes.

Table 2-16. Vessel Characteristics of Vessels Owned by Residents of Unalaska/Dutch Harbor, 1995-2002

Characteristics	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Total Number of Vessels	73	66	62	53	48	43	44	50
Number of Vessels Fishing	39	42	33	26	23	19	24	28
Number of Vessels by Size								
0-26 feet length overall	32	27	22	18	16	13	15	15
27-32 feet length overall	18	18	18	15	12	13	15	16
33-49 feet length overall	11	10	12	12	12	12	9	10
50-59 feet length overall	6	6	4	4	4	3	3	5
60-124 feet length overall	6	4	5	4	4	2	2	4
125+ feet length overall	0	1	1	0	0	0	0	0
Average Age of Vessels (years)	18	20	20	22	22	21	21	23
Number of Vessels by Hull Type								
Aluminum	18	16	15	17	15	15	15	16
Wood	15	16	12	9	6	3	1	7
Fiberglass	27	24	24	18	18	18	23	21
Steel	13	10	11	8	8	7	5	6
Number of Vessels with Refrigeration	4	1	3	4	4	2	2	4
Number of Vessels Using Diesel	35	33	37	32	32	29	30	37

Notes: CFEC analysts provided vessel registration data of all resident vessel owners by community and year. Vessel registration data are available on the internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm. The data were summarized by Northern Economics, Inc.

Source: CFEC Vessel Registration Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

In addition to vessel ownership information, data on permit holders for Unalaska provide a perspective on local harvester engagement in various fisheries. Table 2-17 shows the number of persons in the community who own permits in one, two, three, or all four of the major fishery groups in Alaska, by year, for the period 1995 through 2002. Table 2-18 shows the percentages of all permit holders who own permits in the different combinations listed. (Additional information on permit holders by community may be found in Appendix A.) As shown, in most years roughly half of persons with permits held permits in only one major fishery group and between 25 percent and 41 percent of permit holders held permits in two or more major fishery groups. As noted below, however, any data regarding permit holders for Unalaska should be regarded with caution, as it is highly likely that a number of permit holders with addresses listed in Unalaska do not maintain a residence in the community.

Table 2-17. Distribution of Permit Holders across Fisheries for Unalaska/Dutch Harbor, 1995-2002

Fishery	1995	1996	1997	1998	1999	2000	2001	2002
Persons with Permit in only One Major Fishery Group								
Salmon (SM)	5	8	9	11	12	13	10	8
Groundfish (GF)	20	26	23	18	17	20	13	9
Halibut and Sablefish (HS)	9	6	6	4	5	8	13	13
Crab /all other species (CO)	20	17	11	8	8	6	11	8
Persons with Permits in Two Major Fishery Groups								
SM, GF	2	2	1	2	2	1	2	3
SM, HS	1	1	1	1	1	-	-	2
SM, CO	2	2	-	-	-	-	1	-
GF, HS	18	12	16	14	15	11	9	10
GF, CO	16	16	15	13	9	8	6	10
HS, CO	3	2	-	1	1	-	1	2
Persons with Permits in Three Major Fishery Groups								
SM, GF, HS	-	-	1	-	-	-	-	-
SM, GF, CO	-	-	-	-	-	1	-	-
SM, HS, CO	-	1	1	1	1	2	1	2
GF, HS, CO	4	12	7	1	5	5	7	6
Persons with Permits in All Four Major Fishery Groups								
SM, GF, HS, CO	2	1	2	2	1	1	1	1
Total of All Permit Holders								
All Fisheries	102	106	93	76	77	76	75	74

Notes: (1) CFEC analysts provided permit ownership of residents of each community by year, although these data are available on the internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm. (2) It is likely that a significant number of permit holders shown in this table do not actually maintain a residence in Unalaska/Dutch Harbor. This conclusion is based on a working knowledge of the local fleet, anecdotal evidence from interviews, and the fact that in no other community studied are pounds and value of resident permit holders an order of magnitude higher than pounds and value of resident vessel owners.

Source: CFEC Permit Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Table 2-18. Percentage Distribution of Permit Holders across Fisheries for Unalaska/Dutch Harbor, 1995-2002

Fishery	1995	1996	1997	1998	1999	2000	2001	2002
Percent of all Community Permit Holders with Permit in only One Major Fishery Group								
Salmon (SM)	5%	8%	10%	14%	16%	17%	13%	11%
Groundfish (GF)	20%	25%	25%	24%	22%	26%	17%	12%
Halibut and Sablefish (HS)	9%	6%	6%	5%	6%	11%	17%	18%
Crab /all other species (CO)	20%	16%	12%	11%	10%	8%	15%	11%
<i>Subtotal, One Fishery Group</i>	<i>53%</i>	<i>54%</i>	<i>53%</i>	<i>54%</i>	<i>55%</i>	<i>62%</i>	<i>63%</i>	<i>51%</i>
Percent of all Community Permit Holders with Permits in Two Major Fishery Groups								
SM, GF	2%	2%	1%	3%	3%	1%	3%	4%
SM, HS	1%	1%	1%	1%	1%	-	-	3%
SM, CO	2%	2%	-	-	-	-	1%	-
GF, HS	18%	11%	17%	18%	19%	14%	12%	14%
GF, CO	16%	15%	16%	17%	12%	11%	8%	14%
HS, CO	3%	2%	-	1%	1%	-	1%	3%
<i>Subtotal, Two Fishery Groups</i>	<i>41%</i>	<i>33%</i>	<i>35%</i>	<i>41%</i>	<i>36%</i>	<i>26%</i>	<i>25%</i>	<i>36%</i>
Percent of all Community Permit Holders with Permits in Three Major Fishery Groups								
SM, GF, HS	-	-	1%	-	-	-	-	-
SM, GF, CO	-	-	-	-	-	1%	-	-
SM, HS, CO	-	1%	1%	1%	1%	3%	1%	3%
GF, HS, CO	4%	11%	8%	1%	6%	7%	9%	8%
<i>Subtotal, Three Fishery Groups</i>	<i>4%</i>	<i>12%</i>	<i>10%</i>	<i>3%</i>	<i>8%</i>	<i>11%</i>	<i>11%</i>	<i>11%</i>
Percent of all Community Permit Holders with Permits in All Four Major Fishery Groups								
SM, GF, HS, CO	2%	1%	2%	3%	1%	1%	1%	1%

Notes: (1) CFEC analysts provided permit ownership of residents of each community by year, although these data are available on the internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm. (2) It is likely that a significant number of permit holders shown in this table do not actually maintain a residence in Unalaska/Dutch Harbor. This conclusion is based on a working knowledge of the local fleet, anecdotal evidence from interviews, and the fact that in no other community studied are pounds and value of resident permit holders an order of magnitude higher than pounds and value of resident vessel owners.

Source: CFEC Permit Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Summary catch and earnings estimates for the community may be made through using the annual CFEC data report called “Permit and Fishing Activity by Year, State, Census Division or Alaskan City.” Table 2-19 aggregates and summarizes estimated landings and gross revenue data for Unalaska into 14 gear and species groups. (Note that this table, unlike the previous table, displays the number of permits held, not the number of permit holders.) Where the number of permits in any group is less than that required to permit disclosure of actual data, an algorithm was used to produce “reasonable estimates” of total catch and earnings. (A more detailed explanation of the algorithm methodology is provided in Appendix A.) As shown, there is considerable variability in the relative importance of particular species from year to year. Further, as discussed below, there is a large discrepancy in the data between landings and earnings for local vessel owners and local permit owners in Unalaska (that is not seen for other communities, such as Akutan, King Cove, or Kodiak).

Table 2-19. Summary Catch and Earnings Estimates for Unalaska/Dutch Harbor Permit Holders by Species Group, 1995-2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
Fishery	Permits Held							
Halibut	28	25	26	21	26	25	28	30
IFQ Sablefish	9	22	8	3	7	7	10	12
Salmon Seine	5	4	4	4	2	2	1	2
Salmon Drift Net	4	3	3	4	4	5	3	4
Salmon Set Net	1	2	2	3	2	-	-	-
Salmon Other Gear	-	-	-	1	1	1	-	-
Herring	1	1	-	-	-	1	10	18
Groundfish Longline	21	17	15	11	16	13	16	18
Groundfish Jig	34	40	33	24	20	18	17	19
Groundfish Pot	11	18	13	10	9	8	4	5
Groundfish Trawl	2	3	2	1	1	1	2	-
Tanner Crab	13	14	7	6	10	6	3	2
King Crab	17	29	20	17	9	8	9	5
All Other Fish/ Shellfish	32	36	21	7	5	8	6	5
Total All Permits	178	214	154	112	112	103	109	120
Fishery	Permits Fished							
Halibut	17	19	22	14	20	20	17	24
IFQ Sablefish	3	4	3	3	6	5	5	8
Salmon Seine	3	1	-	1	1	1	1	-
Salmon Drift Net	3	4	3	4	2	4	2	3
Salmon Set Net	1	3	2	2	2	-	-	-
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	1	1	-	-	-	-	6	15
Groundfish Longline	7	5	5	2	6	6	7	7
Groundfish Jig	19	23	15	9	8	7	4	5
Groundfish Pot	7	8	5	1	5	5	1	3
Groundfish Trawl	1	1	-	-	-	1	1	-
Tanner Crab	10	12	7	6	9	6	3	2
King Crab	15	25	18	16	7	6	7	5
All Other Fish/ Shellfish	5	9	12	1	-	1	1	3
Total All Permits Fished	92	115	92	59	66	62	55	75
Fishery	Estimated Landings (Pounds)							
Halibut	322,156	307,609	450,570	396,060	580,952	492,036	516,951	563,097
IFQ Sablefish	133,120	178,973	117,582	105,181	311,670	125,784	196,985	429,433
Salmon Seine	1,494,037	155,783	-	124,723	322,278	176,753	213,595	-
Salmon Drift Net	323,150	308,394	207,565	178,684	103,835	217,927	98,230	168,794
Salmon Set Net	5,325	64,220	35,482	29,008	33,396	-	-	-
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	189,748	125,334	-	-	-	-	158,063	268,588
Groundfish Longline	564,692	77,005	420,898	143,234	260,000	225,883	264,766	188,723
Groundfish Jig	1,004,089	631,021	394,064	248,626	168,045	102,715	19,990	59,869
Groundfish Pot	1,140,888	2,961,654	1,145,697	395,000	495,557	757,246	356,687	1,073,801
Groundfish Trawl	3,334,547	2,654,931	-	-	-	3,368,704	3,477,076	-
Tanner Crab	1,880,882	2,169,967	2,675,476	4,283,224	5,488,979	632,090	236,116	237,339
King Crab	1,412,118	1,102,546	627,262	797,418	344,465	338,555	168,312	146,829
All Other Fish/ Shellfish	161,152	138,925	278,472	30,802	-	8,678	2,809	25,662
Total (All Species)	11,965,904	10,876,362	6,353,069	6,731,960	8,109,176	6,446,371	5,709,580	3,162,136

Year	1995	1996	1997	1998	1999	2000	2001	2002
Fishery	Estimated Gross Revenue (dollars)							
Halibut	\$544,263	\$530,234	\$817,711	\$386,792	\$923,737	\$1,003,253	\$877,251	\$1,015,498
IFQ Sablefish	\$264,581	\$364,244	\$269,713	\$159,242	\$559,620	\$260,239	\$353,731	\$766,264
Salmon Seine	\$476,512	\$40,453	-	\$101,480	\$256,128	\$124,412	\$80,038	-
Salmon Drift Net	\$296,794	\$258,553	\$183,402	\$195,255	\$108,981	\$146,944	\$61,092	\$86,212
Salmon Set Net	\$8,451	\$53,563	\$32,354	\$33,388	\$34,033	-	-	-
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	\$29,601	\$19,827	-	-	-	-	\$39,516	\$53,718
Groundfish Longline	\$213,737	\$24,342	\$269,335	\$31,766	\$85,918	\$76,916	\$73,203	\$35,678
Groundfish Jig	\$297,244	\$178,672	\$118,822	\$65,470	\$58,388	\$32,469	\$6,941	\$13,342
Groundfish Pot	\$268,169	\$561,238	\$249,563	\$79,690	\$151,073	\$231,366	\$91,290	\$276,163
Groundfish Trawl	\$595,324	\$519,326	-	-	-	\$463,706	\$424,702	-
Tanner Crab	\$4,238,241	\$3,043,948	\$2,108,275	\$2,420,022	\$5,395,666	\$1,167,318	\$366,646	\$328,396
King Crab	\$4,165,366	\$2,918,226	\$1,697,832	\$1,728,134	\$1,701,930	\$1,282,866	\$648,206	\$736,216
All Other Fish/ Shellfish	\$393,946	\$221,681	\$769,201	\$44,694	-	\$14,318	\$5,357	\$28,215
Total (All Species)	\$11,792,228	\$8,734,307	\$6,516,208	\$5,245,933	\$9,275,474	\$4,803,806	\$3,027,973	\$3,339,703

Note: It is likely that a significant portion of the landed value and pounds of permit holders shown in this table are associated with persons who do not actually maintain a residence in Unalaska/Dutch Harbor. This conclusion is based on a working knowledge of the local fleet, anecdotal evidence from interviews, and the fact that in no other community studied are pounds and value of resident permit holders an order of magnitude higher than pounds and value of resident vessel owners.

Source: Commercial Fishing Entry Commission "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City" from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

Table 2-20 provides estimates of the percentage of non-confidential gross revenue for Unalaska permit holders by species group by year for the period 1995 through 2002. This provides one type of fundamental measure of "dependency" of community harvesters on particular fisheries. These figures would suggest that the local fleet is highly dependent on tanner and king crab revenues, but interviews in the community suggest that very few vessels owned by individuals considered to be local residents are currently engaged in these fisheries (see the community fleet characterization section below). This suggests some caution should be used in interpreting these data, as it is possible that even a few high producing permits held by individuals from outside the community, but who listed an Unalaska/Dutch Harbor address on their permit, could skew the data. This is more likely to occur in Unalaska than in other regional ports, given the large number of vessels from elsewhere that work out of the community. It has been suggested that Unalaska addresses may show up on permits where permits are sent to fishermen in port awaiting the opening of a given season.

Table 2-20. Percentage of Gross Revenue Estimates for Unalaska/Dutch Harbor Permit Holders by Species Group, 1995-2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
Fishery	Estimated Gross Revenue							
Halibut	544,263	530,234	817,711	386,792	923,737	1,003,253	877,251	1,015,498
IFQ Sablefish	264,581	364,244	269,713	159,242	559,620	260,239	353,731	766,264
Salmon Seine	476,512	40,453	-	101,480	256,128	124,412	80,038	-
Salmon Drift Net	296,794	258,553	183,402	195,255	108,981	146,944	61,092	86,212
Salmon Set Net	8,451	53,563	32,354	33,388	34,033	-	-	-
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	29,601	19,827	-	-	-	-	39,516	53,718

Year	1995	1996	1997	1998	1999	2000	2001	2002
Groundfish Longline	213,737	24,342	269,335	31,766	85,918	76,916	73,203	35,678
Groundfish Jig	297,244	178,672	118,822	65,470	58,388	32,469	6,941	13,342
Groundfish Pot	268,169	561,238	249,563	79,690	151,073	231,366	91,290	276,163
Groundfish Trawl	595,324	519,326	-	-	-	463,706	424,702	-
Tanner Crab	4,238,241	3,043,948	2,108,275	2,420,022	5,395,666	1,167,318	366,646	328,396
King Crab	4,165,366	2,918,226	1,697,832	1,728,134	1,701,930	1,282,866	648,206	736,216
All Other Fish/Shellfish	393,946	221,681	769,201	44,694	-	14,318	5,357	28,215
Total (All Species)	11,792,228	8,734,307	6,516,208	5,245,933	9,275,474	4,803,806	3,027,973	3,339,703
Fishery	Percentage of Estimated Gross Revenue							
Halibut	4.62%	6.07%	12.55%	7.37%	9.96%	20.88%	28.97%	30.41%
IFQ Sablefish	2.24%	4.17%	4.14%	3.04%	6.03%	5.42%	11.68%	22.94%
Salmon Seine	4.04%	0.46%	-	1.93%	2.76%	2.59%	2.64%	-
Salmon Drift Net	2.52%	2.96%	2.81%	3.72%	1.17%	3.06%	2.02%	2.58%
Salmon Set Net	0.07%	0.61%	0.50%	0.64%	0.37%	-	-	-
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	0.25%	0.23%	-	-	-	-	1.31%	1.61%
Groundfish Longline	1.81%	0.28%	4.13%	0.61%	0.93%	1.60%	2.42%	1.07%
Groundfish Jig	2.52%	2.05%	1.82%	1.25%	0.63%	0.68%	0.23%	0.40%
Groundfish Pot	2.27%	6.43%	3.83%	1.52%	1.63%	4.82%	3.01%	8.27%
Groundfish Trawl	5.05%	5.95%	-	-	-	9.65%	14.03%	-
Tanner Crab	35.94%	34.85%	32.35%	46.13%	58.17%	24.30%	12.11%	9.83%
King Crab	35.32%	33.41%	26.06%	32.94%	18.35%	26.71%	21.41%	22.04%
All Other Fish/Shellfish	3.34%	2.54%	11.80%	0.85%	-	0.30%	0.18%	0.84%
Total (All Species)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Note: It is likely that a significant portion of the landed value of permit holders shown in this table are associated with persons who do not actually maintain a residence in Unalaska/Dutch Harbor. This conclusion is based on a working knowledge of the local fleet, anecdotal evidence from interviews, and the fact that in no other community studied are pounds and value of resident permit holders an order of magnitude higher than pounds and value of resident vessel owners.

Source: Commercial Fishing Entry Commission "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City" from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

An important factor in characterizing the economic relationship of the local harvesters to the larger economy of the community is the pattern of landings associated with local vessels and permits. When a vessel owner or permit holder delivers catch to processors inside their home community, revenues will accrue to that community in different ways than if local vessel or permit holders deliver to processors outside of their home community (that is, to processors located in other communities). This would include both tax revenue accruing to local jurisdictions as well private sector economic benefits deriving from activities related to the deliveries, such as processing, shipping, support service demand, and the like.

Table 2-21 provides data on volume and value of landings made inside and outside the community by Unalaska vessel owners for the years 1995 through 2002, and Table 2-22 provides similar information for local permit holders. These two tables point out the sharp difference in landings and gross earnings between individuals classified as local vessel owners and those who show up in the data as local permit owners. For example, for the most recent year shown (2002), total estimated gross earnings were \$1.6 million for vessel owners with an Unalaska address, while the total estimated gross earnings were \$4.4 million for permit holders using an Unalaska address. Of the two, it would appear that the vessel rather than the permit figures more closely approximate the situation on the ground in the community. The vessel numbers, however, still appear to be inflated

based on a working knowledge of the local fleet (see the community fleet characterization section below). Further, the pattern of deliveries, where locally owned vessels in most years deliver substantially more catch to locations outside the community rather than to processors in the community does not match with local interview and observational data regarding the nature of the local fleet.

Table 2-21. Landings by Unalaska/Dutch Harbor Vessel Owners—Summary, 1995-2002

Year	Landing Location	Pounds	Estimated Gross Earnings
1995	Landed in Community	3,004,069	\$3,611,551
	Landed Outside Community	1,889,896	\$1,669,501
	Total	4,893,965	\$5,281,051
1996	Landed in Community	1,317,998	\$656,732
	Landed Outside Community	716,058	\$912,033
	Total	2,034,056	\$1,568,765
1997	Landed in Community	1,924,292	\$1,437,444
	Landed Outside Community	1,358,167	\$1,501,916
	Total	3,282,459	\$2,939,360
1998	Landed in Community	1,705,097	\$861,304
	Landed Outside Community	1,124,238	\$991,954
	Total	2,829,335	\$1,853,259
1999	Landed in Community	388,415	\$534,907
	Landed Outside Community	2,344,358	\$2,266,386
	Total	2,732,773	\$2,801,292
2000	Landed in Community	223,297	\$101,345
	Landed Outside Community	1,088,764	\$1,091,118
	Total	1,312,061	\$1,192,464
2001	Landed in Community	368,095	\$135,472
	Landed Outside Community	1,011,157	\$722,417
	Total	1,379,252	\$857,889
2002	Landed in Community	557,610	\$487,759
	Landed Outside Community	597,420	\$1,108,005
	Total	1,155,030	\$1,595,764

Note: It is likely that at least some portion of the landed value and pounds of vessel owners shown in this table are associated with persons who do not actually maintain a residence in Unalaska/Dutch Harbor. This conclusion is based on a working knowledge of the local fleet and anecdotal evidence from interviews. This problem of overstatement is likely due to non-residents using an Unalaska/Dutch Harbor mailing address for vessel registration paperwork. Overstatement of local vessel associated catch is clearly much less of a problem than the apparent overstatement of local permit associated catch. See text.

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 2-22. Landings by Unalaska/ Dutch Harbor Permit Holders—Summary, 1995-2002

Year	Landing Location	Pounds	Estimated Gross Earnings
1995	Landed in Community	5,477,987	\$8,611,049
	Landed Outside Community	2,219,778	\$3,581,440
	Total	7,697,765	\$12,192,489
1996	Landed in Community	6,074,513	\$5,838,602
	Landed Outside Community	2,210,548	\$2,646,537
	Total	8,285,061	\$8,485,139
1997	Landed in Community	3,921,178	\$3,591,447
	Landed Outside Community	2,434,636	\$2,718,091
	Total	6,355,814	\$6,309,538
1998	Landed in Community	3,475,214	\$2,557,092
	Landed Outside Community	5,122,400	\$2,770,954
	Total	8,597,614	\$5,328,045
1999	Landed in Community	15,782,983	\$4,442,820
	Landed Outside Community	7,211,127	\$6,472,137
	Total	22,994,110	\$10,914,957
2000	Landed in Community	859,434	\$892,587
	Landed Outside Community	4,275,056	\$2,490,208
	Total	5,134,490	\$3,382,794
2001	Landed in Community	18,457,940	\$3,135,715
	Landed Outside Community	1,269,905	\$1,707,051
	Total	19,727,845	\$4,842,766
2002	Landed in Community	20,451,021	\$3,072,685
	Landed Outside Community	1,534,400	\$1,362,271
	Total	21,985,421	\$4,434,956

Note: It is likely that a significant portion of the landed value of permit holders shown in this table are associated with persons who do not actually maintain a residence in Unalaska/Dutch Harbor. This conclusion is based on a working knowledge of the local fleet, anecdotal evidence from interviews, and the fact that in no other community studied are pounds and value of resident permit holders an order of magnitude higher than pounds and value of resident vessel owners.

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 2-23 provides a detailed breakout by species group (to the extent possible given confidentiality restraints) by year for landings within the community by Unalaska vessel owners, and Table 2-24 provides parallel information for landings these vessel owners made to other communities outside of Unalaska. Table 2-25 displays detailed information by species group (again, to the extent possible given confidentiality restraints) by year for landings by permit holders within the community, and Table 2-26 provides parallel information for landings made outside the community. For all of these tables, aggregations vary by year, and totals do not necessarily match those provided in previously presented summary tables, due to confidentiality restrictions. It should be emphasized again that these data should be interpreted with caution in terms of the attribution of residency of both owners and permit holders.

Table 2-23. Landings by Unalaska/Dutch Harbor Vessel Owners—Detail of Landings in Community, 1995-2002

Year	Permit Type	Pounds	Estimated Gross Earnings
Landed in Community			
1995	Groundfish-Jig	747,104	\$219,297
	King Crab/Misc. Shellfish and Other Species/Groundfish (All Gears)	952,440	\$1,289,773
	Sablefish/Groundfish-Longline	577,882	\$561,051
	Tanner Crab	726,643	\$1,541,430
	1995 Total	3,004,069	\$3,611,551
1996	Groundfish (All Gears)/Misc. Shellfish and Other Species	1,051,019	\$307,866
	Halibut/Sablefish	-	-
	King Crab	-	-
	Tanner Crab	266,979	\$348,865
	1996 Total	1,317,998	\$656,732
1997	Halibut/Sablefish/Groundfish (All Gears)	1,224,167	\$498,052
	King Crab/Misc. Shellfish and Other Species/Tanner Crab	700,125	\$939,393
	1997 Total	1,924,292	\$1,437,444
1998	Groundfish-Pot/Groundfish-Jig/Sablefish/King & Tanner Crab	1,705,097	\$861,304
	1998 Total	1,705,097	\$861,304
1999	Groundfish-Jig	207,935	\$74,731
	Halibut/Sablefish/Groundfish (All Gears)/Tanner Crab/King Crab	180,480	\$460,176
	1999 Total	388,415	\$534,907
2000	Halibut/Sablefish/Groundfish (All Gears)	223,297	\$101,345
	2000 Total	223,297	\$101,345
2001	Halibut/Sablefish	62,112	\$54,350
	Herring (All Gears)/Groundfish-Jig/Groundfish-Longline	305,983	\$81,122
	Misc. Shellfish and Other Species	-	-
	2001 Total	368,095	\$135,472
2002	Groundfish-Jig	60,128	\$13,616
	Groundfish-Longline	100,468	\$29,171
	Halibut/Sablefish/Herring (All Gears)/Misc. Shellfish and Other Species	397,014	\$444,972
	King Crab	-	-
	Tanner Crab	-	-
	2002 Total	557,610	\$487,759

Note: It is likely that at least some portion of the landed value and pounds of vessel owners shown in this table are associated with persons who do not actually maintain a residence in Unalaska/Dutch Harbor. This conclusion is based on a working knowledge of the local fleet and anecdotal evidence from interviews. This problem of overstatement is likely due to non-residents using an Unalaska/Dutch Harbor mailing address for vessel registration paperwork. Overstatement of local vessel associated catch is clearly much less of a problem than the apparent overstatement of local permit associated catch. See text.

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 2-24. Landings by Unalaska/Dutch Harbor Vessel Owners—Detail of Landings Outside Community, 1995-2002

Year	Permit Type	Pounds	Estimated Gross Earnings
Landed Outside Community			
1995	Halibut/Sablefish	204,531	\$396,367
	King & Tanner Crab/Misc. Shellfish and Other Species/Groundfish (All Gears)	1,039,950	\$921,593
	Salmon-Seine/Salmon Drift Net	645,415	\$351,541
	1995 Total	1,889,896	\$1,669,501
1996	Halibut/Sablefish	317,683	\$614,166
	Herring (All Gears)/King & Tanner Crab/Misc. Shellfish and Other Species/ Groundfish (All Gears)/Salmon (All Gears)	398,375	\$297,868
	1996 Total	716,058	\$912,033
1997	Halibut/Sablefish	389,342	\$828,986
	King Crab	-	-
	King & Tanner Crab/Groundfish (All Gears)	889,701	\$602,496
	Salmon Drift Net	79,124	\$70,434
	1997 Total	1,358,167	\$1,501,916
1998	Halibut/Sablefish	390,883	\$526,019
	Salmon (All Gears)/King & Tanner Crab/Misc. Shellfish and Other Species/ Groundfish (All Gears)	733,355	\$465,936
	1998 Total	1,124,238	\$991,954
1999	Groundfish-Longline/Groundfish-Pot/Tanner Crab/Misc. Shellfish and Other Species/Salmon (All Gears)	1,819,403	\$1,288,932
	Halibut/Sablefish	524,955	\$977,454
	1999 Total	2,344,358	\$2,266,386
2000	Groundfish (All Gears)/Misc. Shellfish and Other Species/Salmon (All Gears)	693,404	\$240,394
	Halibut/Sablefish	395,360	\$850,724
	2000 Total	1,088,764	\$1,091,118
2001	Halibut	280,925	\$539,941
	King Crab	-	-
	Salmon Drift Net/Misc. Shellfish and Other Species/Groundfish (All Gears)	730,232	\$182,476
	Salmon-Seine	-	-
	2001 Total	1,011,157	\$722,417
2002	Groundfish-Jig	-	-
	Groundfish-Longline/Groundfish-Pot	-	-
	Halibut/Sablefish	487,876	\$1,062,616
	Misc. Shellfish and Other Species	-	-
	Salmon Drift Net/Salmon-Set Net or Troll	109,544	\$45,389
	Tanner Crab	-	-
	2002 Total	597,420	\$1,108,005

Note: It is likely that at least some portion of the landed value and pounds of vessel owners shown in this table are associated with persons who do not actually maintain a residence in Unalaska/Dutch Harbor. This conclusion is based on a working knowledge of the local fleet and anecdotal evidence from interviews. This problem of overstatement is likely due to non-residents using an Unalaska/Dutch Harbor mailing address for vessel registration paperwork. Overstatement of local vessel associated catch is clearly much less of a problem than the apparent overstatement of local permit associated catch. See text.

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 2-25. Landings by Unalaska/Dutch Harbor Permit Holders—Details of Landings Inside Community, 1995-2002

Year	Permit Type	Pounds	Estimated Gross Earnings
Landed in Community			
1995	Sablefish/Groundfish (All Gears)	1,191,411	\$676,633
	Herring (All Gears)/Miscellaneous Shellfish and Other Species/Groundfish-Jig	1,265,568	\$437,092
	King Crab	1,330,307	\$3,739,005
	Tanner Crab	1,690,701	\$3,758,320
	1995 Total	5,477,987	\$8,611,049
1996	Halibut/Sablefish/Groundfish-Longline	262,540	\$306,528
	Herring (All Gears)/Groundfish-Trawl/Groundfish (All Gears)	340,819	\$343,288
	King Crab	1,028,852	\$2,637,946
	Groundfish-Jig	605,514	\$167,054
	Groundfish-Pot	2,425,562	\$459,167
	Tanner Crab	1,411,226	\$1,924,619
	1996 Total	6,074,513	\$5,838,602
1997	Halibut/Sablefish/Groundfish-Longline	218,247	\$263,267
	King Crab	507,022	\$1,319,699
	Groundfish-Jig	390,692	\$114,143
	Groundfish-Pot	1,045,635	\$212,584
	Tanner Crab	1,662,281	\$1,286,791
	Miscellaneous Shellfish and Other Species	97,301	\$394,962
	1997 Total	3,921,178	\$3,591,447
1998	Halibut/Groundfish (All Gears)	257,043	\$71,279
	King Crab/Groundfish-Pot	882,347	\$1,178,389
	Tanner Crab	2,335,824	\$1,307,424
	1998 Total	3,475,214	\$2,557,092
1999	Halibut/Sablefish	73,519	\$63,447
	King Crab	234,020	\$1,277,250
	Groundfish-Jig	153,680	\$53,789
	Groundfish-Trawl/Groundfish-Longline	13,244,591	\$1,311,613
	Groundfish-Pot	406,093	\$115,290
	Tanner Crab	1,671,080	\$1,621,432
	1999 Total	15,782,983	\$4,442,820
2000	Halibut/Sablefish/Groundfish-Longline	252,666	\$206,288
	King Crab	123,752	\$539,414
	Groundfish-Jig	80,909	\$25,001
	Groundfish-Trawl	-	-
	Groundfish-Pot	402,107	\$121,884
	Tanner Crab	-	-
	Miscellaneous Shellfish and Other Species	-	-
	2000 Total	859,434	\$892,587
2001	Halibut	17,396	\$548
	Sablefish	335,302	\$556,493
	Herring (All Gears)	158,236	\$39,559
	King Crab	191,326	\$606,125
	Groundfish (All Gears)	17,755,680	\$1,932,990
	Tanner Crab	-	-
	Miscellaneous Shellfish and Other Species	-	-
	2001 Total	18,457,940	\$3,135,715

Year	Permit Type	Pounds	Estimated Gross Earnings
2002	Halibut	13,332	\$533
	Sablefish	480,341	\$739,757
	King Crab	-	-
	Groundfish-Jig	59,914	\$13,204
	Groundfish-Longline	107,953	\$31,108
	Tanner Crab	-	-
	Miscellaneous Shellfish and Other Species/Herring (All Gears)/Groundfish (All Gears)	19,789,481	\$2,288,083
	2002 Total	20,451,021	\$3,072,685

Note: It is likely that a significant portion of the landed value and pounds of permit holders shown in this table are associated with persons who do not actually maintain a residence in Unalaska/Dutch Harbor. This conclusion is based on a working knowledge of the local fleet, anecdotal evidence from interviews, and the fact that in no other community studied are pounds and value of resident permit holders an order of magnitude higher than pounds and value of resident vessel owners.

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 2-26. Landings by Unalaska/Dutch Harbor Permit Holders—Details of Landings Outside Community, 1995-2002

Year	Permit Type	Pounds	Estimated Gross Earnings
Landed Outside Community			
1995	King Crab/Tanner Crab	817,040	\$1,946,905
	Groundfish-Jig/Groundfish-Longline	248,450	\$133,451
	Salmon Drift Net/Salmon-Seine	545,325	\$313,886
	Salmon-Set Net or Troll/Salmon Drift Net/Salmon-Seine	90,435	\$46,827
	Miscellaneous Shellfish and Other Species/Sablefish/Halibut	518,528	\$1,140,371
	1995 Total	2,219,778	\$3,581,440
1996	Halibut/Sablefish	398,390	\$725,666
	King Crab	116,030	\$383,818
	Salmon-Seine/Salmon Drift Net	-	-
	Salmon-Seine/Salmon Drift Net/Salmon-Set Net or Troll	248,835	\$189,844
	Salmon Drift Net/Salmon-Seine/Salmon-Set Net or Troll	8,387	\$11,988
	Tanner Crab	852,988	\$1,143,317
	Miscellaneous Shellfish and Other Species/Groundfish (All Gears)	585,918	\$191,904
	1996 Total	2,210,548	\$2,646,537
1997	Sablefish/Miscellaneous Shellfish and Other Species/Halibut/Groundfish (All Gears)	703,027	\$1,064,661
	Groundfish-Pot/King Crab	185,532	\$460,640
	Salmon Drift Net/Salmon-Set Net or Troll	107,039	\$98,372
	Tanner Crab	1,439,038	\$1,094,418
	1997 Total	2,434,636	\$2,718,091
1998	King Crab	136,359	\$321,858
	Groundfish-Longline/Sablefish/Halibut	2,689,164	\$1,075,876
	Salmon-Seine/Salmon Drift Net/Salmon-Set Net or Troll	292,283	\$260,523
	Tanner Crab	2,004,594	\$1,112,698
	1998 Total	5,122,400	\$2,770,954

Year	Permit Type	Pounds	Estimated Gross Earnings
1999	Halibut	415,866	\$744,254
	Sablefish	264,107	\$470,901
	King Crab/Tanner Crab	4,286,018	\$4,535,572
	Groundfish-Longline	845,660	\$248,263
	Groundfish-Trawl/Groundfish-Pot	1,062,790	\$145,860
	Salmon-Seine/Salmon Drift Net	-	-
	Salmon-Seine/Salmon Drift Net/Salmon-Set Net or Troll	336,686	\$327,286
	1999 Total	7,211,127	\$6,472,137
2000	Halibut	370,627	\$842,995
	Sablefish	113,694	\$158,129
	King Crab	-	-
	Groundfish (All Gears)	3,050,420	\$417,248
	Salmon-Seine/Salmon Drift Net	258,261	\$185,893
	Tanner Crab	482,054	\$885,941
	2000 Total	4,275,056	\$2,490,208
2001	Halibut	536,568	\$973,461
	Sablefish/Groundfish-Jig/Groundfish-Longline	646,882	\$424,965
	King Crab	86,455	\$308,625
	Salmon-Seine/Salmon Drift Net	-	-
	Tanner Crab	-	-
	2001 Total	1,269,905	\$1,707,051
2002	Sablefish/Groundfish (All Gears)	789,422	\$104,466
	Salmon Drift Net/Halibut	744,978	\$1,257,805
	2002 Total	1,534,400	\$1,362,271

Note: It is likely that a significant portion of the landed value and pounds of permit holders shown in this table are associated with persons who do not actually maintain a residence in Unalaska/Dutch Harbor. This conclusion is based on a working knowledge of the local fleet, anecdotal evidence from interviews, and the fact that in no other community studied are pounds and value of resident permit holders an order of magnitude higher than pounds and value of resident vessel owners.

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Communities also directly benefit from the harvest sector through participation of residents as crew members as well as through the engagement of vessel owners and permit holders. Beginning in 2000, the CFEC has produced estimates of crew members by community, based on the number of permit holders in the community, plus the community residents who have applied for a Crew Member License with the Alaska Department of Fish and Game (ADFG). To the extent that the number of permits held by local residents is apparently overstated (see previous discussion), so will the number of local crew positions be overstated, so caution should be exercised when using these data. (A more complete discussion of this methodology may be found in Appendix A.) Table 2-27 provides estimates of crew members for Unalaska for the years 2000 through 2003.

Table 2-27. Estimated Number of Permit Holders and Crew Members from Unalaska/Dutch Harbor 2000-2003

Year	Permit Holders	Crew Members	Total
2000	50	163	213
2001	CFEC did not develop this report for 2001		
2002	53	158	211
2003	54	187	241

Note: The number of permit holders local to Unalaska/Dutch Harbor is likely overstated (see text), which will result in an overstatement of local crew member estimates.

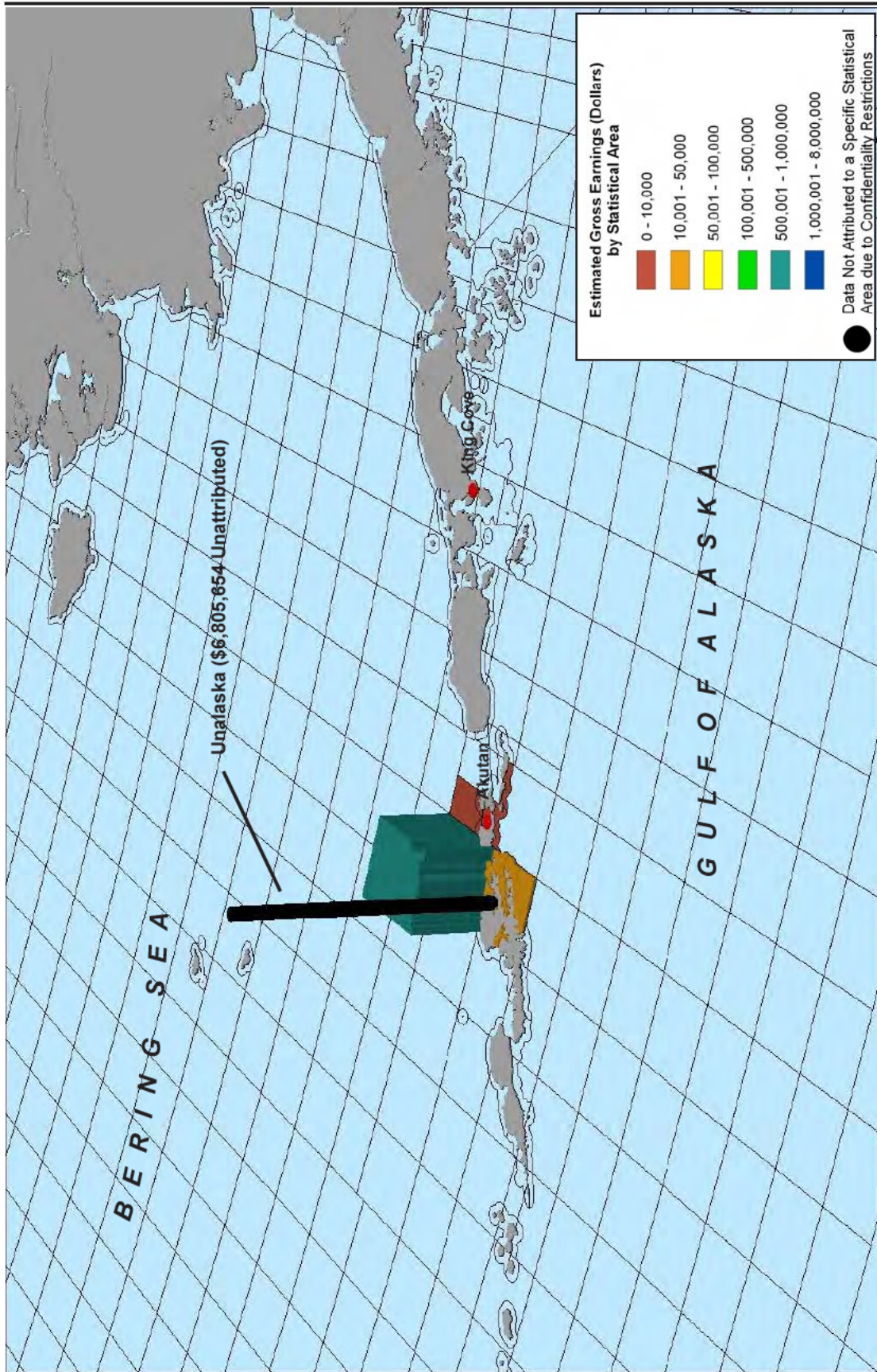
Source: CFEC permit holder and crew member counts by census area and city of residence report, accessed via www.cfec.state.ak.us/Mnu_Summary_Info.htm.

Spatial Distribution of Harvester Effort

Figure UNAK-1 provides information on the spatial distribution of groundfish catch for vessels owned by Unalaska residents for all gear types for the years 1995 through 2002. **Figure UNAK-2**, **Figure UNAK-3**, **Figure UNAK-4**, and **Figure UNAK-5** show the spatial distribution of catch for groundfish in 2-year intervals for within this same overall time period. These figures show a localized distribution of effort, with a marked concentration of effort in the statistical area just north of the community, with a lesser distribution of effort in the area that encompasses Unalaska Bay, Beaver Inlet, and the other nearshore areas on the northeastern end of Unalaska Island. Some effort also shows up in the statistical area that includes that waters around Akutan Island. This is consistent with the small boat nature of the local fleet, and the relative lack of protected waters beyond the immediate vicinity of the community (or, more accurately, the need to transit areas exposed to the open Bering Sea before reaching other sheltered areas). **Figure UNAK-6** and **Figure UNAK-7** show breakouts of groundfish catch by gear type (to the extent possible given confidentiality restrictions) for the most recent 2-year interval (2001-2002). These figures show the patterns of effort by the longline and other gear groups, with little differentiation evident. **Figure UNAK-8** shows the statistical areas used for documenting salmon catch near the community. Due to the low level of effort, confidentiality restrictions prevent a disclosure of catch areas with all salmon catch for the years 1995 through 2002 being spatially unattributed, as shown in the figure.

Community Fleet Characterization

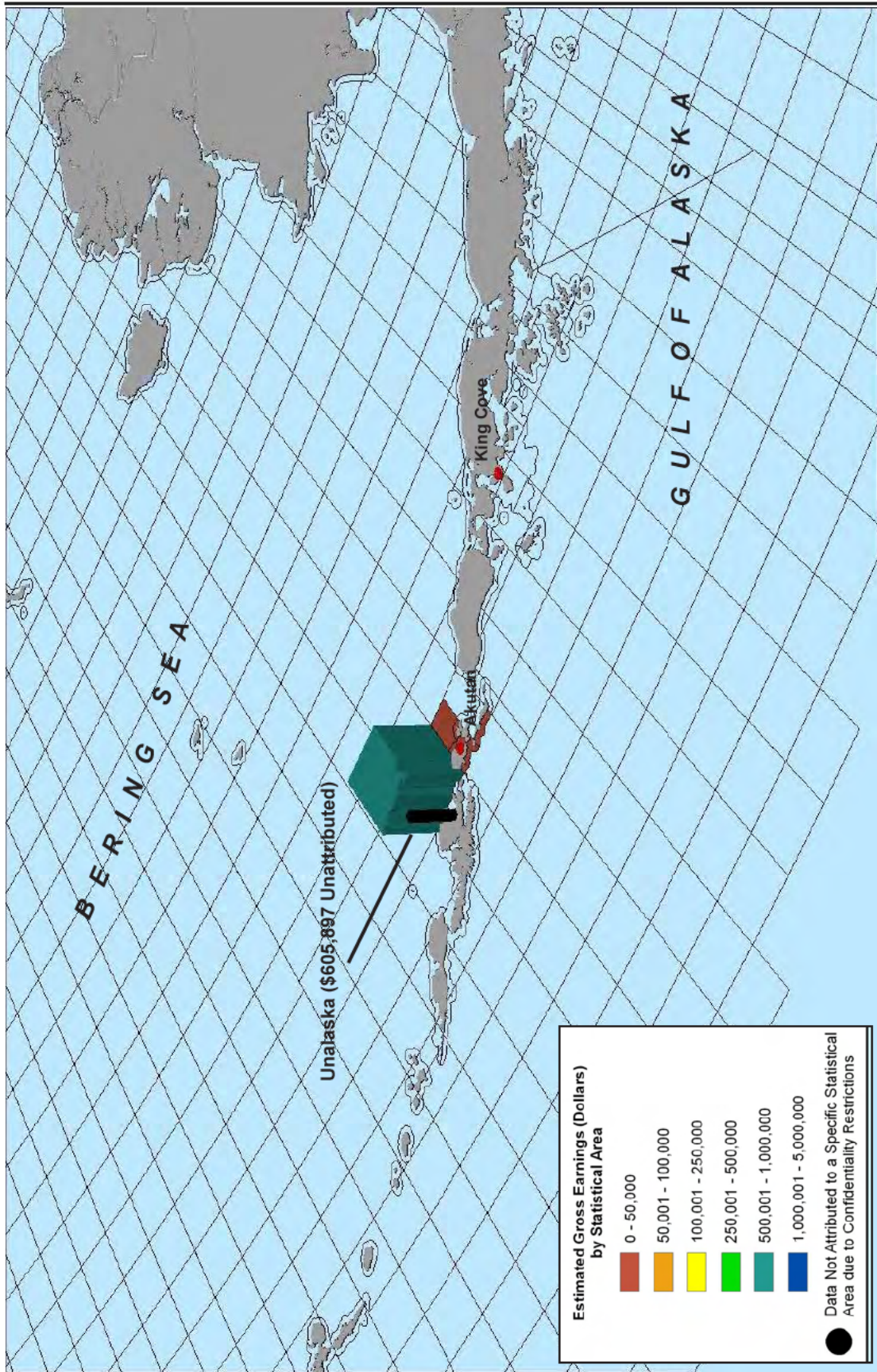
The vast majority of fish landed in Unalaska both in terms of volume and value are landed by vessels from outside of the community. Unalaska is at once both an industrial-scale fishing community and a small boat fleet town. It is home to a greater concentration of processing and catcher vessel activity than any other Alaskan community, but its residential fleet is much smaller than the fleets of some other fishing communities with much smaller populations within the same region (e.g., King Cove and Sand Point). The following discussion is divided into small and large vessel subsections. Images of relatively large vessels from outside the community in the local harbor may be seen in **Plate UNAK-5a** and **Plate UNAK-5b**. **Plate UNAK-5c** and **Plate UNAK-5d** include images of the local small boat fleet. **Plate UNAK-5e** and **Plate UNAK-5f** include images of local fishing skiffs.



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

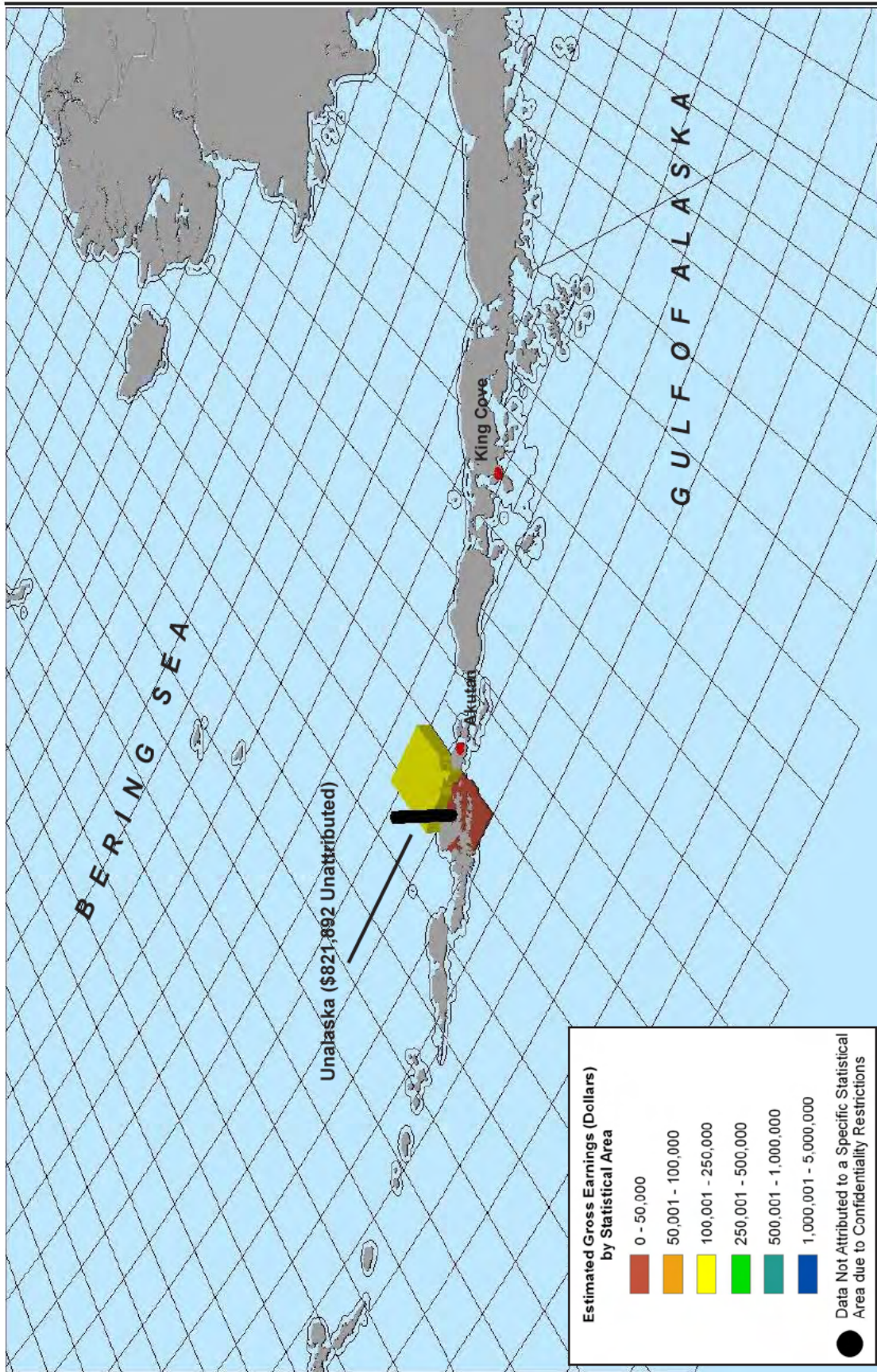
Figure UNAK-1
Total Commercial Groundfish Catch
For Vessels Local to Unalaska
All Gear Types, 1995-2002

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Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure UNAK-2
Commercial Groundfish Catch
For Vessels Local to Unalaska
All Gear Types, 1995-1996



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure UNAK-3
Commercial Groundfish Catch
For Vessels Local to Unalaska
All Gear Types, 1997 -1998

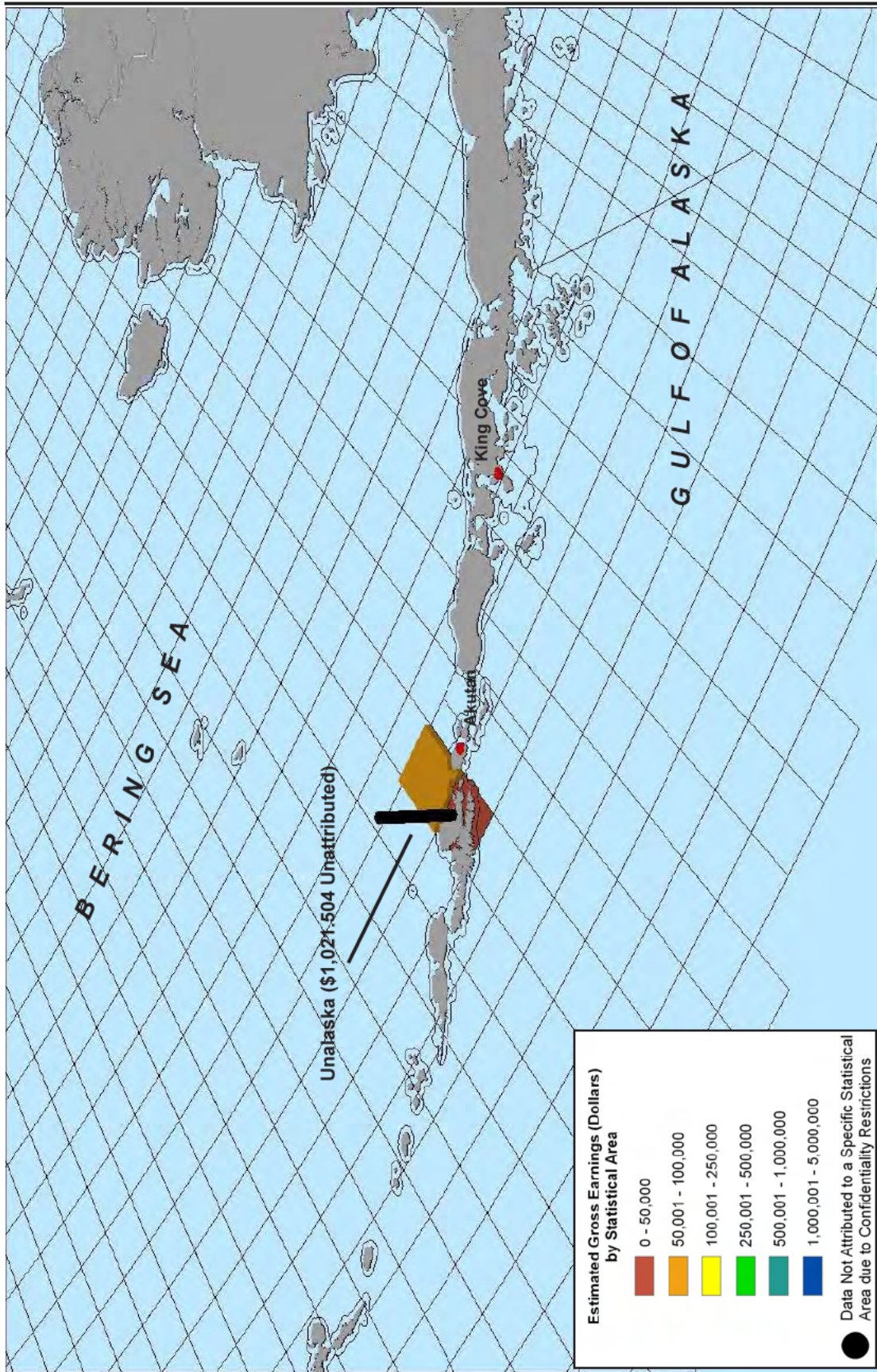
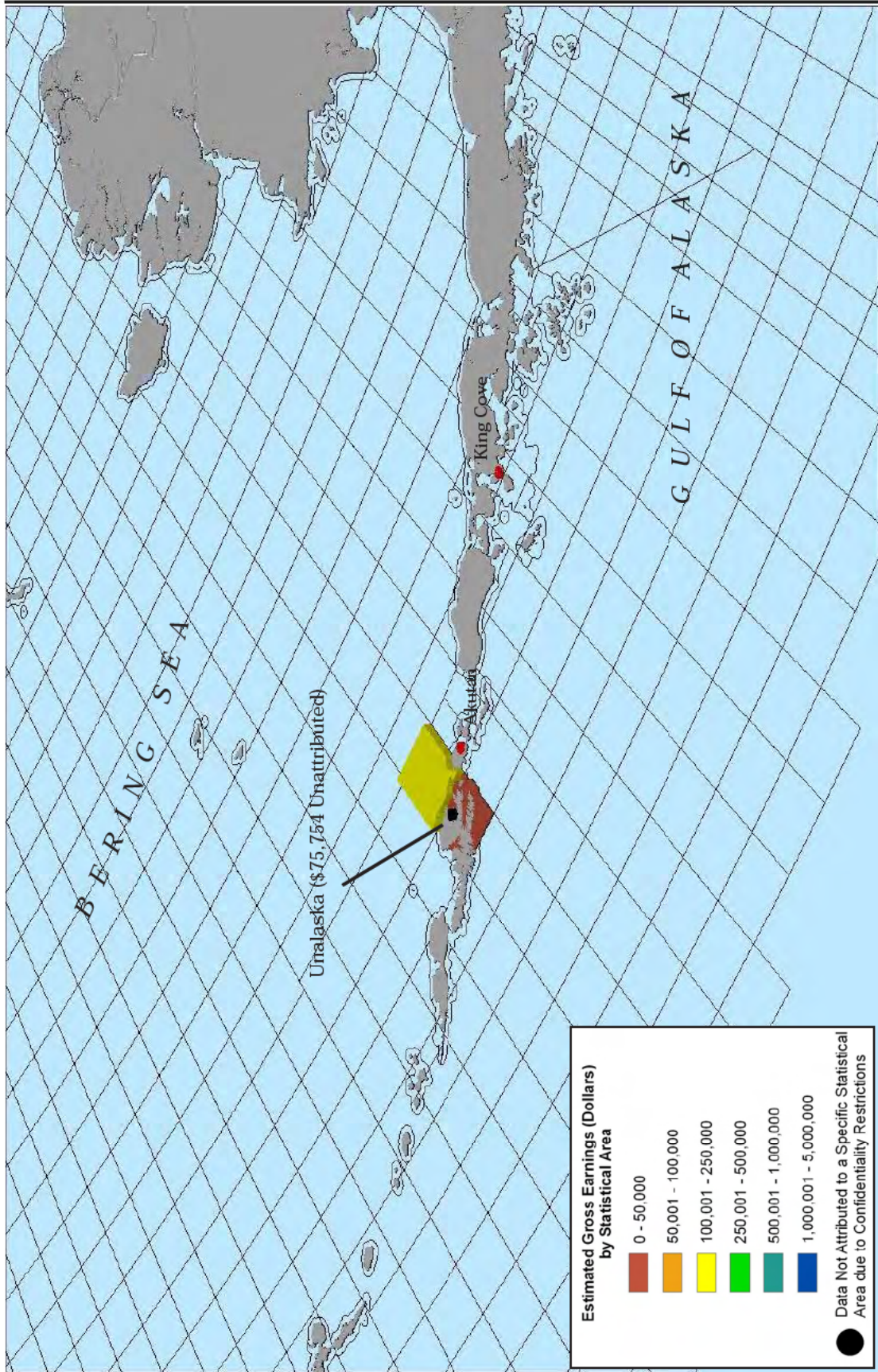


Figure UNAK-4
Commercial Groundfish Catch
For Vessels Local to Unalaska
All Gear Types, 1999-2000

Source: Northern Economics, Alaska Department of Fish and Game, ESRI



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure UNAK-5
 Commercial Groundfish Catch
 For Vessels Local to Unalaska
 All Gear Types, 2001-2002

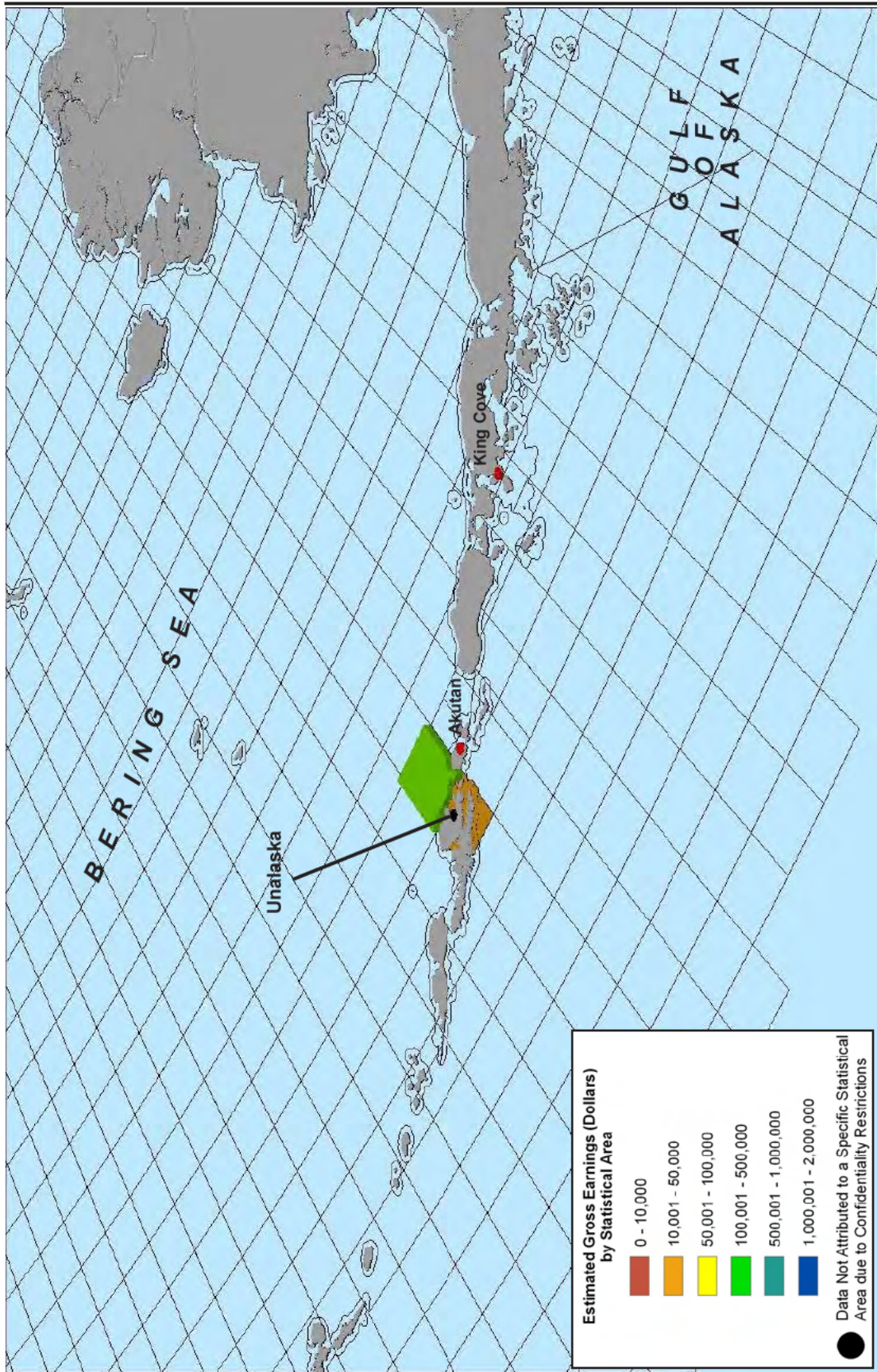
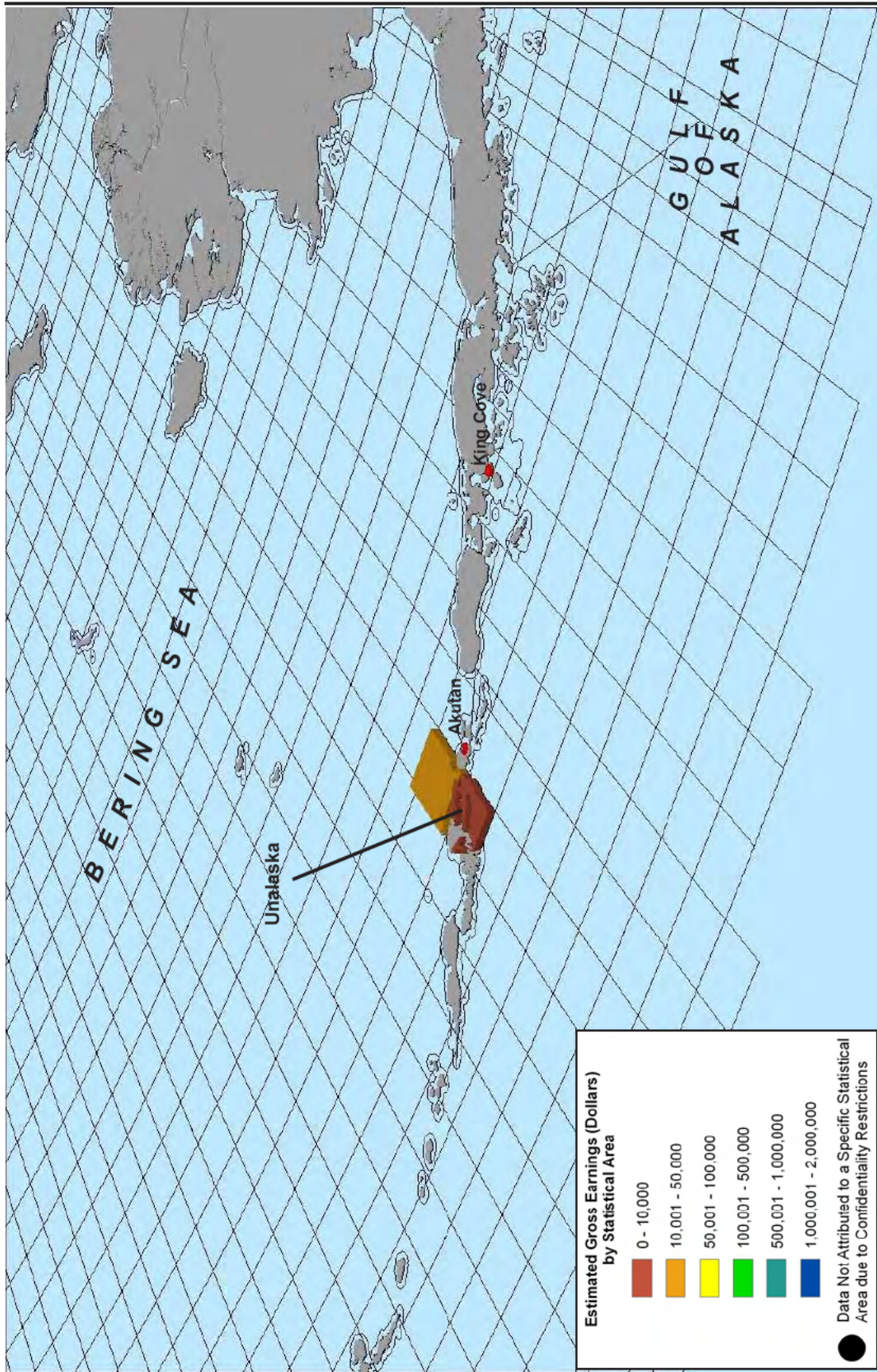


Figure UNAK-6
Commercial Groundfish Catch
From Vessels Local to Unalaska
Longline Gear Only, 2001-2002

Source: Northern Economics, Alaska Department of Fish and Game, ESRI



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure UNAK-7
Commercial Groundfish Catch
For Vessels Local to Unalaska
All Other Gear, 2001-2002

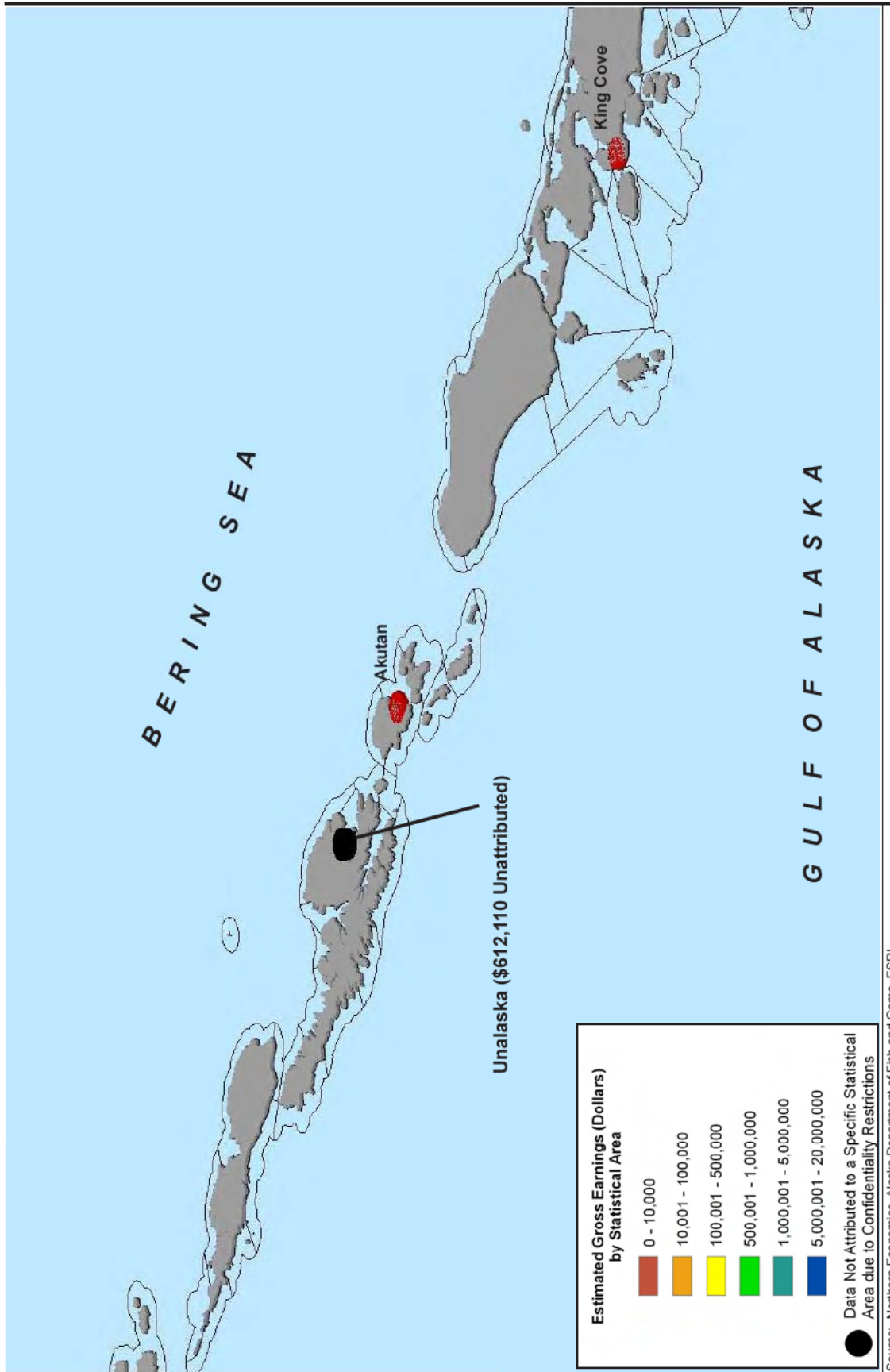


Figure UNAK-8
Total Commercial Salmon Catch
For Vessels Local to Unalaska
All Gear Types, 1995-2002

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UNAK-5a
Harvest Sector

Vessels in Dutch Harbor



UNAK-5b
Harvest Sector

Vessels in the inner harbor
and Captains Bay



UNAK-5c
Harvest Sector

Local fleet in the small boat harbor



UNAK-5d

Harvest Sector

Local fleet in the small harbor



UNAK-5e
Harvest Sector

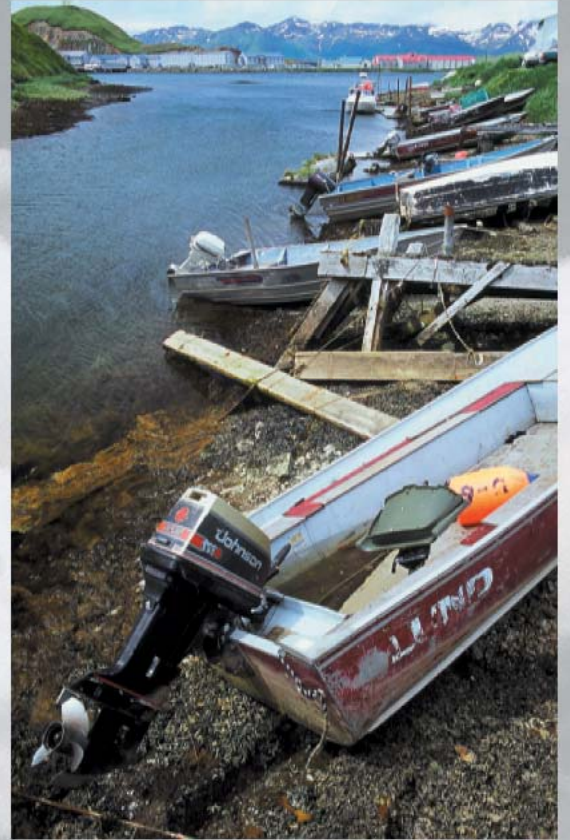
Local skiffs in town creek



UNAK-5f

Harvest Sector

Local skiffs in town creek and skiff at Dutch Harbor



Small Vessel Fleet

A portion of the local small vessel fleet is represented by the Unalaska Native Fisherman's Association, and according to earlier interview data, in 1998 there were 24 boats in the association, ranging in size from 18-foot skiffs up to a 68-foot commercial vessel. In late 2001, membership was described as fluctuating between 20 and 50 boats, depending on the nature of fisheries management/political climate. This association is open to Natives and non-Natives alike, but there is a requirement that members must live in the community 8 months per year. This entity, with financial support of the regional CDQ group, represents the interests of Unalaska small boat fishermen before the NPFMC by underwriting travel expenses for local representatives to attend the meetings.

There is at present little direct participation in the BSAI crab fisheries by vessels owned or crewed by local residents. Local vessels also do not participate in the locally important pollock fishery, but they do participate in the local cod, halibut, and crab fisheries on a small scale. A frequently noted problem in developing markets and long-term relationships with the larger processing entities in the community, however, is that the locally based fleet consists of vessels that are small by Bering Sea standards. In practical terms this means that they are more weather dependent than larger vessels and have a smaller delivery capacity per trip, which makes it difficult for larger plants to accommodate what are, by necessity, small and sporadic deliveries. Until recently, there were two smaller processing entities in the community that, in addition to doing custom processing for the larger processors and serving the local charter sportfishing sector, also serve as an important market for the local small boat commercial fleet. One of these small processors was no longer in business in 2004, but plans were in the works for opening a new second small processor in the community near the small boat harbor. Information from interviews conducted for this and other recent projects suggests that with perhaps a single exception noted by multiple interviewees, very few, if any, of Unalaska's small vessel owners derive household or individual income exclusively from commercial fishing. Commercial fishing for small boat owners in Unalaska is generally one part of a (variable) multiple income source strategy of "piecing together a living." In the words of one long-time local vessel owner, "you could do it [support a family off of local commercial fishing] when I was young, but if I had to support a family now, I would have to be a longshoreman."

According to information gained from interviews conducted for the NPFMC crab rationalization project in December 2001, local small boat participation in BSAI crab fisheries has dropped to near zero due to closures restricting access to crab in waters near the community, with tanner having been closed since 1994 and king crab since the early 1980s. When open, the tanner fishery was effectively an Unalaska Bay fishery for the small boats, but there was some competition from larger vessels that would drop pots on the local grounds on the way out to more distant fishing areas and retrieve them on their return to port. Local small vessel owners interviewed ranged in their estimate of the number of locally owned small vessels still participating in any BSAI crab fishery as between one and three vessels. At least some local small vessels do participate indirectly in the crab fisheries by selling bait to the larger vessel crab fleet. Reportedly, however, this business has been made much more difficult with the very short crab seasons, and a lengthening of seasons through rationalization would assist this local market for small vessel owners, through longer turnarounds as well as more port calls during an extended season. This would make investment in such enterprises less speculative as well.

A very recent (2004) change for the local fleet has been the reopening of the Eastern Aleutian District local bairdi tanner crab fishery after a decade of closure. The season opened on January 15, with a guideline harvest level of 47,219 pounds in Unalaska Bay and 87,891 pounds in Makushin Bay. The Unalaska Bay portion of the fishery closed on January 19, and the Makushin Bay portion closed on February 3. The 2004 harvest level was a small fraction of the average levels seen in the 1970 and 1980s (the peak of almost 2.5 million pounds occurred in 1997), but this does represent a positive development for local fishermen. Four of the 7 vessels over 60 feet and 20 of the 21 vessels under 60 feet with interim use Dutch Harbor Tanner crab are listed as locally owned, but only 14 vessels total actually participated in the 2004 fishery. This is an open access fishery with a gear limit of 300 pots, so while additional vessels may be attracted to the fishery, there likely will be a relatively low number of vessel owners who will find it attractive to share this pot limit (Northern Economics 2004). Locally provided harvest figures (that include both local and outside vessels) indicate that in 2004 a total of 128,000 pounds were harvested at \$3.25 per pound for a harvest value of \$415,000, while in 2005 a total of 35,000 pounds were harvested at \$2.50 per pound for a harvest value of \$85,000. The sharp drop-off in 2005 was attributed to the Makushin Bay closure brought about by the oil spill from the December 2004 wreck of the freighter M/V Selendang Ayu.

Information on local small vessel participation in the groundfish fishery is more readily available than information on the fleet's participation in the BSAI crab fisheries, due to these fisheries being open in recent years and having enough entities that data on the fishery are not confidential for most years. Some information specific to the Unalaska fleet is readily available as it was compiled for use in recent NPFMC groundfish decision making processes, but has the limitation of being somewhat dated by only including data through 2000.

Between 1992 and 2000, as shown in Table 2-28, between 3 and 21 Unalaska resident-owned vessels less than 60 feet had landings in targeted groundfish fisheries in any given year. Also as shown in this same table, the total value of groundfish ex-vessel revenues for the community-based fleet ranged between \$40,000 to \$250,000 per year during this same time period, for the years that can be disclosed. A couple of trends are apparent in this table. The number of vessels during this era peaked at 21 in 1996 and has declined every year since, with the 7 vessels fishing in 2000 representing a 67 percent reduction from the 1996 fleet size. Total Unalaska-owned vessel groundfish ex-vessel revenues have declined over this same 1996 through 2000 period, but not as quickly as the number of vessels themselves, resulting in a 50 percent reduction of annual revenues between 1996 and 2000. This has had the effect of raising the average revenue per vessel within the reduced fleet by 201 percent between 1996 and 2000. Among the groundfish species, Pacific cod plays a dominant role for these vessels. Between 1992 and 2000, Pacific cod accounted for between 71 and 100 percent of value of catch for this fleet in any given year, with an average of 92 percent per year over this span. Over the most recent 4 years for which detailed data are available, 1997 through 2000, Pacific cod accounted for 89 percent of total value of catch for the Unalaska-owned under 60 feet fleet. There is no state water groundfish fishery in the Bering Sea near the community, so these data all refer exclusively to federal water fisheries. Two to four Unalaska resident-owned vessels 60 feet or greater participated in the targeted groundfish fishery each year for the years 1992 through 1999, but none did so in 2000.

Table 2-28. Vessels <60' Owned by Unalaska Residents with Landings in Groundfish Target Fisheries and Groundfish Ex-vessel Revenue of Unalaska/Dutch Harbor Resident Owned Vessels, 1992-2000

Year	Number of Unalaska-Owned Vessels	Unalaska-Owned Vessels, Groundfish Ex-Vessel Revenue	
		Total (thousands of dollars)	Average per Vessel (dollars)
1992	6	40	\$6,700
1993	3	suppressed	suppressed
1994	16	110	\$6,900
1995	13	250	\$19,200
1996	21	150	\$7,100
1997	16	120	\$7,500
1998	9	110	\$12,200
1999	9	110	\$12,200
2000	7	100	\$14,300

Note: Includes "ghost vessels."

Source: CFEC/ADFG Fish Tickets, June 2001.

Reportedly, the activities of this local small boat groundfish fleet are effectively confined to the north side of Unalaska Island west of Unalaska Bay, due to environmental as well as potential gear conflict factors. According to one local longline fisherman, if fishing is attempted to the east, currents in the major passes, especially when combined with rough weather, make for untenable conditions for small boats. Further, frequent transits of this area by the larger-scale fishing fleet as well as the numerous shipping vessels that call on the Port of Dutch Harbor make gear loss too great of a risk to be conducive to fishing in the area. In contrast, the waters to the west feature less current and offer more sheltered or protected areas for small boats to ride out rough weather. In general, the open Bering Sea conditions near Unalaska present difficulties for small boat fishermen as little adequate shelter exists outside of Unalaska Bay itself. This is equally applicable to groundfish and crab pursuits.

In terms of the number of participants, the local jig fleet has seen growth and decline in recent years. According to CFEC and ADFG fish ticket data, three Unalaska/Dutch Harbor jig vessels fished groundfish in 1992, two fished in 1993, and then there was an upsurge in participation with between 13 and 18 vessels reporting per year from 1994 to 1997, inclusive. A decline quickly followed, however, as in 1998, 1999, and 2000, there were 9, 8, and 7 vessels participating each year, respectively.

There has been a recent shift in the importance of different gear types among community vessels targeting Pacific cod. During the 1993 through 1998 period, 95 percent of the Pacific cod landed by Unalaska-owned vessels under 60 feet was caught using jig gear. In 1999 and 2000, catch by vessels using longline gear increased significantly but specific figures cannot be disclosed due to confidentiality restrictions. Table 2-29 presents information on number of Unalaska/Dutch Harbor vessels specifically targeting Pacific cod by gear type use. As some vessels utilize more than one type of gear, the total number of vessels that fished in any given year may be less than the sum of

the counts by gear types for that year. As shown, the number of vessels using jig gear far outnumber the vessels using any other gear type for all of the years shown.

Table 2-29. Number of Unalaska/Dutch Harbor Vessels < 60' Targeting Pacific Cod in the Bering Sea by Gear Type Utilized, 1992-2000

Year	Number of Vessels					Total
	Longline	Jig	Other	Pot	Trawl	
1992	4	3	0	0	0	6
1993	1	2	0	0	0	3
1994	1	12	0	0	0	13
1995	3	12	0	0	0	13
1996	1	18	1	0	1	19
1997	2	13	1	1	0	15
1998	0	9	0	0	0	9
1999	2	8	1	0	0	9
2000	2	7	0	0	0	7

Source: CFEC/ADFG Fish Tickets, June 2001.

According to one local long-term fisherman, while there has been more local groundfish activity utilizing jig gear since the development of the contemporary small boat groundfish fleet, there has been an increasing emphasis on longline gear in the past few years by some local residents (and this observation is consistent with the quantitative data available). This shift has been driven by several factors. Jigging is typically a day fishery, more weather dependent because jiggers tend to use smaller vessels, and they are faced with chronically low prices, according to local fishermen. While this type of cod fishing can serve as a gateway by providing entry level access to local commercial fisheries, it is reportedly difficult to sustain participation in the long run, leading at least some locals to switch gear types. In addition to these individuals, there are also individuals who, while not long-term residents, fish the area on a generally regular basis using small vessels and longline gear. According to this fisherman, at the time of the interview (late 2001), there were about three small boat longline fishermen who “live in houses” in the community, another three or so who lived on their boats, and about three others who seasonally came to the area to fish, with some turnover being common in the latter group. More recent interviews (2004) suggest that a number of local fishermen have not changed appreciably in the last few years, but at least a few have upgraded to larger vessels and thereby have increased effort and catch. Beyond interviews, characterizing the level of effort of the “local” component is problematic with currently available data. Most deliveries by these vessels have been characterized as having been made at two local small processors (one of which went out of business in the early 2000s) rather than the large volume “industrial” plants due to a typically better price structure. However, a relatively small portion is reported to also be made at the largest plants in the community for a variety of reasons, including the ability to obtain different types of operational support at the larger facilities that are unavailable at the small processing operations.

It is also important to note that there are a number of vessels that are not owned by community residents in the under 60 feet class that deliver to Unalaska (and Beaver Inlet) processors.

Table 2-30 provides information on ex-vessel revenues for all under 60 feet vessels that make local deliveries and includes all groundfish species, including Pacific cod, sablefish, and so on. Examining the figure for the fixed gear vessel class 33 to 59 feet for 2000, it can be seen that the value for this sector alone (\$1.23 million) is about 12 times higher than the total ex-vessel revenues for all Unalaska/Dutch Harbor resident-owned under 60 feet vessel classes combined for the same year (\$0.10 million, as shown in Table 2-28). While the Unalaska/Dutch Harbor-owned small vessels may not fish far from the community, it is clear from the landings data that small vessels in these same gear classes from other communities fish far from their owners' communities (i.e., in the Unalaska/Dutch Harbor area).

Table 2-30. Groundfish Ex-Vessel Revenue of Vessels <60' Delivering to Processors on Unalaska Island, 1992-2000

Year	Ex-Vessel Revenue by Gear Type (millions of dollars)				
	Trawl Catcher Vessels < 60'	Fixed Gear Catcher Vessels 33-59'	Fixed Gear Catcher Vessels ≤ 32'	Ghost	Total
1992	0.14	1.75	0.11	0.01	2.01
1993	0.05	0.78	0.02	0.01	0.86
1994	0.01	0.64	0.17	0.01	0.83
1995	0.05	1.62	0.12	0.07	1.86
1996	0.02	0.93	0.10	0.03	1.08
1997	0.00	0.65	0.09	0.03	0.77
1998	0.02	0.31	0.10	0.02	0.45
1999	0.08	0.70	0.04	0.12	0.94
2000	0.03	1.23	0.02	0.03	1.31

Note: Includes landings to the Northern Victor, which operates in Beaver Inlet outside of any municipal (or borough) boundary, but not landings to the Arctic Enterprise, which operated in Beaver Inlet for part of this period, but more recently has been operating in Akutan Bay. Other than the Northern Victor, all landings were made within the municipal boundaries of Unalaska.

Source: CFEC/ADFG Fish Tickets, June 2001.

One recent change in the local groundfish fishery that has had a positive impact on the local vessel fleet was the regulation implemented in 2004 that gives local 60 foot and under fixed gear vessels a first right at the unused portion of the Pacific cod jig allocation in any given opening. The jig allocation is 2 percent of the total Pacific cod allocation, with the unused portion amounting to about 4 million pounds annually in recent years. According to local sources, this roll-over provision will be of great benefit to the Unalaska small boat fleet (and the local fleets of other regional communities), allowing fishing to take place throughout the year around the trimester openings. While quantitative data are lacking, local interview data suggest that jig to fixed gear roll-over regulation change has resulted in about a half-dozen vessels coming into the local 60 foot and under fleet in the 2004-2005 period.

Unalaska did not qualify as a CDQ community, but it is an ex-officio member of the Aleutian Pribilof Island Community Development Association (APICDA) CDQ group. This group partners with both an onshore and offshore entity and offers training programs in Unalaska. Though

Unalaska is not formally a CDQ community, according to interview data it is in fact where more of APICDA training and other programs are run because of the size of the population it services in the community. Although theoretically the recent increase in CDQ quota under AFA hurt the community as a non-CDQ participant, the simultaneously occurring increase in onshore quota, again in theory, more than made up the difference. The precise impacts of this shift on the community are not possible to ascertain with available data. However, it is known that given CDQ partnerships with onshore and offshore sector participants that directly or indirectly benefit the community through either local economic activity or payment of taxes in one form or another, the consequences of the change are likely to be minor indeed. When queried about the impact of CDQ allocation change, a number of respondents offered the opinion that it was simply a “cost of doing business.”

Large Vessel Fleet

The large vessels from outside of the community that are associated with the individual shoreplants are discussed in overview in the processor section. This section, however, provides some information on the Unalaska community links to that fleet. Fishery management changes that occurred in the 1999-2001 era, including implementation of the AFA and Steller sea lion resource protection measures, brought about a number of fundamental shifts in the groundfish fishery that have had consequences for the relationship of the fleet to the community.

Ownership patterns of the large catcher vessels have been changing in recent years, and this is making the local versus outside fleet dynamic somewhat more complex. This is more obvious within the groundfish fishery (and the pollock fishery specifically) than it is within the crab fishery. Within the pollock fishery, one of the trends in recent years has been the dramatic increase in ownership and/or control (through third-party entities with some type of business relationship to the processors) of pollock harvest vessels by the shoreplants in Unalaska. Prior to this pattern of acquisition, it was accurate to say that no permanent residents of Unalaska were involved in the pollock fishery as vessel owners, nor were any vessels homeported out of Unalaska in the sense of being the community of residence for the skipper and crew. With the changes in ownership patterns have come complexities for the description of the relationship of the harvest fleet to the community. While it is still true to say that no independent fishermen who are permanent residents of the community own pollock harvesting vessels, some pollock harvesting vessels are now owned (partially or wholly) by economic entities based in the community (or, given the complex nature of corporate relationships and/or restrictions on foreign ownership of the fleet, by entities with close relationships with entities based in the community). This change in ownership pattern, while it may have shifted where vessels are homeported or, perhaps more importantly from an economic perspective, spend more of the year, it is still the case that very few, if any, permanent residents of the community work on pollock harvesting vessels.

Under AFA conditions, there have been some additional changes in ownership of catcher vessels delivering to Unalaska, and the details of this shift are analyzed in the Council’s AFA Report to Congress (NPFMC 2002). There have been examples in Unalaska of a vessel being purchased by other vessels within a co-op and the redistribution of the purchased vessel’s quota share being distributed among other vessels in the co-op, and of vessels changing ownership and moving between co-ops that are based in different communities. Further, quota has been rented to other

co-op members as well. None of these changes involved local residents, and none of the shifts of quota resulting from these actions are considered of a magnitude to have created community level impacts.

There are also indications that there are fundamental changes in relations between vessel crew and owners with the conversion of one or more vessel crew compensation structures from a share to a wage basis on vessels controlled by processing entities. How closely this is tied to rationalization itself, and how this experience may in turn be generalized to crab rationalization conditions is unclear; however, this type of shift is perhaps consistent with an assigned quota system where vessel revenues are generally predictable. Crew share systems are, of course, well suited for a fishing environment where the crew shares in the economic risk and benefits in the rewards of uncertain outcomes. However, with what is essentially corporate ownership of a stable quota share, there are those who feel that results can be obtained from vessels without utilizing a share incentive system. This is consistent with the observation of one locally based skipper, that with the AFA co-op quota assignment system, operating a vessel has become more like “running a combine” than hunting, as “everything is in fences now.” Different AFA processors in Unalaska have very different vessel ownership/control patterns, with one processor having virtually no ownership interest (having decreased from a minor ownership share previously) while others have quite strong interests. While these specific changes may or may not be rationalization/AFA influenced in their timing, clearly the trends of processor control of catch capacity leading to these logical consequences were operating in the pre-AFA environment. Further, there has been considerable speculation related to the differential economics of various price points when it comes to what plants pay for fish, given different catcher vessel ownership relations. Where plants control a large portion of the delivery fleet (and can thus decide where to take their profits in that transaction), the price paid to non-directly controlled vessels becomes a marginal cost, with different rules about what makes economic sense in comparison to a fleet not controlled by a processor. While there were numerous opinions about the logical outcome of these circumstances under an AFA-driven management regime, clearly these potential changes have not yet fully played themselves out in the relatively brief time since the implementation of onshore co-ops in Unalaska.

According to interviews conducted in 2001 for an AFA social impact assessment (NPFMC 2002), while there has been leasing of quota between vessels that resulted in greater overall economic efficiency, there have been some cases where there has been a reluctance of vessel owners to trade the resource due to concerns or lack of trust in what the National Marine Fisheries Service (NMFS) or NPFMC may do in the long run. That is, despite incentives to lease quota, some owners are still protective of maintaining an ongoing history of direct participation in the pollock fishery as a hedge against possible future changes in fishery management.

Another change among catcher vessels participating in Unalaska-based pollock co-ops is the level of information sharing between vessels, such that vessels can coordinate catch timing and location to optimize timing at the processing plant. In some ways, the co-ops have resulted in “absolute flexibility” from the perspective of coordination and running a processing plant. From the perspective of the catcher vessel owner, although most agree wholeheartedly that co-ops are a better management system than complete open access, the current system in some ways represents a loss of flexibility in terms of the strength of ties to a particular processor. Of course, the change with co-ops is to some degree more apparent than real, given the existing ownership/control patterns of a

good proportion of the fleet and the limited number of delivery options available to vessels without a commitment to any particular plant.

Yet another change that began in the 1999-2001 era is the differential importance of small harvest vessels for some operations in the face of harvest area restrictions related to Steller sea lion resource protection areas. Catch and delivery by co-op member vessels that are small enough to fish inside areas closed to the larger vessel classes can be coordinated to optimize the overall delivery schedule. This has been recognized as an important strategic approach by at least one processor to date, but clearly the utility of such an approach is enhanced or limited by the scale of the individual processing operation. This situation is quite different for the crab fleet.

Another type of relationship change between catcher vessels and shore processors in Unalaska resulting from the implementation of co-ops is the degree of management coordination between the vessel co-op and the plant, as realized in the creation of co-op manager positions. These individuals represent the co-op in dealing with plant management and are privy to a level of detail about plant operations and economics that simply was not communicated to the catcher fleet prior to the formation of co-ops. When the crab fishery is rationalized in 2005, it is likely that this type of system will also be implemented as crab co-ops are formed.

2.3.2 Processing

Community Processor Quantitative Description

The following two tables provide information on processors operating in Unalaska during the period 1995 through 2002. Table 2-31 provides a count of active shore processors by year based on the number of processors that submitted fish tickets indicating that delivery was made in the community. As shown, Unalaska has been the site of numerous processors over these years, but what is not apparent are the differences in scale of the different processors in the community. This is discussed in the community processing characterization section below.

Table 2-31. Number of Active Processors in Unalaska/Dutch Harbor, 1995-2002

1995	1996	1997	1998	1999	2000	2001	2002	Unique Count over All Years
11	9	10	10	11	10	10	9	15

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Table 2-32 summarizes Commercial Operators Annual Report (COAR) processing data by year for the period 1995 through 2002 by major species of pounds purchased by processors in the community, along with the ex-vessel and wholesale value associated with those purchases. This information may be used to gauge community processing sector relative engagement in and dependency on particular fisheries. While Unalaska processors run substantial amounts of quite a few different species or species groups, the data shown underscore the importance of pollock to local processing. For

example, the estimated wholesale value of pollock processed by Unalaska-based entities in 2002 was \$253 million, with the next closest species group, king crab, being valued at \$52 million.

Table 2-32. Processing Summary for Unalaska/Dutch Harbor, 1995-2002

Species	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Number of Processors								
cod, Pacific (gray)	9	9	8	6	9	9	7	7
crab, Tanner, bairdi	4	6	1	-	-	-	-	-
halibut, Pacific	5	5	4	3	5	6	6	6
herring, Pacific	-	-	-	-	-	-	3	3
king crab, all species	5	6	5	7	7	6	5	6
other species	7	7	8	7	9	8	7	7
pollock, walleye	5	5	5	5	4	4	5	4
sablefish (blackcod)	5	4	4	3	6	6	7	8
salmon, chinook	1	1	1	2	1	1	1	1
salmon, chum	1	1	2	2	2	1	1	1
salmon, coho	1	1	1	2	1	1	-	-
salmon, pink	1	-	1	1	2	1	-	-
salmon, sockeye	1	1	2	2	1	2	1	1
Pounds Purchased								
cod, Pacific (gray)	82,663,984	94,417,900	64,962,840	40,277,181	35,522,716	57,443,857	42,600,994	46,212,551
crab, Tanner, bairdi	1,332,920	723,366	x	-	-	-	-	-
halibut, Pacific	2,523,208	1,813,451	4,500,978	x	5,360,178	7,266,094	5,659,265	3,970,066
herring, Pacific	-	-	-	-	-	-	x	x
king crab, all species	7,822,800	11,550,181	7,357,064	10,791,609	9,303,706	6,859,254	7,500,322	8,084,136
other species	50,200,527	34,111,627	67,535,910	85,125,184	68,170,627	23,211,868	12,274,373	19,186,083
pollock, walleye	706,491,522	618,324,264	584,750,736	612,727,391	604,258,644	695,062,520	881,574,385	937,675,051
sablefish (blackcod)	1,496,828	868,387	712,633	x	544,650	707,626	1,056,038	1,453,266
salmon, chinook	x	x	x	x	x	x	x	x
salmon, chum	x	x	x	x	x	x	x	x
salmon, coho	x	x	x	x	x	x	-	-
salmon, pink	x	-	x	x	x	x	-	-
salmon, sockeye	x	x	x	x	x	x	x	x
Ex-Vessel Value								
cod, Pacific (gray)	13,856,177	13,492,942	10,591,408	6,555,316	8,963,481	17,120,700	10,334,186	9,390,728
crab, Tanner, bairdi	3,774,671	1,801,265	x	-	-	-	-	-
halibut, Pacific	4,703,273	3,584,232	9,021,182	x	9,766,823	16,644,343	10,021,703	8,119,898
herring, Pacific	-	-	-	-	-	-	x	x
king crab, all species	23,070,701	32,156,570	19,217,539	25,443,575	46,809,259	27,968,114	30,259,581	41,791,928
other species	43,149,299	22,061,758	18,448,776	45,402,948	59,056,623	24,344,117	12,572,327	21,741,954
Pollock, walleye	64,845,217	50,658,060	59,172,902	43,023,199	56,768,530	85,743,960	97,183,151	110,229,714
sablefish (blackcod)	4,343,730	2,601,984	2,541,118	x	1,534,272	2,307,753	3,033,755	4,355,778
salmon, chinook	x	x	x	x	x	x	x	x
salmon, chum	x	x	x	x	x	x	x	x
salmon, coho	x	x	x	x	x	x	-	-
salmon, pink	x	-	x	x	x	x	-	-
salmon, sockeye	x	x	x	x	x	x	x	x
Wholesale Value								
cod, Pacific (gray)	31,928,597	33,015,630	24,184,436	17,028,369	18,423,296	30,818,290	22,788,453	28,667,769
crab, Tanner, bairdi	5,823,370	2,490,675	-	-	-	-	-	-
halibut, Pacific	6,370,391	5,016,400	11,787,490	x	11,888,858	19,892,143	13,185,510	9,151,924
herring, Pacific	x	-	x	x	-	-	x	x
king crab, all species	30,036,153	42,752,480	30,257,857	34,572,660	51,778,847	38,530,696	40,758,222	51,558,022

Species	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
other species	80,326,785	39,552,915	60,331,298	118,741,192	114,037,486	35,831,853	20,970,025	35,240,218
pollock, walleye	215,113,512	157,358,876	166,474,479	137,129,357	179,142,041	219,889,562	237,677,109	253,205,024
sablefish (blackcod)	2,603,032	2,712,384	530,008	x	2,313,126	2,910,179	3,830,507	5,263,844
salmon, chinook	x	x	x	x	x	x	x	x
salmon, chum	x	x	x	x	x	x	x	x
salmon, coho	x	x	x	x	-	x	-	-
salmon, pink	-	x	x	x	x	x	-	-
salmon, sockeye	x	x	x	x	x	x	x	x

Source: ADFG Commercial Operator Annual Report Summary, provided to Northern Economics, Inc. in September 2004 by ADFG.
Note: An "x" indicates the data are confidential and cannot be released.

Table 2-33 displays processor non-confidential value added by fishery as calculated by subtracting ex-vessel value from wholesale value for Unalaska for the years 1995 through 2002, with percentage of total non-confidential value contribution by each species or species group⁶. This information provides another type of measure of relative dependency of community based processing operations on particular species on a year-to-year basis. As shown, pollock accounts for over 75 percent of total value added for the 3 most recent years covered by the table, and never dipped below 50 percent of total value for any of the years in the time span covered by the table.

Table 2-33. Processing Value Added and Processor Percentage Dependency for Unalaska/Dutch Harbor, 1995-2002

Species	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Total Value Added								
cod, Pacific (gray)	18,072,420	19,522,688	13,593,028	10,473,053	9,459,815	13,697,590	12,454,267	19,277,041
crab, Tanner, bairdi	2,048,699	689,410	-0	-	-	-	-	-
halibut, Pacific	1,667,118	1,432,168	2,766,308	x	2,122,035	3,247,800	3,163,807	1,032,026
herring, Pacific	-	-	-	-	-	-	x	x
king crab, all species	6,965,452	10,595,910	11,040,318	9,129,085	4,969,588	10,562,582	10,498,641	9,766,094
other species	37,177,486	17,491,157	41,882,522	73,338,244	54,980,863	11,487,736	8,397,698	13,498,264
pollock, walleye	150,268,295	106,700,816	107,301,577	94,106,158	122,373,511	134,145,602	140,493,958	142,975,310
sablefish (blackcod)	-1,740,698	110,400	-2,011,110	x	778,854	602,426	796,752	908,066
salmon, chinook	x	x	x	x	x	x	x	x
salmon, chum	x	x	x	x	x	x	x	x
salmon, coho	x	x	x	x	-	x	-	-
salmon, pink	-	x	x	x	x	x	-	-
salmon, sockeye	x	x	x	x	x	x	x	x
All Species	214,458,772	156,542,549	174,572,643	187,046,540	194,684,666	173,743,736	175,805,123	187,456,801
Percentage of Value Added								
cod, Pacific (gray)	8.4	12.5	7.8	5.6	4.9	7.9	7.1	10.3
crab, Tanner, bairdi	1.0	0.4	-	-	-	-	-	-
halibut, Pacific	0.8	0.9	1.6	x	1.1	1.9	1.8	0.6
herring, Pacific	-	-	-	-	-	-	x	x

⁶ This is a rough measure, as processor costs, and differential costs by species, of adding value are unknown.

Species	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
king crab, all species	3.2	6.8	6.3	4.9	2.6	6.1	6.0	5.2
other species	17.3	11.2	24.0	39.2	28.2	6.6	4.8	7.2
pollock, walleye	70.1	68.2	61.5	50.3	62.9	77.2	79.9	76.3
sablefish (blackcod)	-0.8	0.1	-1.2	x	0.4	0.3	0.5	0.5
salmon, chinook	x	x	x	x	x	x	x	x
salmon, chum	x	x	x	x	x	x	x	x
salmon, coho	x	x	x	x	-	x	-	-
salmon, pink	-	x	x	x	x	x	-	-
salmon, sockeye	x	x	x	x	x	x	x	x
All Species	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: ADFG Commercial Operator Annual Report Summary, provided to Northern Economics, Inc. in September 2004 by ADFG.

Note: "Value added" is calculated by subtracting Total Ex-Vessel Value from Total Wholesale Value.

Shaded cells indicate the species that generated the highest value added in the year.

Negative value added indicates that a significant proportion of the amount purchased was custom processed outside the community.

An "x" indicates the data are confidential and cannot be released.

The following set of four tables presents information derived from a different data source on the volume and value of the species processed in Unalaska by year for the period 1991 through 2000 (but salmon data for all years and halibut data for 2000 are anomalous as referenced in the notes at the bottom of each table). The percentage tables display the percentage that each fishery processing category represented for the annual processing total for Unalaska (a form of community processing dependency). Table 2-34 provides information on total processed weight by species group by year for 1991-2000, and Table 2-35 provides the same information by percentage for each year. Important information for recent years to note is the overall dominance of pollock and the second tier domination of other groundfish and crab in landing volumes. Second, the precipitous decline in crab landings from 1998 (the highest volume since 1991 over the 1991-2000 span) to 1999 (still the second highest year since 1992) to 2000 (far and away the lowest volume year of this period and just 19 percent of the highest year) is readily apparent. Pollock landings, on the other hand, increased from 1998 to 1999, and then again in 2000, reaching its highest level for the 1991-2000 period in 2000. Clearly, the recent increase in pollock landings in the community is related to AFA reallocation of quota to onshore processing entities (which increased the inshore component from 35 percent to 50 percent of the BSAI pollock Total Allowable Catch [TAC]⁷) as well as increases in the overall TAC itself.

Table 2-36 presents information on the value of processed fish by species group by year for the period 1991 through 2000 for Unalaska. Table 2-37 provides the same information on a percentage basis. As shown, despite the volume domination of pollock in recent years, crab dominated local value among all species during most recent years. During the 1991-2000 period, crab value was

⁷ Inshore/Offshore-3, passed by the NPFMC in 1998, was scheduled to take the inshore component from 35 percent to 39 percent of the BSAI pollock TAC by reallocating 4 percent away from the offshore sector (and leaving the CDQ preallocation set aside at 7.5 percent). This planned shift never took place, however, as it was superseded later that same year (before implementation) by AFA. After CDQ and incidental take allocations were "taken off the top," AFA allocated 50 percent of the remaining TAC to the onshore sector, 40 percent to the offshore catcher processor sector, and 10 percent to the newly created mothership sector (which had previously been a part of the offshore sector along with catcher processors). AFA also increased CDQ set aside to 10 percent of the overall TAC.

Table 2-34. Volume (in Pounds) Processed by Unalaska/Dutch Harbor Processors, by Fishery Category and Year, 1991-2000

Fishery Category	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Crab	81,551,853	79,173,640	57,136,296	34,147,593	28,405,975	28,437,656	39,921,080	80,194,468	56,606,628	15,507,892	501,083,081
Salmon	6,200,015	6,677,910	14,855,001	12,998,733	9,951,176	8,494,899	5,102,131	10,055,269	14,384,810	5,434,743	94,154,687
Halibut	2,452,401	2,555,789	3,530,379	2,738,901	3,048,416	1,792,292	4,244,506	2,549,845	5,152,783	see note	28,065,421
Sablefish	2,545,110	2,978,115	1,309,902	1,130,290	2,691,699	1,402,901	1,353,774	783,257	734,033	1,171,391	16,100,472
Pollock	461,621,153	602,517,363	637,230,059	662,013,632	570,886,988	531,907,758	578,715,025	604,877,659	679,171,596	693,429,290	6,022,370,523
Pacific Cod	41,549,645	23,088,933	32,783,213	56,194,934	65,329,047	86,665,493	71,135,761	45,560,405	36,478,301	52,008,168	510,793,900
Other Groundfish	14,562,453	8,348,204	2,589,760	20,997,064	22,283,634	14,219,510	41,919,159	4,367,610	5,499,948	8,327,767	143,115,109
Other Fisheries	1,525,017	2,091,133	3,177,083	7,364,974	5,966,828	8,060,362	2,464,434	2,502,305	2,293,388	1,387,816	36,833,340
Non-Commercial	555,613	124,877	19,583	113,367	550,835	20,704,368	19,035,013	19,137,962	28,312,272	118,829	88,672,719
Total	612,563,260	727,555,964	752,631,276	797,699,488	709,114,598	701,685,239	763,890,883	770,028,780	828,633,759	777,386,005	7,441,189,252

Notes: Halibut numbers are not available for 2000.

Most numbers are likely to be underestimates and should be used as indicators rather than exact measures. See text.

Non-commercial includes forfeited bycatch, test fisheries, CDC, etc.

Salmon data are known to be overstated for the community due to the inclusion of all processing activities for floating processors that spend part of the year processing crab (and other non-salmon species) in Unalaska/Dutch Harbor and part of the year engaged in processing activities elsewhere. The data upon which this table is based were originally compiled to document all local crab processing for the purposes of crab rationalization analysis and as an unintended consequence captured a significant amount of salmon processed non-locally.

Very little salmon processing actually takes place in the community either in shore plants or aboard floating processors. This type of processing overstatement is not thought to be a significant issue for non-salmon species.

Source: Summarized from the NPFMC Bering Sea Crab Data Base / 2001_1.

Table 2-35. Percentage of Total Volume Processed by Unalaska/Dutch Harbor Processors, by Fishery Category and Year, 1991-2000

Fishery Category	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Crab	13.3%	10.9%	7.6%	4.3%	4.0%	4.0%	5.2%	10.4%	6.8%	2.0%	6.7%
Salmon	1.0%	0.9%	2.0%	1.6%	1.4%	1.2%	0.7%	1.3%	1.7%	0.7%	1.3%
Halibut	0.4%	0.4%	0.5%	0.3%	0.4%	0.3%	0.6%	0.3%	0.6%	see note	0.4%
Sablefish	0.4%	0.4%	0.2%	0.1%	0.4%	0.2%	0.2%	0.1%	0.1%	0.2%	0.2%
Pollock	75.4%	82.8%	84.7%	83.0%	80.5%	75.8%	75.8%	78.6%	82.0%	89.2%	80.9%
Pacific Cod	6.8%	3.2%	4.4%	7.0%	9.2%	12.4%	9.3%	5.9%	4.4%	6.7%	6.9%
Other Groundfish	2.4%	1.1%	0.3%	2.6%	3.1%	2.0%	5.5%	0.6%	0.7%	1.1%	1.9%
Other Fisheries	0.2%	0.3%	0.4%	0.9%	0.8%	1.1%	0.3%	0.3%	0.3%	0.2%	0.5%
Non-Commercial	0.1%	0.0%	0.0%	0.0%	0.1%	3.0%	2.5%	2.5%	3.4%	0.0%	1.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: Halibut numbers are not available for 2000.

Most numbers are likely to be underestimates and should be used as indicators rather than exact measures. See text.

Non-commercial includes forfeited bycatch, test fisheries, CDQ, etc.

Salmon data are known to be overstated for the community due to the inclusion of all processing activities for floating processors that spend part of the year processing crab (and other non-salmon species) in Unalaska/Dutch Harbor and part of the year engaged in processing activities elsewhere. The data upon which this table is based were originally compiled to document all local crab processing for the purposes of crab rationalization analysis and as an unintended consequence captured a significant amount of salmon processed non-locally. Very little salmon processing actually takes place in the community either in shore plants or aboard floating processors. This type of processing overstatement is not thought to be a significant issue for non-salmon species.

Source: Summarized from the NPFMC Bering Sea Crab Data Base / 2001_1.

Table 2-36. Value (in Dollars) of Fish Processed by Unalaska/Dutch Harbor Processors, by Fishery Category and Year, 1991-2000

Fishery Category	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Crab	\$70,834,127	\$69,032,418	\$73,369,886	\$69,962,424	\$69,283,242	\$55,335,093	\$49,724,796	\$64,038,373	\$85,615,553	\$42,908,899	\$650,104,811
Salmon	\$4,552,531	\$7,398,910	\$10,013,630	\$12,551,911	\$7,746,147	\$6,659,712	\$3,108,353	\$4,100,565	\$6,288,310	\$3,437,423	\$65,857,492
Halibut	\$4,747,846	\$2,366,389	\$4,497,715	\$5,271,277	\$5,714,417	\$3,528,928	\$8,561,085	\$2,307,552	\$9,320,102	see note	\$46,315,334
Sablefish	\$2,596,082	\$3,527,305	\$1,382,767	\$1,479,770	\$4,965,125	\$2,657,017	\$3,067,087	\$1,078,649	\$1,311,388	\$2,395,279	\$24,460,469
Pollock	\$37,435,879	\$80,128,990	\$44,444,685	\$50,586,973	\$55,400,054	\$42,959,231	\$58,971,109	\$41,755,636	\$62,437,793	\$78,626,839	\$552,747,189
Pacific Cod	\$7,778,885	\$3,780,580	\$4,462,915	\$7,667,686	\$10,989,681	\$13,939,735	\$11,286,448	\$7,029,881	\$8,819,980	\$15,040,665	\$90,796,456
Other Groundfish	\$1,570,794	\$823,404	\$630,176	\$1,622,946	\$1,662,513	\$845,177	\$1,998,103	\$253,459	\$307,857	\$611,064	\$10,325,493
Other Fisheries	\$796,861	\$267,593	\$1,121,952	\$1,224,803	\$1,253,862	\$2,402,055	\$350,490	\$385,208	\$513,402	\$235,741	\$8,551,967
Non-Commercial	\$53,826	\$3,242	\$6,703	\$15,862	\$488,417	\$2,473,490	\$2,659,737	\$3,017,412	\$5,249,780	\$421,324	\$14,389,793
Total	\$130,366,831	\$167,328,831	\$139,930,429	\$150,383,652	\$157,503,458	\$130,800,438	\$139,727,208	\$123,966,735	\$179,864,165	\$143,677,257	\$1,463,549,004

Notes: Halibut numbers are not available for 2000.

Most numbers are likely to be underestimates and should be used as indicators rather than exact measures. See text.

Non-commercial includes forfeited bycatch, test fisheries, CDQ, etc.

Salmon data are known to be overstated for the community due to the inclusion of all processing activities for floating processors that spend part of the year processing crab (and other non-salmon species) in Unalaska/Dutch Harbor and part of the year engaged in processing activities elsewhere. The data upon which this table is based were originally compiled to document all local crab processing for the purposes of crab rationalization analysis and as an unintended consequence captured a significant amount of salmon processed non-locally. Very little salmon processing actually takes place in the community either in shore plants or aboard floating processors. This type of processing overstatement is not thought to be a significant issue for non-salmon species.

Source: Summarized from the NPFMC Bering Sea Crab Data Base / 2001_1.

Table 2-37. Percentage of Total Value of Fish Processed by Unalaska Processors, by Fishery Category and Year, 1991-2000

Fishery Category	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Crab	54.3%	41.3%	52.4%	46.5%	44.0%	42.3%	35.6%	51.7%	47.6%	29.8%	44.4%
Salmon	3.5%	4.4%	7.2%	8.3%	4.9%	5.1%	2.2%	3.3%	3.5%	2.4%	4.5%
Halibut	3.6%	1.4%	3.2%	3.5%	3.6%	2.7%	6.1%	1.9%	5.2%	see note	3.2%
Sablefish	2.0%	2.1%	1.0%	1.0%	3.2%	2.0%	2.2%	0.9%	0.7%	1.7%	1.7%
Pollock	28.7%	47.9%	31.8%	33.6%	35.2%	32.8%	42.2%	33.7%	34.7%	54.7%	37.8%
Pacific Cod	6.0%	2.3%	3.2%	5.1%	7.0%	10.7%	8.1%	5.7%	4.9%	10.5%	6.2%
Other Groundfish	1.2%	0.5%	0.5%	1.1%	1.1%	0.6%	1.4%	0.2%	0.2%	0.4%	0.7%
Other Fisheries	0.6%	0.2%	0.8%	0.8%	0.8%	1.8%	0.3%	0.3%	0.3%	0.2%	0.6%
Non-Commercial	0.0%	0.0%	0.0%	0.0%	0.3%	1.9%	1.9%	2.4%	2.9%	0.3%	1.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: Halibut numbers are not available for 2000.

Most numbers are likely to be underestimates and should be used as indicators rather than exact measures. See text.

Non-commercial includes forfeited bycatch, test fisheries, CDQ, etc.

Salmon data are known to be overstated for the community due to the inclusion of all processing activities for floating processors that spend part of the year processing crab (and other non-salmon species) in Unalaska/Dutch Harbor and part of the year engaged in processing activities elsewhere. The data upon which this table is based were originally compiled to document all local crab processing for the purposes of crab rationalization analysis and as an unintended consequence captured a significant amount of salmon processed non-locally. Very little salmon processing actually takes place in the community either in shore plants or aboard floating processors. This type of processing overstatement is not thought to be a significant issue for non-salmon species.

Source: Summarized from the NPFMC Bering Sea Crab Data Base / 2001_1.

higher than pollock value except for 1992 (when the value of pollock exceeded that of crab by about \$11 million), 1997 (pollock surpassed crab by approximately \$9 million) and 2000 (when the value of pollock was approximately \$36 million greater than crab). As can be seen, the increase in value of landings in the community attributable to AFA-related redistribution of pollock TAC allocations between sectors was more than offset by the decline in crab landings in 2000. For the period overall, crab accounted for approximately \$650 million and pollock accounted for approximately \$553 million in value of locally processed fish.

Community Processing Characterization

In terms of links to the community, it is important to note that shoreplants have long been a part of the community. Among the large plants in the community, the facility now operating as Alyeska Seafoods was originally constructed by Pan Alaska Seafoods in the early 1960s, UniSea began local operations in 1975, the permanently moored Royal Aleutian has processed locally under its current name since 1986 (but earlier was operated by a previous owner as the Whitney in the same location), Icicle Seafoods has been processing locally since 1987, and Westward Seafoods was locally established in 1990. That is not to say that relationships between the plants and other interests in the community have not been strained at times, but in Unalaska a number of the longer-term residents working at the plants, especially management level personnel, are actively involved in the community and serve in various elected, appointed, and volunteer leadership capacities with the City of Unalaska and numerous community organizations. For example, at different times in recent years the mayor's position and one or more of the city council positions were filled by persons employed by processors. This level of social integration sharply differentiates Unalaska from other major fishing ports in the region, such as Akutan and King Cove. Photos of some of the local processing plants may be found in Plate UNAK-6.

There still is, however, a transient underpinning to the local processing industry, with very few, if any, processing workers at the larger plants being recruited from the local residential labor pool. In this sense, Unalaska is similar to Akutan or King Cove, and unlike Kodiak, which does draw processing workers from the community. That is not to say the nature of "transientness" hasn't changed markedly over the years in Unalaska, with worker stays in the community becoming longer with more stable processing levels. During the boom-and-bust years, the length of local residency of the workforce employed in seafood processing was inversely related to the vitality of the local industry in general. For example, in 1982, at the height of processing capacity for king crab, turnover tended to be high. Like today, there were no local residents other than some individuals in management positions, and the reasons cited for that fact at the time included working conditions, pay rate, and long work hours. At that time, workers were hired out of the Pacific Northwest, typically Seattle, and were flown to Unalaska to work on a 6-month contract basis. With the downturn in the crab fisheries, a 6-month contract system no longer made economic sense. Some have done away with such contracts and hire workers for an indefinite period of time with incentives for longevity; others hire more out of the Alaska labor pool than in the past.

Several other factors influencing local hires in periods of fluctuation should be noted. First, under boom conditions there is a range of available employment options for local residents outside of the less appealing processing jobs. Second, when there is a downturn in hires at the local processing plants, virtually all of the workforce at the individual plants consists of returning workers, obviating

UNAK-6

Processing Sector

Clockwise from upper left:
Westward Seafoods, Royal
Aleutian Seafoods, Alyeska
Seafoods, and Prime Alaska
Seafoods



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the need for new hires. Even when 6-month contracts were most common, there was always a core of returning workers. Third, setting aside the lack of long-term resident hires, Unalaska is seldom the “point of hire” for processing workers for individuals who are newly arrived to the community. That is to say, people do not come to Unalaska for processing work unless they have already secured a position. It is far too expensive to fly out to the community on the off chance they might gain employment, particularly at relatively low-paying jobs, especially given the fact that there is seldom housing available in the community and that which does come available is relatively expensive. Fourth, it should be noted that a lack of local hire does not apply to all positions with the seafood companies. Management positions at nearly all of the seafood companies (as well as with the major fisheries support sector companies) are occupied by individuals who, if not originally from the community, have at least become long-time residents of the community or the region. In a number of ways, the processing industry is a “small circle” in terms of managers, and individuals who have worked for more than one company and have gained 10 to 20 years of experience in the community and the region are not uncommon. Individual owners and, in the case of “permanently” moored floating processors, even the plants themselves may come and go, but individuals in upper level management positions tend to remain in the business and in the area.

Very few, if any, lifetime residents of the community work at the shoreplants at any given time. There are a number of reasons commonly cited for this, but the most common dynamic involves the high cost of living in the community. Costs are such that it is nearly impossible for a local resident to take an entry-level job at one of the plants, and better paying jobs at the plant are typically filled by individuals who have “worked their way up” within the company. Further, according to interview data, local residents who have tried working at the plants have found that entry-level position work schedules, involving very long hours during extended periods during processing peaks are not compatible with an active involvement in community and family life outside of the plant.

In general, the pace of processing at the larger plants has changed with a rationalization approach to fishery management. Interviews with processing plant personnel suggest that a major operational impact experienced by the community of Unalaska since the passage of AFA and the formation of the co-op system has been a slowing down and spreading out of pollock processing activity. While some plants reported minor changes in numbers of personnel associated with pollock processing operations, for the most part employment levels have stayed almost the same, given the need for a full complement of staff to run the plants. What has changed is that, according to senior plant personnel, workers are working less hours per day and working for longer periods than was the case at the end of the open access era. Workers are reportedly earning perhaps slightly more than in past seasons, but it is taking them more days of processing to do so, given the shorter workdays. This has had some impact on recruiting personnel, as there are some processing workers who want to come to the community for a relatively brief period of time and maximize the number of hours worked during that time. This strategy allows them to return to their home communities with more money while being away from family and friends for a shorter period of time. Plant personnel also note that recruiting for processing workers has been more difficult during the time that there is a strong economy in the Lower 48 (the contiguous states).

Plant personnel also note that there is still a “race” interval during pollock processing under AFA conditions, and that occurs during roe season. Roe is at optimal quality for only a relatively short period, so there is a premium placed on maximizing return within that relatively short window.

Further, non-roe pollock are also harvested to target maximum returns based on quality of fish, but those windows are much larger than the roe window. In general, however, the AFA is cited by local residents as being the centerpiece of a number of changes in fisheries management that have in turn changed the community, through changes in the processing sector, and the support services sector.

One change within shoreplants as a result of co-op/AFA related conditions has been the addition of additional pollock products to the processing mix. During open access when highest throughput was the goal, the returns on a number of specialty products were not worth the time (and opportunity costs) that such production would take. Some plants that concentrated heavily on surimi are now producing pollock fillets. Fillets are more labor intensive to produce than surimi, and so theoretically would result in more employment at the plants, but in practice plant operations typically split their labor forces between a “surimi side” and a “seafood side” of operations. Producing pollock fillets means a diversion of some pollock to the “seafood side” of the operation and this has happened at the same time that the seafood side of local operations has been in decline with the shrinking of crab quotas. These changes to groundfish patterns have had an impact on crab processing at plants that run both sets of species. At least two of the major AFA plants have reported that they have not used dedicated crews for crab processing in recent years because of the sharp decline in crab volume, such that pollock seafood side products have picked up some of the slack, with workers switching to processing other species as they become available. With the slowing of the pace of processing, at least one shoreside operation has closed a relatively inefficient but significant portion of their plant in favor of maximizing use of other portions of the plant. One operation reports more workers on-site than in the recent past, but another reports labor force is down somewhat from the peak years when the crab quota was larger. The combination of balancing seafood with surimi production, and adding fillet and other product capacity makes comparing workforces between years with quite different circumstances like “comparing apples and oranges” in the words of one plant manager, but overall, the level of processor employment change directly related to AFA does not appear to have had a significant impact on the community of Unalaska.

Unlike the case with the AFA, there have been recent disruptions to plant operations associated with recent fishery management changes concerning Steller sea lion protection measures. According to senior staff at the local AFA plants, there were times during the pollock season of 2000 when the individual plants ran out of fish during what would otherwise have been continuous operation periods. When plants shut down during production, there are disproportionate inefficiencies created not just by the downtime, but by required cleaning as well. Plant managers were of a common opinion that the 2000 A/B seasons were a marked success under AFA co-op conditions, but that in the C/D season, the Steller sea lion protection measures “took away” at least some of the gains realized under AFA. On the other hand, the opinion was universally held among plant managers that the AFA mitigated, at least to a degree, the negative impacts to the Steller sea lion protection measures (i.e., without the AFA, the negative impacts of the protection measures would have been much worse). In concrete terms, in addition to timing and effort inefficiencies, the sea lion protection measures hurt shoreplants in terms of fish quality and age, something that the AFA had allowed the plants to make gains on compared to the derby system context pre-AFA. While Steller sea lion measures confound the direct assessment of at least some AFA impacts, shore processors report that overall they are doing well. As their utilization has improved, they can time product mix to markets more efficiently, they can more efficiently ship product, and they can run higher value products than in the past, among other factors. In 2001, the first full year under more stringent sea

lion protection measures, plant shut-downs were reportedly much less common than in 2000, with harvesters and processors having improved at anticipating operational constraints inherent under resource protection area closure conditions. These adjustments combined with continuing management refinements in subsequent years have resulted in continuing improvements and an overall cementing of the central place of the pollock fishery in terms of benefits to the community.

Under AFA co-op conditions, there has been some shift in inshore pollock away from Unalaska Island with the move of the Arctic Enterprise floating processor from Beaver Inlet to Akutan (coincident with its purchase by a new owner), but this shift has not had direct consequences on the community of Unalaska. Local revenues were not affected, as Beaver Inlet is outside of the municipal boundaries of Unalaska, nor is Beaver Inlet part of an organized borough, so there were no local taxes that derived from that operation. (Processing operations outside of organized boroughs and municipalities pay fish taxes directly to the state, and Unalaska, like other communities, receives a portion of these revenues back from the state through revenue sharing, but this is a modest revenue source compared to taxes derived from entities operating within city limits.) The operation was supported logistically out of Unalaska as the closest transportation hub, but that is still the case to some degree even with the vessel operating out of Akutan.

From the Unalaska shoreplant perspective, one negative aspect of the AFA was “the way other species were carved up.” One plant manager cited the example of yellowfin sole being capped, “therefore any growth has to occur at sea [i.e, among non-AFA entities] because shoreside is capped.” In terms of community implications, this type of sideboard arrangement does preclude local AFA processors from potentially diversifying into other fisheries and therefore increases local dependency on fewer species than may be theoretically desirable. However, in practical terms the community is already heavily dependent upon pollock and crab, and fluctuations in those fisheries are much more important to the economic well-being of the community than any other species that is recognized at present to have at least some commercial potential. There are other communities in the region, however, for whom AFA does represent preclusion from developing at least a portion of a local commercial fishery.

Unalaska non-AFA processor response to AFA was mixed. In 2000 (the first year of AFA shoreside co-ops), crab-dependent entities were more affected by changes in crab quota and price than by AFA interactive effects. The largest non-AFA crab producer in the community reported that during 2000 there was no apparent “cap overflow” from the AFA processors to his operation, and that while overall the AFA was beneficial to his particular business, there was not the level of benefit from the capping of competition at the AFA plants that had been anticipated. These circumstances changed somewhat in 2001, as the plant did receive some cap overages. This processor also noted that the downside of the AFA from their perspective was the preclusion of shoreside crab plants moving into pollock at a later date if business conditions would otherwise dictate that such an expansion would be a good strategic move. More recently, the impending implementation (2005) of crab rationalization has become the dominant issue for potential structural changes among at least some of the non-AFA plants and will likely result in another readjustment of relationships between the larger and smaller processing entities.

Small entities in the community that do a variety of specialized processing and custom packing in conjunction with AFA plants report that AFA has had negative impacts on their operations in

general, and for crab operations in particular. For example, those that do custom processing of crab in conjunction with AFA plants now, in a sense, compete with those plants because their crab “counts against” the AFA plant’s crab cap. In other words, unlike in the past, cooperation with a custom processor is limiting what the AFA plant can do on their own as they are essentially “giving away” a part of their cap limit by doing so. (This dynamic, however, is likely to change substantially under crab rationalization.) Also, with the slowing down of the AFA plants during pollock season, there is the opportunity for the larger plants to explore custom products that were not worth their while during the race for fish, so the larger plants may now be interested in providing some of the custom services that the small operations provided in the past. During interviews, small operation owners also found the “locking up” of pollock by the AFA-qualified shore processors disconcerting because of the effect of precluding them from exploring that niche or diversifying into that market in the future. It is also the case that the small processors have less political leverage in the management process and can afford less representation at fishery management meetings. These operators feel that they are not competing on a level playing field because of the management of the fishery being biased toward the interests of larger firms, with the AFA providing one more example of this general trend. One of the specialty processors notes that they have been successful in competing for the halibut market specifically because the fishermen own the quota rather than the larger processing entities. The impacts of processor shares in crab rationalization to smaller operations remains to be seen.

While Inshore/Offshore and AFA pollock allocations have clearly been beneficial to Unalaska processors and, by extension, the community, not all allocations in the recent past have been seen as similarly beneficial. During interviews in 2004, persons in management at several of the local plants expressed concern over the recent allocation of Aleutian Islands pollock, which will apparently shift processing away from Unalaska at odds with historical processing patterns for the fishery.

Current Operations

The plants that currently operate in Unalaska can be grouped into four different categories: the three large multi-species plants, a relatively large crab-focused operation (Royal Aleutian), a mobile processor operator (Icicle), and two small specialty processors (Prime Alaska and Harbor Crown). The large multi-species plants are UniSea, Alyeska, and Westward. All are AFA-qualified groundfish plants, and all process a wide range of species.

UniSea has a large multi-species plant in the community (which is the focus of UniSea operations for the state, having discontinued its former crab processing operation in St. Paul). In recent years, when fully operational, UniSea has had upwards of 1,200 workers in Unalaska, including processing, direct support, and other business functions. At present (2004) the number of direct processing workers (not including support or other business unit personnel) peaks at around 900 during pollock A season, and then again between 680 and 700 during pollock B season. During these periods, of course, many other products are run by the plant, but groundfish operations do drive overall employment and activity levels. During the slow season in May and June, activities focus on maintenance and fabrication as well as running halibut and black cod. As B season trails off there is a step down in workers through king crab season, followed by a very slow period from November through December. UniSea does provide idled workers with room and board during the

slow winter time if they choose to remain in the community for the upcoming season. Like other AFA plants, UniSea adjusts its operations around the schedule of the unrationalized crab fisheries. For example, opilio season overlaps with pollock roe and cod season, so during this time rather than bring in a pulse of workers just to do crab, value added products for groundfish are suspended during this period to the extent it makes sense to do so (making adjustments for the high-value, short-lived pollock roe season). The three main crab species run currently are opilio, Bristol Bay red king, and brown king crab, with some other species run in lesser amounts. For the fall Bristol Bay red king crab season, pollock operations are more flexible and can be moved forward to “create a hole” for crab processing. In other words, the unrationalized crab fisheries do impact the flow of other, even rationalized operations, and this impact may be seen in what the plant is able to do with those groundfish fisheries at the time of the overlap. Brown king crab processing is described as “more hit and miss” such that it can be handled with resident crews without much juggling between species. Processing of pollock itself has changed in recent years, with a de-emphasis on surimi to the point where it is almost a secondary product, due to changes in demand and the growth of production in other areas of the world. During the 2004 B season, for example, UniSea management reported that production was approximately 80 percent fillets and 20 percent surimi. UniSea also reports that it has sharpened its processing focus in recent years. For example, as of 2004 UniSea has been out of the salmon business for approximately 3 years, no longer produces salt cod, no longer sells fish oil, and quit processing herring when the season shifted and now conflicts with other core operations. According to management, operations are now directed toward growing the value added portion of the business, as facilitated by rationalization fishery management approaches.

Alyeska Seafoods takes a slightly different approach to balancing crab and pollock operations. While patterns will surely change this next year (2005) with the implementation of crab rationalization, in the recent past the plant basically shut down pollock processing for a 2-day period during the peak of king crab, but otherwise did crab processing as “hole” in groundfish processing like UniSea. During the longer overlap with opilio season the plant cannot afford to shut down pollock production, so Alyeska changed its pollock product mix to less labor intensive product forms. Alyeska has not run the more sporadic brown king crab for a number of years. The regular crew of about 80 full-time personnel is augmented with seasonal workers, with peak worker numbers for the plant constrained by housing capacity. At present (2004) approximately 430 workers are on-site during the January through March period, when pot cod, opilio, pollock, and trawl cod largely fuel operations. A second peak is seen from July through October, when between 340 and 350 workers are on site, driven largely by the pollock B season occurring on top of other operations. Alyeska traditionally has been a diverse, multi-species plant running a wide variety of products from pollock, Pacific cod, black cod, halibut, herring, and salmon, among others. Like other large plants in Unalaska, product mixes have changed in recent years, as the emphasis on surimi has declined with changes in the market and as other opportunities have presented themselves as a result of the pollock co-op system. For Alyeska, these changes have included a recent addition of pollock fillet machines.

Westward Seafoods is a high volume groundfish plant and a high capacity crab plant that, according to senior plant staff, essentially runs every species of BSAI crab other than hair crab. The number of processing personnel on-site varies by season, with the approximately 650 to 700 workers present during the January through March period during pollock, opilio, and cod activity. From mid-April through June, the local workforce is down to approximately 300 to 350 people, and activities during

this time include dungeness crab and the halibut and sablefish IFQ fisheries. From July through the end of October, approximately 550 to 600 personnel are on-site for the bait, herring, pollock, and brown and red king crab fisheries, among others. From November through the end of the year, local employment is at its ebb, with about 175 personnel engaged in cleanup, maintenance, and some relatively low volume processing, including brown crab and pot cod. About 125 people work steadily at the plant through the entire year. Crab processing occurs intermittently through the year with season openings. Crab processing is characterized as part of the core business at Westward, and in recent years crab processing capacity has been increased along with crab related dock expansion projects and an increase in storage areas for pots and other gear. As for crab-specific processing employment, approximately 200 processors are brought in specifically for opilio, and about 100 workers are dedicated to red king crab, with additional crab-specific workers needed if the seasons are longer. For the intermittent or lower volume crab fisheries, other seafood processing workers handle crab processing without the need for dedicated crab crew.

Royal Aleutian is unique among processors in Unalaska as its operations focus almost exclusively on crab, although the plant also does run some halibut in the summer. Halibut in recent years, however, has become more of a custom packing operation in relation to what was common before the introduction of IFQs in that fishery. With the shortened crab seasons, Royal Aleutian faces a different set of challenges than the larger multi-species plants. It is the only major community-based crab processor in the region that is not an AFA-qualified company, and it runs no pollock or codfish. As a result, there are very sharply defined pulse seasons at the plant. In mid-January, opilio crab is run at the plant, providing about 5 to 8 days of work for about 300 people. In mid-August, there is approximately 2 weeks of brown king crab work for around 130 processors, down from a 3- to 4-month season in the not-too-distant past. In mid-October there are about 5 to 8 days of work on red king crab for around 200 processors. Reportedly these three species make up the vast majority of processing at the plant, although it does run “a smattering” of other crab species along with frozen and head and gut halibut and black cod, with fish processing during the summer providing employment for between 10 and 20 workers. In addition to the surge of workers brought in for the peak seasons, according to management there is a core group of about a half-dozen workers at the plant “who have been here for years” with a total of about 15 to 20 people who are characterized as always being in the community, despite the fact that work is not always available at the plant. During times when work is not available at Royal Aleutian, these individuals reportedly pick up short-term work doing a variety of things in the community, including stevedoring and longshoring. With seasons being so short, management reports that it is a major challenge to find an effective workforce to bring to the community for such a brief period of time. Rather than attracting people as a primary job, they characterize it as being more like “paying for an Alaska adventure” to get people to come for the brief periods. With the shortening of seasons has come a drop in the rate of return of workers, from around 80 percent for the half-dozen years leading up to 2000 to perhaps 50 percent at present (2004). These seasonal changes have resulted in a change in recruiting approach, with the company now targeting “professional migrant workers” who over the course of a year may process salmon elsewhere in Alaska and work in agriculture in California. Despite a relatively low overhead between seasons, Royal Aleutian reports that it is still in a difficult position of trying to make a financial go of it for the year with very short processing intervals. Clearly of all the local processors, crab rationalization will benefit Royal Aleutian proportionately more than others, given the structure of the operation and the nearly exclusive nature of its engagement with the crab fishery. Royal Aleutian did benefit to some degree by crab caps on AFA processors, taking

deliveries from over-cap vessels. Royal Aleutian is also somewhat different from the other local plants in the degree it buys from local small boat fishermen, an ability due at least in part to its different scale of operations. For example, Royal Aleutian purchases local herring, which is reported to not be economically feasible for the larger plants. Given the structure of the business, Royal Aleutian also buys proportionally more goods and services than the larger plants, although UniSea is noted in the community as also purchasing more locally than the others. Given the lack of dock space compared to other processors, the Royal Aleutian-related fleet also uses proportionally more City of Unalaska dock space during the off seasons, and the processor underwrites this vessel expense.

Local Icicle Seafoods operations have yet a different focus from the other local processors. Icicle does not have a shoreplant facility, but two of the company's mobile processors, the Bering Star and the Arctic Star, typically operate for at least part of the year in Unalaska. Typically, if one vessel is in the community it operates tied up to a dock at the northern end of Dutch Harbor, and if both vessels are in town at the same time, the second vessel processes in the Wide Bay portion of the Unalaska Bay. Icicle normally has a mobile processor in the community from January through May processing opilio and cod (before it leaves to participate in the Togiak herring and Bristol Bay salmon fisheries) and again July through mid-November to run cod and king crab. During any given year, one of the mobile processors will follow fisheries from southeast to the Pribilofs, stopping to process crab in Unalaska. The degree to which crab is run locally versus elsewhere depends on the individual season. The focus for king crab is Unalaska, but opilio may be run either just in Unalaska or in both Unalaska and St. Paul, depending on whether it is a big season. Unalaska does not see an influx of Icicle employees in the same way as it does for other processors, as the employees tend to follow mobile Icicle operations, and employees can be shifted between company barges, floaters, and shore facilities as needed. The number of processing workers utilized on the Bering Star and the Arctic Star when they are in Unalaska varies by the vessel and the season. The Bering Star typically operates with a crew of around 90 to 100 when it is in the community, while the Arctic Star uses about 50 to 60 workers per shift for cod and around 90 to 100 workers for crab, plus an additional 6 to 8 maintenance personnel, with peaks reported in past years of around 150 workers, depending on a number of variables. Icicle's floater Northern Victor, which processes in Beaver Inlet, does not operate within the city of Unalaska but is supported out of the community. The Discovery Star, which also operates in the region, focuses on herring and salmon.

Prime Alaska Seafoods is a small processing operation with facilities on the "Little South America" portion of Amaknak Island and an ice house facility on Dutch Harbor itself, but it does not have its own dock space. At present (2004), Prime Alaska has one full-time employee (in addition to the owner), down from half a dozen full-time employees and a similar number of nearly full-time employees in the recent past. In part this has, according to the owner, been driven by liability issues. In recent years Prime Alaska has worked with both processors and harvesters, having focused mostly on producing custom products in conjunction with larger processors as well as on its own halibut fresh products. Current (2004) operations include custom packing milt for one of the large processors in the community for about 6 weeks from the first of February and running into March. Although the operation did not itself purchase cod in some recent years, it did so in 2004. In 2004, halibut was processed from June through August, but in the past halibut has provided about 6 months of processing activity. Halibut season is open earlier, but reportedly fish of the size needed for the fresh market do not come available locally for purchase until late May or early June. Prime

Alaska also works on occasion with larger processors to custom pack halibut. Prime Alaska's owner noted that one possible area of expansion could be the addition of freezing capacity to be able to take advantage of older halibut in addition to servicing the fresh market. Relatively little of the halibut purchased is from local IFQ holders, with more coming from the small boats operating out of Homer and Kodiak. Since 2000, the plant has been shut down during the October to December time period. While Prime Alaska did include crab in its operational mix in recent years, it is no longer active in crab processing. This reportedly has been more a decision based on wishing to maintain other cooperative business relationships with larger crab processors in town rather than strictly crab economics *per se*, but the difficulties of a small operation making money on a very short season were also noted. In terms of competition with larger processing entities, maintaining good relations with other firms is seen as important, and while "there is always enough fish for someone of this size" there are cost challenges with doing business in Unalaska. The anticipated increase in time that crab will be available under rationalization in 2005, along with the change in dynamics of processor relations resulting from rationalization, may influence Prime Alaska to participate in crab processing again.

Harbor Crown Seafoods, established in the summer of 2003, is the newest entrant into the Unalaska processing sector. While some small-scale operations have already occurred, construction of the permanent plant itself was just beginning at the time of fieldwork (summer 2004). This operation is located in the "sub dock" area complex on Amaknak Island, site of a former vessel repair facility that recently discontinued operations. Lease holdings include several buildings including, among others, the sub dock shipway and building, a machine shop, a bunkhouse, and the Dutch Harbor Mall, the former location of Osterman Fish, another small processor in the community that focused on "fresh and live" markets but recently discontinued operations. Harbor Crown at present (2004) employs three to four individuals on a regular basis and has had up to eight or nine people at some times. Plans include a focus on "straight to retail" and value added markets. To date, products have included octopus, and custom buying (but not processing) of crab.

2.3.3 Support Services

Unalaska is unique among Alaska coastal communities in the degree to which it provides support services for the Bering Sea fisheries. One long-time resident noting the lack of a sizable truly local fleet stated that "this is a service town, not a fishing town." As described in detail in the Inshore/Offshore-1 community profile (NPFMC 1991), Unalaska serves as an important support port for several different sectors or subsectors of the pollock fishery, including harvesters (including a wide range of vessel classes), inshore processors (including shoreside and floating processors), and offshore processors (including processor/motherships and catcher/processors). This same pattern holds true for the crab fishery and the other major fisheries of the area.

The Ounalashka Corporation, the local Unalaska village Alaska Native Claims Settlement Act (ANCSA) corporation, is in a unique position with respect to functioning as a support service entity to the fishing industry. By far the largest land owner in and around the community, the corporation leases land to some fishery support businesses, such as American President Lines and Horizon Lines, which represent the corporation's largest leases, as well to at least two of the seafood processors themselves, Royal Aleutian Seafoods and Harbor Crown Seafoods. Other seafood processing plants with larger geographic footprints in the community, Aleyska, UniSea, and Westward, all own their own land, as these parcels were in private hands prior to the passage of

ANCSA in 1971. In a departure from strategies pursued in the past, the Ounalashka Corporation currently focuses on leasing land rather than direct participation in specific business ventures. This reliance on leasing (and longer-term leasing specifically) has reportedly served to insulate the corporation somewhat from the drastic swings in fortune that can accompany changes in fishing conditions year-to-year that, in turn, can and do impact direct fishery support businesses.

Other support services include a wide range of companies, including such diverse services as accounting and bookkeeping, banking, construction and engineering, diesel sales and service, electrical and electronics services, freight forwarding, hydraulic services, logistical support, marine pilots/tugs, maritime agencies, gear replacement and repair, vessel repair, stevedoring, vehicle rentals, warehousing, and welding, among others. There is no other community in the region with this type of development and capacity to support the various fishery sectors in the Bering Sea. Photos of some of the local support services may be seen in Plate UNAK-7a, Plate UNAK-7b, Plate UNAK-7c, and Plate UNAK-7d.

Shoreplant Support

In general, in the way of support services, there is little direct supply of the main shoreplants in the community. This is especially true of the large combined pollock and crab-oriented shoreplants, by far the largest plants in the community. These are large enough entities that it is more efficient to supply most on-site needs directly from outside of the community. These plants all feature an “industrial enclave” style development to some degree, but this varies from operation to operation. Plants may purchase some regular items such as rain gear and boots for processors locally that they do not want to keep in inventory, but major purchases may be limited to fuel sales. Commonly large volume supplies, such as packaging materials and food are purchased “down south” and shipped direct. Individual processing plant workers do patronize local businesses to some extent, although this is limited by the fact that they are supplied furnished housing and meals by the processors. Nonetheless, this trade is important to some of the retail stores in the community. As noted below, some of the stores in the community carry speciality ethnic foods for this trade and at least one of the stores draws part-time workers from the processing labor pool during the off-seasons. The smaller processing operations in Unalaska have proportionally more local purchases of goods and services in the community than do the large operations. The major non-pollock crab processor in the community noted that because of the scale of their operation they did buy most services in town, but that with the overall decline in the support service sector of the economy they have seen “about a half dozen” of their vendors leave the community in recent years.

Vessel Support

There are numerous businesses within a variety of subsectors in Unalaska that are oriented toward supporting catcher vessels or, to a lesser degree, catcher processor vessels for a significant amount of their business. These include such diverse enterprises as vessel grocery supply, marine supplies/hardware, hydraulics, marine electric, marine electronics, mechanical services, welding and ship repair, and fuel provision, among others.

One general trend among the diverse vessel support businesses is a change in the nature of demand for services that has accompanied the way fisheries have been managed in recent years along with

changing harvest levels. With the recent decline in crab harvest, which occurred simultaneously with a decrease in the race for fish during the centrally important pollock fishery, there has been a drop-off in peak demand for vessel related support services. The amount of this drop-off depends on a number of different factors, including the relative reliance on crab and trawl fleet support. According to one service supply business manager who is quite heavily dependent upon trawl vessels, the co-op system in theory should help his business out in the long run, because even if overall there are less vessels with quota reassignments within co-ops, it will be the less efficient vessels that drop out, leaving more predictability and more secure players. The flip side of this perspective, put forward by other some other support service business owners, is that it is precisely the inefficient vessels that need the most service in a place like Unalaska. In practice, a good portion of the support business in Unalaska has been built on inefficiencies, as according to one manager “this was Unalaska business.” Like many of the support service businesses contacted, the common pattern for his business was to have a limited staff of year-round personnel and to ramp up capacity during peak periods by bringing in temporary or seasonal staff from “Outside” (i.e., from the Lower 48). This is true both for vessel-oriented service firms that are parts of larger regional or national entities as well as for more locally based firms (and of the latter there are very few).

With the conditions created by AFA in conjunction with the fall in crab quotas, there have been employment cutbacks at all of the businesses contacted in this subsector, either in the form of having fewer year-round personnel or in hiring fewer seasonal hires for peak demand, and in all cases a cutting back of overtime hours for staff. One specific firm contacted is at half the level of employment that was typical in pre-co-op circumstances, and this was not an unusual case. One local business manager captured a common sentiment regarding the cutbacks and the quality of the jobs remaining in the community, however, with the observation that with the cutback “we have been trading money for sanity.” In the words of another business owner, during the days of the race for fish “I didn’t know I was crisis oriented” and in the time passing since crisis mode he has had to find other ways of making the business work. In this particular case of a locally owned vessel support business, survival has meant diversifying away from relying on the fishing industry nearly exclusively by performing similar services for land-based businesses (and adding new marine-oriented services) and away from relying on Unalaska as a nearly exclusive geographic base of revenue by taking his services to the region and beyond. One social change that has accompanied these business changes in the support sector is that the pace of business has been more sustainable, and with the predictability of a more consistent business year, and this has permitted something resembling a “normal life” for business owners, managers, and workers, which, in turn, has apparently fostered more people bringing their families to the community.

Another common problem with these businesses is inventory, and this has changed somewhat under co-op conditions (again, depending on how relatively dependent a business is on trawl-specific trade). Under race for fish conditions, carrying a larger than normal relative to overall volume of sales inventory was necessary due to the need to have virtually everything possible on hand instantly in case of need during the fishing season, as downtime for vessels off of the fishing grounds meant unacceptable opportunity losses, and vessels were willing to pay whatever it took to get them back on the grounds as quickly as possible – time was worth more than the cost of urgent repairs. As the race for fish went away, it was much more efficient to order specialty parts express shipped in from the Lower 48 (typically Seattle) if needed than to try and stock everything in Unalaska.

UNAK-7a

Support Services

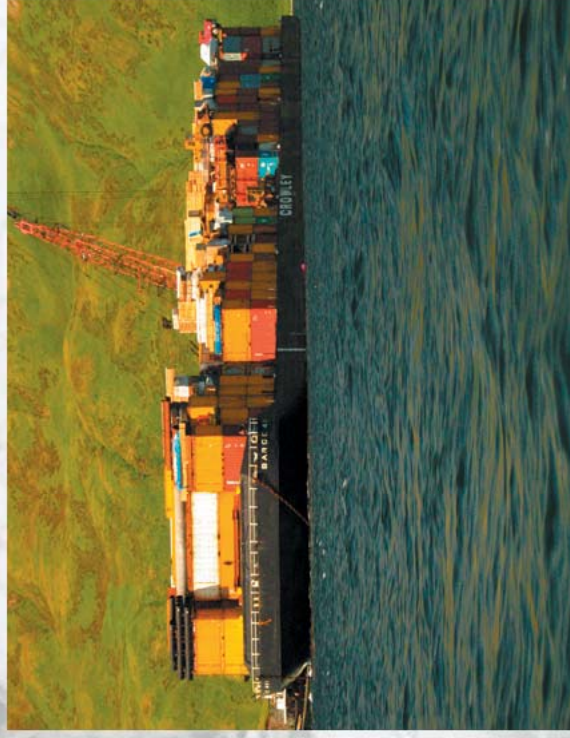
Clockwise from upper left:
American President Lines
facility, crane on city dock,
container vessel and tug at
city dock, and freighter in
Unalaska Bay



UNAK-7b

Support Services

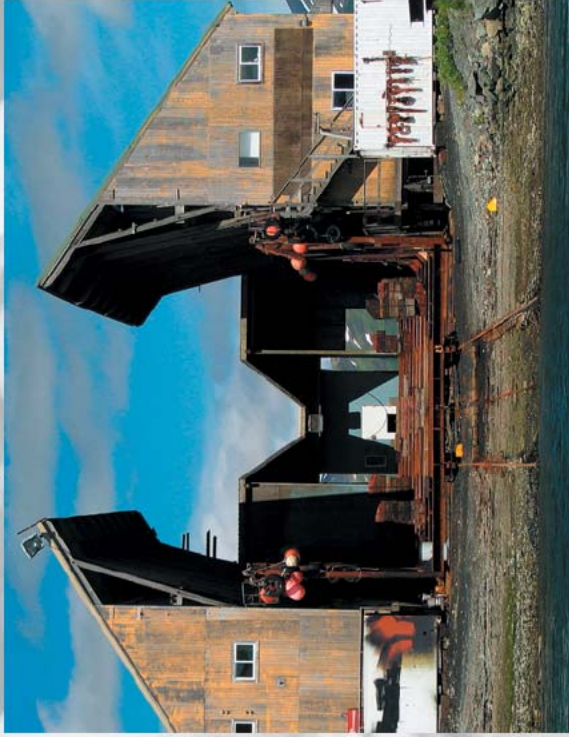
Clockwise from upper left:
Shipping containers, barge
and fuel dock



UNAK-7c

Support Services

Clockwise from upper left:
Submarine dock, net repair,
close-up of net, and Highliner
Food Services warehouse



UNAK-7d

Support Services

Clockwise from upper left:
Grand Aleutian Hotel, Carl's
Bayview Inn, espresso shack,
and Grumman Goose am-
phibious aircraft



Depending on the composition of the business base of these firms, they have been hit more or less hard by the decline in the crab quota. According to one business manager, with the loss of income to crab vessels, he has seen his crab vessel support business drop off 50 percent as owners are not spending money on preventative maintenance; those who are performing work are slower to pay their bills. Rationalization may be expected to change crab-dependent businesses somewhat, but that depends on the nature of services performed. For example, some vessel preparation work needs to be done once per season, no matter whether it is a short or a long season. On the other hand, some work is directly related to intensity of use such as the “number of turns” on hydraulic equipment. One support service business owner observed that crab seasons have now become so short as to be “almost inconsequential” for his business, although when he started, the local crab and shrimp fisheries were the base of his business.

With the trawl fleet, the slowing down of the race for fish has also meant that the trawlers are spreading their business differently in the community, according to support business owners. Not only is less money being spent overall because of the relative lack of urgency, “now money managers are involved” in looking at relative value between providers and shopping work around. For a number of the support businesses that service the catcher fleet, the loss of a large portion of the catcher-processor fleet was a large blow. While these large vessels did not employ the full range of services that some of the smaller catcher vessels might have employed in the community (simply due to their facilities being unable to handle all of the work), they did need specialty service work from a number of the suppliers.

Another common observation of the support sector within the community is that while the relatively longer pollock seasons are good for the community as a whole, a number of entrepreneurial businesses have folded, and the redundancy among (or the range of choices among) service providers has been reduced. The flip side of this means that, according to one fishing business manager, they can be more selective in their purchasing of services and “everything no longer needs to be at a premium price in Dutch Harbor.”

No systematic information exists on the vessel support service sector in the community. The following business characterizations were derived from limited field interviews conducted over a brief period of time. It was not possible to contact all support service businesses in the community, and these sketches are intended to convey the types and nature of these businesses in the community, and their links to the fisheries, not provide an exhaustive inventory of Unalaska support service businesses.

At present (2004) there are a total of six enterprises that have been supplying groceries to vessels as a substantial portion of their business, including two specialty operations (Peterkin Distribution and Highliner Food Services), a more general ship supply store that also provides groceries (Alaska Ship Supply), two larger general stores/supermarkets (Eagle Quality Centers and Alaska Commercial Company), and a store that is part of a larger commercial complex (Carl’s Commercial). Both specialty businesses are wholesale grocers whose primary business is supplying commercial vessels (estimated at 90 percent of total sales), but both also derive revenues from sales to other businesses and the general public (about 10 percent of total sales). In the case of Highliner Food Services, a significant portion of their business is derived from a freight forwarding service they operate in conjunction with their Seattle head office; whereas Peterkin Distribution

completes/fills all orders locally. The freight forwarding service offered by Highliner Food Services, with orders made through their Seattle office, allows the Dutch Harbor/Unalaska operation to facilitate the handling of larger orders (\$80,000+) than would be financially and logistically practicable given the size of the local facility. The service also allows the local facility to avoid the additional expense or loss of revenue through extended periods of large over- or understock. The value of typical locally placed orders filled on-site ranges from \$10,000 to \$15,000. For this reason, Highliner Food Services tends to market their services to larger vessels in the different fleets. Both Highliner Food Services, currently with one manager and two employees, and Peterkin Distribution, currently with one manager and four employees, have been in the community since the early 1990s. With only a few staff each, both are relatively small employers. Both operations noted that business operations have become more steady than was the case in earlier years, with Highliner Food Services noting that the current “busy” period is now less extreme and Peterkin Distribution noting a general upswing in overall business over the last several years.

The Alaska Ship Supply grocery operation, part of a larger store with multiple departments, is similar in some operational characteristics to Highliner or Peterkin such as in typical commercial vessel orders, although it is more “user friendly” to the public by means of facilitating walk-in trade. Unlike the true warehouse orientation of Highliner or Peterkin, Alaska Ship Supply resembles a bulk item wholesale/retail store, and it has been in the community since the early 1980s. According to management, the vast majority (95 percent) of the Alaska Ship Supply grocery operation’s business is commercial vessel related. In general, business is described as generally good and more consistent over the past few years than in the more distant past, due in part to the longer fishing seasons (that have accompanied rationalization). Employment levels have remained steady throughout the year, but with existing staff working greater hours during peak times and fewer hours during the slow times.

The two large grocery/general stores within Unalaska, Eagle Quality Centers and Alaska Commercial Company (AC), share a number of characteristics, selling a variety of products as well as groceries, including clothing, electronics, and durable goods. There are a number of differences in emphasis between the two as well, as noted by store managers, where AC stocks a variety of furniture and firearms, while Eagle sells sportfishing gear, over-the-counter medicines, and jewelry. Eagle also contains a deli-bakery, coffee counter, and a large video/DVD selection for rent and for sale. AC tends to have a greater variety of non-grocery products given its history as a general store; thus, overall, non-grocery items account for a larger proportion of their business than is the case at Eagle. Eagle competes for business primarily based on variety and price of groceries and correspondingly has larger market share for groceries. Non-grocery products in Eagle are primarily stocked for convenience, to allow customers to the extent feasible to shop “under one roof.”

Both large grocery/general stores supply groceries to fishing vessels, with Eagle management estimating that about 33 percent of its grocery business is attributable to vessels, and AC estimating sales to vessels account for perhaps 50 to 60 percent of its grocery sales. According to AC staff, it is not unusual for one of their three regular longline vessel customers to call ahead and order five to eight pallets worth of groceries costing between \$10,000 and \$14,000 per order. However, this varies by relative amount of port calls and the length of the fishing season and the type and nature of groceries purchased depending to a degree on the particular cook on the boat. AC also serves small vessels, but these are more “just filling a lot of carts” as opposed to bulk orders and, while

important, are not a large percentage of the business. Eagle offers free delivery and boxing if a list is sent by the vessel and offers “streamlined retail” as opposed to wholesale service. Both stores report sales to small and medium vessels in the various fishery fleets, and at least one of the stores is interested in expanding more into the freighter business. The stores also vary in their staff structure, with AC employing 20 mostly full-time staff. All are full-time during the peak seasons (but with no overtime), and vacations are taken during off seasons. At the Eagle store, on the other hand, only the manager and senior staff are full-time, supplemented with 40 part-time workers, with hours decreased or increased based on business volume. More processing workers are working part-time in the store during off seasons instead of leaving the island than in the past, and in general it is considered easier to retain staff given the increased stability of the community as the fishing seasons have come to have less sharp peaks and valleys of activity. Eagle reports that sales volume has been increasing on a year-to-year basis, and since 2000 the summer period, previously very slow, has become profitable. In part, overall sales increases are attributed to increased sales to fishing vessels. Also noted as significant have been sales to U.S. Coast Guard vessels.

Both stores also have local processing workers as a client segment. Common services include cashing paychecks and money order services. Beyond that there are a few differences in types of business attributable to the processing workers. Eagle management reports that processors tend to buy electronics and other consumer goods/personal items, but not much in the way of groceries. At the AC store, processing worker sales often include electronic goods, CDs, sheets, towels, and pillows, but also enough in the way of grocery sales to justify the store creating an “ethnic” food aisle, catering to specific regions or countries of origin of processing workers.

A third general store in Unalaska, Carl’s Commercial, has been a long-standing institution in the community, and one that traces its roots back to the Russian-American days, through the original Alaska Commercial Company outlet in Unalaska, and the Northern Commercial Company. The store, offering groceries, furniture, appliances, and a range of household goods, is part of a larger set of businesses including a 32-room hotel and bar. Located near the Alyeska Seafoods plant, this is the only store on the Unalaska Island side of the community. According to store management, approximately 30 percent of the hotel business, 25 to 30 percent of the store business, and around 60 percent of the bar business may be attributed to commercial fishing related activity.

Another type of vessel support enterprise is comprised of marine supply and hardware stores. Examples of this type of business in Unalaska are LFS, Net Systems, and Alaska Ship Supply. LFS supplies marine hardware and clothing, including a full range of foul-weather gear. According to store management, approximately 80 percent of sales are related to buoys, lines, and other marine hardware, with clothing comprising the remainder, and this split between the two holding consistent over time. LFS services a number of different fleets that spend at least some time in Unalaska, except that the larger factory trawlers tend to be self-contained, carrying their own equipment and supplies for any given season. The head office of LFS is in Seattle where a number of pre-set accounts are managed. In terms of an annual cycle, January through the end of April or the beginning of May tend to be busy, as well as the September through October period. LFS management noted that sales levels and patterns have been consistent over the past few years, and this has had its benefits. While more concentrated sales periods previously experienced allowed the business to hold inventory for a shorter period, this has to be measured against a steadier, more consistent volume of business.

Net Systems is a marine hardware supplier with a fully equipped wire shop, capable of performing a range of fabrication and repair work. They also sell some personal supplies/clothing for fishermen. Net Systems has been in Unalaska since the late 1980s and attributes about 80 percent of its current business to trawlers, with crabbers making up most of the rest. Local management reports that they used to be busier for wire, but this still continues to be their niche. Business is heaviest just before pollock A & B seasons, though some boats gear up in Seattle as opposed to Unalaska. Business related to crab season starts just before end of B season in early October, and business slows down but remains steady through the end of the year. Current (2004) staff is four persons year-round.

Alaska Ship Supply, a grocery supplier as noted above, also has a large hardware and marine supply store. While the bulk of this part of the business is marine oriented, they do stock auto parts as well. Management reports that they are busy the last 10 days in December, all through January, February, and March, and then again September through October. This portion of the business employs five people steadily throughout the year.

There are also three hydraulics businesses in Unalaska, Rapp Hydema, Hydra-Pro, and Hanson Hydraulics. Rapp Hydema provides repair service and installs hydraulic deck machinery, winches, pump systems, and hydraulic motor drives. Products are fitted for a variety of vessels (fishing, research, tug and barge), but in Unalaska the work is fishing orientated (mainly trawlers, with some tugs). Though the shop is year-round in Unalaska, larger jobs will go to their repair shop in Seattle unless they need to be made on an emergency basis. As part of a much larger company Rapp Hydema manufactures and produces their own equipment. The company has been in Unalaska since the late 1980s, and while the level of activity is characterized as “pretty busy all the time now,” there are distinct peaks just before and during the major seasons. The local work force is relatively steady, but two or three employees are sometimes called in from Seattle to help with peak demands, a pattern that has been steady for several years.

Hydra-Pro is a hydraulic sales and repair business (and manufacturer’s agent) that attributes 98 percent of their business to fishing industry, with both boats and processors as clients. Hydra-Pro has been in Unalaska since 1998. Recently the business expanded to handle particular makes of trawl electronics systems, with the idea being that this would provide a synergistic fit with many of the boats currently utilizing Hydra-Pro for winch and hydraulic systems services. Hydra-Pro has a total of six staff locally, all but one is steadily based in the community. While the manager reports that he is “still working 7 days a week” he also reports that the peaks and troughs of business have been smoothing out in recent times. This has resulted in lower inventory needs, improved cash flow, and ultimately a reduced cost of doing business. Hydra-Pro attempts to keep their customer base broad over all types of vessels and has seen steady growth over the last few years.

Hanson Hydraulics also provides hydraulic services in the community. It is differentiated from the other hydraulics providers, however, in that it is also one of three machine shops in Unalaska (along with Magone Marine and Alpha Welding; a fourth shop, formerly utilized by Walashek Marine, is not currently active). Formerly a part of Marco, Hanson Hydraulics became independent in recent years. The owner reports that between 50 and 60 percent of the business is associated specifically with the crab fleet. In general, a decline in the “tearing up of machinery” has been seen as accompanying the slower and steadier fishing seasons in the past few years.

Electrical and electronics support firms are also relatively well represented in Unalaska, in the form of Harris Electric, Lunde North, and Sea Technology Company (also known as STC). Harris Electric specializes in the repair of marine electrical systems and electronics. With 95 to 98 percent of the business attributable to commercial fishing, management reports that they can basically “repair anything on a commercial fishing vessel.” In business locally since 1986, current work is spread across all fleets (depending on season). In general, the last week of December and then the months of January and February are busy, before business slows down in March. July through October is another busy period, before things slow down again at the end of the year. While peak activities are not as frenetic as in previous years, during busy seasons people may still work 100 hours plus in a week. Harris has four full-time employees on-site at any given time, though only the manager and administrative person live in the community, with the remaining staff rotating in and out 6 weeks at a time. Sea Technology has a business similar in structure to Harris Electric, specializing in the repair of marine electrical and electronics, with about 95 percent of the business being commercial fishery related. At any give time there may be one to five employees on-site, but all continually rotate up to the community from their base in Seattle.

Lunde North specializes in the installation and repair of marine electronics, with approximately 90 percent of the business attributable to commercial fishing, with the remainder coming from computer installation and repair. Lunde North has been in Unalaska since the mid-1980s. Work is spread among the different fishing fleets, although work on pollock vessels is more common given the size of vessel and nature of the electronics on board. Crab boat work has been declining in recent years, as pollock work has picked up. Busiest periods are during A and B pollock seasons, and the period just prior to crab season in the fall, while November and December are generally slow. Lunde typically as two technicians working in the community, though a third will be added during busy periods.

NC Machinery is a supplier of mechanical work in Unalaska, specializing in service and sales CAT engines and equipment. An estimated 80 percent of their local business is characterized as directly related to commercial fishing, with 20 percent comprising public clients, including utilities. This business has a long history in the community, prior to becoming NC Machinery in 1985. Within the fisheries component of the business, they service all segments of the fleet. There are 13 employees, but only 2 are local residents and the remaining 11 rotate in from elsewhere in Alaska and the Lower-48 (and are generally not working when not in the rotation. While a move away from an Olympic fishery system has resulted in a more consistent level of business, there are still busy and slow periods. The busiest periods are from mid-November through end of January, and then again from June into the fall, but the slow period “gaps are filling in more now.”

Welding and ship repair enterprises represent another type of vessel support service in Unalaska. These include Waterfront Welding, Harbor Welding, Alpha Welding, Mac Enterprises, and Magone Marine. Waterfront Welding does marine/boat welding but is also a supplier of welding products, marine refrigeration supplies and service, and it is a steel reseller that does occasional fabrication. The business has been in Unalaska since the late 1970s and has seven employees during peak periods and two during the off-peak times. This business services trawl, longline, and crab vessels but sees little business from factory trawlers that tend to be more self-contained. The longer pollock seasons in recent years have meant that vessels stay in the community longer, providing work for

support businesses, rather than heading to Seattle between seasons. Recently the price of steel has had an impact on business.

Harbor Welding specializes in ship repair welding and diving. While in business under its current name for only 3 years, the owner of the firm has been working in the community since the late 1980s. Typically employing three people, there can be a total of six employees during peak times, with August through November, and January through February being the busiest times. Typically, commercial fishing vessels working out of Unalaska are hauled out in Seattle every 2 to 3 years, and Harbor Welding business is related to the maintenance in between these haul-outs. Typical jobs would involve the replacement of leaking pipes or diving to cut lines off wheels. While work can involve all types of boats, more business is typically associated with longline vessels than any other type. With fuel prices being high, bigger jobs are being done locally because of the expense of taking vessels to Seattle has become a deciding factor.

Alpha Welding specializes in sheet metal work, computerized cutting, and fabrication and works on all types of vessels regardless of season. An estimated 80 percent of the business is related to commercial fishing of that portion, and about 50 percent comes from groundfish vessels. The 20 percent non-fishing business tends to be related to public entities and has reportedly been increasing year-to-year, with emergency jobs being common. Alpha Welding has been under current management since 2001 but has been an entity in the community since 1990. A workforce of 6 employees is typical, but this may fluctuate between 5 and 10 during the year. Work remains busy most of the year, with particular peaks 2 weeks before major seasons and during the month of February. A steadier work flow is preferable particularly given that high costs of steel and fuel have played much more of a role in the business as of late. Previously, job costs were based predominantly on labor charges, but now (2004) materials forms a large part of any job bid/cost estimate. Another factor is the changing quality of the vessels within all fleets – with the more professional/reliable management of newer, higher quality boats and subsequently lower numbers of “junkers,” there has been a decrease in the number of repair jobs needed.

Mac Enterprises is described by its owner as a three-part business, including diving and underwater welding, above water welding, and boat watch services, with three employees in addition to the owner. Boat watch services provide about 50 percent of the income for the business, and above water welding is seen as limiting because of taking away time from underwater welding tasks. Vessel watch work has grown with the changes in seasons, as trawl vessels tend to stay in the community between pollock A and B seasons, except for those years when they are headed to a shipyard. At present (2004), Mac Enterprises may be responsible for watching 50 to 70 vessels in the November to December slow period, and given the limited dock space in the community, this requires active management of those vessels.

Magone Marine is a business whose owner describes their operation in Unalaska as a “wet dry dock,” including welding, machining, fabrication, repair, and related services. When the company started many years ago, crab and shrimp vessels were the main focus of the business, but today (2004) crab related business is “almost inconsequential” given how short the seasons are. As a result of this and other changes in the fisheries, Magone has diversified into wreck removal, vessel salvage, shipping equipment, and related undertakings as marine repair is a “mere shadow of what it used to be.” At present, vessel repair is estimated to account for about one-third of the business.

Magone employs about 25 people and that is relatively steady throughout the year. While the business used to be locally focused, it now includes salvage work “within a thousand-mile radius.”

Fuel sales are another type of locally provided support for the catcher vessel fleet. Marine fuel services in Unalaska are provided by, among others, Delta Western, North Pacific Fuel, and Offshore Systems, Inc. (OSI). Delta Western supplies fuel to vessels and local land-based clients, with an estimated 85 to 90 percent of total sales volume going to commercial fishing vessels and the remainder being mostly heating fuel for the community. All fishing fleets are served, depending on the season. This business has been in operation since the 1980s, utilizing facilities that date back decades, and it has retained its name despite a corporate takeover in 2000. Busy times include January to mid-April and late June to September with the end of October through the end of December very slow periods, but like many other support service businesses, the peaks and valleys have been less dramatic in more recent years than was previously the case. Delta has a local staff of nine, with two administrative personnel, with no change during busy times (except employees take vacations during the slow periods). Additional staff is sometimes added if specific repair and/or maintenance work is needed. Delta does also supply fuel via barge to other communities via the local facilities.

North Pacific Fuel is similar to Delta Western in a number of respects, but in addition to marine and direct sales to local clients, there is also a North Pacific Fuel gas station in the community. North Pacific has tank farms and provides marine fuel service at four locations in the community, including the former Petro Marine facility on Dutch Harbor, at the City Dock, at the Crowley Marine facility in Captains Bay, and at the Westward Seafoods dock, also in Captains Bay. The former Petro Marine facility largely services harvest vessels, with crab vessels representing a significant portion of sales. Sales at the City Dock include larger vessels, such as factory trawlers and U.S. Coast Guard cutters. This facility also services a good portion of the pollock harvester fleet. The Crowley facility (leased by North Pacific Fuel) is characterized as North Pacific Fuel’s most versatile facility, servicing all types of vessels, in all size ranges, in all fisheries. In addition to having the capacity to do factory trawler offloads like the City Dock, this facility also has crab gear storage capacity and other services available. The Westward facility services the processor’s powerhouse as well as the Westward fishing fleet. In general, local management attributes approximately 85 to 90 percent of all North Pacific Fuel business as being fisheries related, with the balance being made up of some sales to cruise ships, U.S. Coast Guard and National Oceanic and Atmospheric Administration vessels, tugs, and the occasional tramper vessel, among others. North Pacific Fuel management personnel noted that, in recent years, the changes in fishery conditions have had an impact on employee hiring and retention. Pre-rationalization, workers would come to the community expecting to work a lot of overtime over a relatively short season. With the lengthening of the seasons has come longer work periods, but with less overtime, and getting workers to stay in the community for longer periods of time has proved a challenge.

OSI operates a relatively large facility in Captains Bay that provides a significant amount of support directly related to the offshore fleet, including fuel. Catcher processors use warehousing services, and refuel and resupply when they are in the community to do a full or partial offload of product. Additionally, catcher processors typically need a range of expediting, freight management, and logistical support services through Unalaska to keep operating in the Bering Sea. This is true for both crab and groundfish catcher-processor vessels. For groundfish vessels, this basic pattern has

not changed in the post-AFA era, but the volume of local work is down significantly due to both the reduction in the catcher-processor fleet and the slackening of the pace of fishing following the implementation of the AFA.

One fishery management change that has had a specific impact on local fuel sales was the implementation of the Steller sea lion restrictions in 2000. These restrictions have meant an increase in fuel sales due to longer vessel trips to the open fishing grounds. This, coupled with co-occurring high fuel prices has meant higher costs to the catcher vessel (and the catcher-processor) fleet. While the fuel sales businesses have benefitted (as has the municipality of Unalaska through tax on the fuel sales), the vessels and shoreplants (because of the higher cost of fuel they are purchasing) have been hurt.

There are a number of other businesses in the community that support various aspects of fishing operations. These include such direct services as warehousing and gear storage, and less direct support services such as vehicle rental businesses, lodging services, restaurants and bars, and the like. These businesses all derive a substantial portion of their revenues from fishing related activities.

Shipping

Shipping seafood products is also a major business sector in the community. In addition to the two main shipping lines that move seafood product from the community, American President Lines and Horizon Lines, there are a number of other entities that service different niches. Coastal and Western Pioneer provide domestic coastal freighter service and provide services to communities that cannot be serviced by larger vessels operated by some others. Northland and Samson provide tug and barge service, with Northland interlinking with the Pribilofs and Bristol Bay, and Samson linking to Sand Point and King Cove, among others. These firms also can serve communities with lesser port facilities, and feed product to larger operations in Unalaska for transshipment elsewhere.

Unalaska has the westernmost container terminals in the state, and the community is strategically located on the Great Circle Route between northern Asia and the west coast of the United States, which is why it has become a major transshipment point. Seafood products from Bristol Bay, Akutan, and other seafood processing facilities in the region (and beyond) move by tug and barge to Unalaska where they are typically transhipped to container ships or other vessels destined for their ultimate marketplace. In addition to container ships, freight movements to and from the community are also handled by tug and barge sets and small coastal freighters for domestic movements, and foreign break-bulk freighters capable of holding frozen product, often called trampers, that are primarily engaged in moving seafood products to foreign countries (Northern Economics 2004).

With the recent changing of the pace and structure of the groundfish fishery with co-ops, shipping business patterns have changed in the community. The largest difference is attributed to the fact that processors can now much more closely time their operations and shipping needs and can thus optimize their range of shipping choices. This opens up a range of options not readily available under race for fish conditions. For example, processing entities can more easily arrange for scheduled transfers direct to trampers rather than having to always use available locally established shipping firms to transfer product. Of course, shipping choices ultimately depend on product mix,

destination, and cost efficiencies, but clearly local shipping related entities have felt impacts directly as a result of fishery structure changes. There are also indications that shoreside plants have shifted to a greater emphasis on trumper shipments relative to containerized shipments, but no quantitative information is available to verify this assertion. In terms of crab specifically, however, crab remains the major product shipped for at least one of the container companies. According to one shipping company manager, a major recent change in shipping has been movement to unitized cargo loading. Whereas, in the past, trampers were used because they were fast and containers were used because they were good quality, unitized cargo loading has meant that trumper-shipped goods can equal the same quality as container-shipped goods.

In recent years, there has been a reported shift in product destination from Unalaska, with less product going to Asia and more going to domestic and European markets, due primarily to change in product mix. One of the large shipping firms in the community reports that there has been almost a 100 percent fall-off in business to his company from the offshore sector since AFA, and increases from the shoreside have not made up for this change. This is attributed to the fact that without the Olympic system, seafood companies can schedule and plan offloads, meaning that they can make their own arrangements rather than having to go through a shipping company that is always available. Similarly, the onshore sector can more easily schedule trumper loads. The situation is not straightforward, however, for the two primary shipping companies with a local presence in Unalaska. There has been some movement of market share between the two firms that, according to some, was as closely associated with ownership and corporate changes as much as any local market forces. The community has seen a higher proportion of work going to non-union longshoremen in recent years, although the non-union entities tend to have smaller workforces (partly because of being able to schedule work rather than needing a large on-call labor pool). Co-op conditions have pushed inventories up because of increased recovery rates and diversification of product mix, meaning there has been some increase in demand for cold storage, berthing, dockside services, and so on. While one senior shipping manager has reported that movement of product will become more of an issue with this trend, he also reports that there has been a tradeoff with the slowing of the peak periods post-AFA; even during the busy season, now that staff are able to work more normal schedules and can be home with their families by 7:00 p.m. At the same time the two largest established shipping firms were seeing changes in their market share or customer base, two more private dock/shipping facilities emerged in the community, one at the old East Point plant location and another in Captain's Bay. There also appears to be proportionately more offshore related volume going across municipal docks than was the case in the past, and city revenue from dockage and wharfage in general is up. These two factors reinforce the general observation that shipping related business is becoming less concentrated among the formerly dominant local entities and more widespread among various smaller entities.

Another type of support service provided in the community for both the inshore and offshore fleet is stevedoring services. While some shoreplants typically do not use stevedores in loading operations across their docks, or the demand is lower for stevedoring because of containerized product, hatch gangs are used for loading product "over the side" to trampers for shipment from Unalaska. Stevedoring jobs are relatively high paying, and much valued in the community, though the work is not steady for the bulk of persons engaged in it. What does make this labor opportunity particularly valued is the fact that long-term locals, including lifetime residents, may qualify for, and provide a viable labor pool for, these positions without having to go through minimum-wage entry

positions first. There are also union and non-union laborers alike who come to the community during the busy seasons to take advantage of the opportunities available in the community.

Remote Operations Support

There are also support service providers in Unalaska who support inshore processing entities that are operating far outside of the community. For example, the firm (Icicle Seafoods) that owns the floating processor in Beaver Inlet (Northern Victor) has a local Unalaska representative who supports that operation. (When a second floater was operating in Beaver Inlet, this entity had an office in Unalaska that, among other functions, supported that operation.) Similarly, the company that owns and operates the large shoreplant in Akutan (Trident) has a support office in Unalaska because of their logistical support needs that cannot be managed directly from Akutan.

Offshore vessels are supported by a number of entities in the community as well. American Seafoods, a large catcher-processor company, has an office and one employee in Unalaska, down from seven employees in under the pre-AFA Olympic system. American Seafoods operates five vessels in the summer and seven in the winter that are supported, at least in part, out of Unalaska. Transhipments of product are made in Unalaska, which has also served as a logistical support base and a port for crew changes. OSI also provides a range of fleet support services for vessels for other at-sea processing firms as well for catcher vessels.

In addition to these types of support, there is a range of businesses in the community that handle a variety of expediting, logistical, and ship agent tasks. Though typically small in terms of the number of employees involved, this type of business does provide income for a number of local residents.

Summary

In general, the recent changes experienced by support service sector businesses in Unalaska have gone to the heart of the paradox of the Unalaska support service economy. This portion of the local economy was historically dependent to a large degree on the economic inefficiency of the commercial fishing industry. To the extent that the co-op quota allocation system has made pollock fishing more economically efficient, it has also served to allow vessel and facility owners to not have to purchase inefficient support services. This has meant a drop in local support service activity, employment, and revenue. There are no data available to quantify the amount of the drop, but it has clearly been significant for many of the businesses in this sector. Overall, peak demand is lower, the pace of business is slower, money has become at least as important a consideration as time, and businesses do not need the same level of inventory and staff as in the past. There are, of course, exceptions to this generalization, but the pattern is apparently quite consistent over the sector as a whole. Crab rationalization, scheduled for implementation in 2005, can be expected to continue this general trend. Under AFA co-op conditions, the direct fishery businesses in the community and the municipality itself have seen substantial gains, but the support service impacts have been mixed or negative. It is anticipated that the same type of pattern will be seen with crab rationalization, where there will be a period of some business loss or displacement, followed by a healthier and more stable, if smaller, support sector.

2.3.4 Other Local Business/Service Activity

Tourism continues to develop in the community, with new draws in the last few years associated with an increased local National Park Service presence, the opening of the Museum of the Aleutians, and the continued popularity of charter sportfishing. In 1996 the footprint of historic Fort Schwatka at Ulakta Head on Mt. Ballyhoo on Amaknak Island was designated as the Aleutian World War II National Historic Area within the national park system, and the Aerology Building at the airport has been refurbished as a visitor and interpretive center.⁸ The Museum of the Aleutians opened in 1999 and is the only archaeological research and museum storage facility in the region.⁹ The structure of the building itself incorporates a time line representing Aleut peoples prior to western contact, the era of Russian influence, the post-Russian era, and World War II, and features both permanent and temporary exhibits illustrating aspects of life, events, and the arts in the region over time.

The local sport charter fishing sector became established and experienced a surge in popularity in the mid-1990s when world record sport halibut were caught locally in 1995 and 1996, with the latter fish, at 459 pounds, still representing the world record. According to sector participants, at present (2004) there are a total of five local charter businesses, of which three are characterized as proactive business operations and two others that are characterized as less continuously active or more opportunistic participants. According to one charter owner, business has hit a plateau in recent years as the average size of halibut has decreased somewhat and no new records have been produced. Changing halibut subsistence and charter regulations have apparently had some impact as well. In 2004 no local derby, normally a vehicle for promoting local charter fishing, was held, apparently due to contentious gear issues, among other factors. Reportedly, some charter vessel owners are picking up the slack in business by doing non-fishing charters, including marine tours, some long range charters (for a variety of customers including government agencies, universities, and other research or publication oriented entities, such as National Geographic, as well as private individuals) along with some small-scale freight hauling to Akutan and outlying areas. According to one charter operator, 95 to 98 percent of his business used to be comprised of fishermen; now birders account for about 30 percent of the business. None of the sportfishing charter operations in Unalaska are full-time businesses or the primary source of income for their operators given the very short season, with business being characterized as “dead” before mid-June, busy during July, and fair during August before dropping off completely in mid-September. Beyond charter services per se, there is one enterprise in the community that runs a remote salmon fish camp in addition to offering traditional vessel charters.

Cruise ships represent another type of tourism activity in the community, and the local Convention and Visitors Bureau and Ounalashka Corporation management estimates that there have been approximately 7 to 10 cruise ships per year calling on the community in recent years. One cruise ship specializing in ecological tours made a total of four calls in 2004. The Alaska state ferry system also brings some level of tourism to the community during the April through October service window. While cruise ships and the ferries do bring individuals into the community who then

⁸ The land and facilities of the Aleutian World War II National Historic Area are owned and managed by the Ounalashka Corporation, with technical assistance provided by the National Park Service.

⁹ A private, non-profit corporation, the Museum of the Aleutians is run by a board with seats occupied by representatives of the City of Unalaska, the Qawalangin Tribe, the Ounalashka Corporation, the Aleut Corporation, and the public-at-large.

patronize other businesses, such as a couple of land-based tour operations, the overall economic impact of this type of activity is very modest.

Other types of birding, hiking, kayaking, and camping opportunities draw some tourism interest, as does visitation at the Russian Orthodox Church of the Holy Ascension, also known as the Holy Ascension Cathedral, which is listed in the National Register of Historic Places.¹⁰ Despite the presence of a number of attractions, the high cost and inconvenience of transportation make the development of this sector challenging for local businesses. With the slowdown in the race for fish that accompanied AFA, direct fishery related passenger transportation demand also declined to some degree, although clearly demand was falling off prior to AFA. Table 2-38 provides information on passenger counts at the community airport for the period 1995 through 2003. As shown, the total number of passengers for this span of years peaked in 1996 and counts for 2001 through 2003 are the three lowest annual counts during the period shown.

Table 2-38. City of Unalaska, Port of Dutch Harbor Airport Passenger Count by Quarter, 1995-2003

Quarter	Calendar Year								
	1995	1996	1997	1998	1999	2000	2001	2002	2003
January-March	16,122	20,380	15,992	20,919	15,672	16,461	14,696	15,466	14,027
April-June	17,209	16,615	15,772	13,683	14,556	16,480	13,988	14,351	14,259
July-September	18,015	17,105	16,041	12,909	16,312	15,906	16,086	15,502	14,853
October-December	13,171	13,323	15,380	15,863	13,740	12,596	13,612	13,512	12,130
Total	64,517	67,423	63,185	63,374	60,280	61,443	58,382	58,831	55,269

Note: Data in the table represent a total of enplaned and deplaned passengers, not “round trips” by single individuals (e.g., if 9,000 passengers got off planes in Unalaska during a particular quarter and 7,000 passengers boarded planes in Unalaska during that same quarter, the quarterly passenger count would be 16,000).

Source: Adapted from spreadsheet supplied by City of Unalaska Finance Department, 2004. Data were originally configured in fiscal not calendar year format.

Coupled with these conditions was a decrease in level service caused by the recent discontinuation of regular jet service to the community (which itself followed a decrease in service frequency). According to long-time community residents, this has had an impact on a range of services in the community (such as the price and availability of a variety of food at stores), as well as mail and freight.

Unalaska continues to support a much wider range of non-fisheries related businesses as well as fisheries support related businesses than any other community in the region. According to interviews conducted in 2004, however, business conditions are changing with a general slowdown in the non-fisheries sectors of the economy, a trend at least partially related to recent structural changes in the groundfish fishery sector as well as the decline in the crab fishery sector. A number

¹⁰ Consecrated in 1825 by Ivan Veniaminov, a famous Russian clergyman and the first bishop of Alaska, the original church was completed in 1826 and forms the central portion of the existing structure that was expanded significantly in 1894. Considered the first Russian Orthodox church in the United States, it was listed in the National Park Service administered National Register in 1970, rededicated in 1996 after a major restoration, and today retains a large collection of religious artifacts and icons.

of businesses that serve the general public have gone out of business in the recent past, and examples of these businesses, including an office supply store, an auto parts store, a vehicle rental firm, and a bowling alley, were frequently cited during interviews. Also strongly marked was the reduction in number of more direct fishery support businesses that were needed for peak demand times. In this case, it is not that types of services are no longer available, it is more that there is less of a choice of providers of those services. One landlord reports having lost a net company, an electrical firm, a hydraulic firm, and a restaurant all out of a single building. While this is an unusual case, it does illustrate the range of enterprises (and types of fleet support businesses) that have gone out of business.

As noted earlier, some community services are utilized by a larger “floating population” than just by community residents. One of these services is the local clinic, and this fact is reflected in their slogan: “Serving Unalaska, the Aleutian Islands, and the Bering Sea.” Formerly classified as a “rural health center” the clinic is currently (2004) designated as a “community health center” for federal funding purposes, and has four staff providers, including two staff physicians and two full-time staff mid-level providers (a nurse practitioner and a physician’s assistant). Other service provision personnel include the school nurse who works at the clinic one day per week and two mental health counselors. Additional services are provided out of the clinic building (but independent of the clinic entity itself) via programs administered by the regional Aleutian Pribilof Islands Association. Co-located health care staff include a community health aide, a part-time nurse practitioner, and a part-time behavior health specialist. Social service, substance abuse, and WIC (Women, Infants and Children) programs are offered by different providers through the clinic infrastructure as well. During an interview for an earlier project, two clinic board members stated the clinic had experienced a drop-off in fisheries related demand for services with the slowing of the fishing seasons. Table 2-39 presents selected patient statistics for the years FY 1999 through FY 2003. These data do not show a linear drop-off in a number of indicators that might be assumed to be related to fisheries demand, but data prior to 1999 that might show a longer-term trend are not available. According to a board member, changes in demand patterns has the clinic board working toward less of an industrial focus and more of a residential focus in terms of strategic planning for future clinic services. Donations for the clinic are reportedly off as well. Plate UNAK-8 shows the clinic and some other community amenities.

Table 2-39. Unalaska/Dutch Harbor Community Medical Center, Iliuliuk Family and Health Services, Selected Patient Statistics and Total Revenues, FY 1999 - FY 2002 and FY 2003 (preliminary)

Patient Services/Visits	Fiscal Year				
	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003*
Office Visits	7,024	6,835	8,279	7,945	9,698
Medivacs	55	68	40	41	68
Emergencies	541	428	393	548	404
Ambulance Runs	141	162	181	212	38
X-Rays	2,665	2,439	2,820	3,162	2,928
Patients Registered	9,517	9,585	9,833	9,458	12,371
Total Patient Services Revenues	\$2,303,331	\$2,191,606	\$2,633,776	\$3,047,226	\$3,089,984

*Note: FY 2003 office visits data being revised (downward); final 2003 data not available at time of fieldwork.

Source: Iliuliuk Family and Health Services - Unalaska/Dutch Harbor Community Medical Center spreadsheet/personal communication S. Handforth-Kome, January 2002 and June 2004

Another change in the local community context noted by multiple interviewees is an increased federal presence in the community. While having nowhere near the presence as in, for example, Kodiak, the U.S. Coast Guard now has a detachment in the community (after the community had lobbied for many years for an increased local presence given the importance of commercial fishing in the community and region). There are also now U.S. Customs and Immigration and Naturalization Service personnel and offices in the community.

2.4 LOCAL GOVERNANCE AND REVENUES

Table 2-40 provides information on Unalaska municipal revenues as summarized by the Alaska Department of Economic and Community Development. This information parallels the information presented for the other study communities.

UNAK-8

**Community Services/
Facilities**

Clockwise from upper left:
Iliuliuk Medical Center,
Unalaska City Hall,
Expedition Park, and Frank
Kelty Field at Unalaska Park



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Table 2-40. Unalaska Municipal Revenues, 1999 -2003

Revenue Source	1999	2000	2001	2002	2003
Local Operating Revenues					
Taxes	\$11,853,490	\$12,775,775	\$12,974,407	\$13,191,320	\$13,957,188
License/Permits	\$13,687	\$22,018	\$0	\$18,235	\$18,610
Service Charges	\$566,459	\$586,947	\$1,278,988	\$617,823	\$650,198
Enterprise	\$10,925,442	\$11,955,169	\$11,838,447	\$12,582,856	\$13,377,296
Other Local Revenue	\$2,793,052	\$2,351,981	\$4,320,367	\$3,777,529	\$3,059,837
Total Local Operating Revenues	\$26,152,130	\$27,691,890	\$30,412,209	\$30,187,763	\$31,063,129
Outside Operating Revenues					
Federal Operating	\$336,193	\$193,065	\$171,089	\$963,821	\$321,496
State Revenue Sharing	\$201,088	\$129,402	\$103,053	\$106,462	\$106,094
State Municipal Assistance	\$125,281	\$83,312	\$72,457	\$78,721	\$79,220
State Fish Tax Sharing	\$5,164,608	\$4,708,573	\$6,062,468	\$6,179,983	\$7,021,677
Other State Revenue	\$1,083,384	\$1,073,143	\$1,092,958	\$557,030	\$0
Other Intergovernmental	\$0	\$0	\$150,464	\$231,831	\$1,114,823
State/Federal Education Funds	\$2,303,157	\$2,453,287	\$2,424,152	\$2,660,994	\$3,729,094
Total Outside Revenues	\$9,213,711	\$8,640,782	\$10,076,641	\$10,778,842	\$12,372,404
Total Operating Revenues	\$35,365,841	\$36,332,672	\$40,488,850	\$40,966,605	\$43,435,533
Operating Revenue Per Capita	\$8,465	\$8,483	\$9,453	\$10,113	\$9,899
State/Federal Capital Project Revenues	\$217,144	\$6,828,094	\$309,012	\$6,976,007	\$0
TOTAL ALL REVENUES	\$35,582,985	\$43,160,766	\$40,797,862	\$47,942,612	\$43,435,533

Source: DCED Website, 2001, 2002, personal communication, 2004.

Unalaska derives a significant portion of its municipal revenues from fishery related activities. Table 2-41 presents a more detailed breakdown of General Fund revenues by source for the City of Unalaska. This provides a sense of scale for the different revenue sources for the City's General Fund. Local taxes include a 3 percent sales tax, an 11.78 percent mills property tax, a 5 percent accommodations tax, and a 2 percent raw fish tax.

Table 2-42 provides a breakout of selected fisheries related General Fund revenue sources. These include the local raw fish sales tax (first instituted in FY 1987), the intergovernmental fisheries business tax, and the fisheries resource landing tax (a relatively recent revenue source, first appearing on City statements in FY 1996). As shown, the local raw fish tax increased substantially from FY 1999 to FY 2000, with the latter encompassing the first half of the 2000 calendar year, the first year of AFA onshore co-ops. Of course, a number of factors influence the volume and value of fish landed in the community which, in turn, translates into taxes paid. (The City of Unalaska does not keep a breakout of revenue generated by species or species group so information is not readily available to calculate the relative revenue contribution of individual species or species groups, but a proxy for that information for the shore-based operations may be found in the processing dependency tables appearing in the processor operations discussion in an earlier section.) Information for FY 2001 shows a further increase in revenues. This fiscal year covers the second half of the first full (calendar) year of onshore co-ops and the first half of the second year of onshore co-ops. It also captures the period when the more stringent Steller sea lion protection measures were

Table 2-41. City of Unalaska General Fund, Fiscal Years 1998-2004

Revenues	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
Real Property Tax	2,521,746	2,698,454	2,690,560	2,748,920	2,796,559	2,761,277	2,991,121
Personal Property Tax	1,164,363	1,120,957	1,202,265	1,116,369	1,171,985	1,159,755	1,231,722
Raw Fish Sales Tax	2,641,124	2,513,500	3,410,717	3,065,220	3,339,469	3,667,000	4,190,139
General Sales Tax	3,533,123	3,254,403	3,242,284	3,610,653	3,497,424	3,956,691	4,240,409
Other Taxes	439,735	516,863	509,434	524,195	462,297	462,294	462,297
Intergovernmental/State of AK	6,030,119	6,306,064	5,640,942	6,949,345	7,958,632	8,295,388	7,029,969
Charges for Services	278,703	282,778	279,159	300,809	356,449	367,364	374,887
Permits & Licenses	19,546	13,687	22,018	20,265	18,235	18,610	20,725
Miscellaneous	2,407,515	2,099,082	1,954,352	3,436,551	3,078,965	2,911,872	791,635
Other Financing Sources	386,895	273,416	461,817	398,153	172,440	346,390	39,881
Total General Revenue Funds	19,422,869	19,079,204	19,413,548	22,170,480	22,852,455	23,946,641	21,372,785

Source: City of Unalaska Finance Department spreadsheet, 2001; Personal communication with John Voss, City Finance Director, 2001, 2002, December 2004.

put in place during 2000.¹¹ Local fish tax revenues have continued to increase yearly since that time. One of the impacts of the AFA on the City of Unalaska revenues relates to the additional requirement that at-sea processors count landings outside of state waters as taxable events (under the fisheries resource landing tax). As shown in Table 2-42, the local revenue derived from the fisheries resource landing tax increased from FY 1998 to FY 1999 (with the latter year encompassing the first half [calendar] year of offshore co-ops). Revenue from this source, however, fell over half a million dollars between FY 1999 and FY 2000 (the period covering the second half the first year of offshore co-ops and the first half of the second year of offshore co-ops) but rebounded in FY 2001 and grew strongly through FY 2003, before dropping back in FY 2004.

Looking at the three-revenue source total, although there was some variation in the individual sources, the combined amount was nearly flat at \$7.7 million for each year FY 1996 (the first year the fisheries resource landing tax came to the city) through FY 1999. FY 2000 combined three-source revenues rose to \$8.1 million, so for the first FY that spanned both offshore co-ops and the start of on-shore co-ops, revenue sources that were directly fishery associated increased over 5 percent. This figure further increased each year until reaching \$10.7 million in FY 2003 (a gain of about 40 percent since FY 1999) before dropping off (by about 6 percent) between FY 2003 and FY 2004.

Table 2-42. City of Unalaska Selected Fisheries-Related General Fund Revenues (in dollars), Fiscal Years 1991-2004

¹¹ All of these numbers must be interpreted with some caution when going beyond a general level, such as when attempting to establish direct links to particular fishing seasons. In some cases, the figures reflect when the money was received by the municipality, and for others they reflect when the transactions from which the revenue derives actually took place (i.e., in accounting terms, the difference between cash-based accounting versus an accrual-based accounting). For example, local fish taxes are paid on the 15th of the month following the month in which the sales transactions took place. An adjustment is taken at the end of the fiscal year, however, to attribute those revenues to the periods where the sales took place. So, for local fish taxes, it is easy to see the link between seasons and revenues (keeping in mind the distinction between calendar and fiscal years). In the case of revenues deriving from the State of Alaska, however, the shared fish taxes are paid for the calendar year by the processors to the state in March of the following year. The State then pays the shared portions out to the local entities in the August-September timeframe. So, for example, ex-vessel value paid by processors in calendar year 2000 is taxed in March 2001. The State then pays the boroughs and cities their share calling it "FY2001 Taxes" in August 2001. This means that a single sales event that is subject to both local and state fish taxes can show up as revenue to the City of Unalaska in two separate fiscal years (and, because of the divergence of calendar and fiscal years as the basis for accounting, the spread between accrual and appearance on reports can essentially be two fiscal years [e.g., shared taxes accrued in January 2000 received in September 2001 would have been based on sales that took place in FY 2000, but it would show up as revenue during FY 2002]). To further complicate time series analysis, the City of Unalaska has changed accounting procedures in recent years, such that shared taxes have effectively shifted the periods during which they appear in financial statements, making comparability between years less than straightforward. Before the City's FY 2000, the fisheries business tax collected by the State for calendar year 1998 was booked in FY 1999. Under the method currently in place, that revenue would be recorded in FY 2000. This means that the FY 1999 and FY 2000 fisheries business tax figures reflected in Table 2-42 are the same revenue (they are not exactly equal due to a second, smaller payment from the State to communities in unincorporated boroughs that falls into a different time period). In practical terms, this means that detailed fishing season specific time series analysis is not possible using commonly published data, but that trend information is readily apparent at the individual revenue source level. In terms of fiscal impacts to municipalities, it is a truism that when revenue is received is more important than when fish are landed, but clearly much other economic activity (and important revenue generation) takes place at the time of landings.

Fiscal Year	Selected Fishery Revenue Source			Three Source Total
	Local Raw Fish Sales Tax	State Fisheries Business Tax	State Fisheries Resource Landing Tax	
FY 1991	\$2,851,008	\$2,067,793	\$0	\$4,918,801
FY 1992	\$3,681,908	\$2,475,197	\$0	\$6,157,105
FY 1993	\$3,131,661	\$3,581,134	\$0	\$6,712,795
FY 1994	\$2,641,802	\$2,770,321	\$0	\$5,412,123
FY 1995	\$3,340,512	\$2,364,847	\$0	\$5,705,359
FY 1996	\$2,212,833	\$2,828,570	\$2,637,708	\$7,679,111
FY 1997	\$2,641,645	\$2,071,914	\$3,015,804	\$7,729,363
FY 1998	\$2,641,124	\$2,424,747	\$2,604,706	\$7,670,577
FY 1999	\$2,513,500	\$2,424,787	\$2,739,821	\$7,678,108
FY 2000	\$3,410,717	\$2,483,670	\$2,224,903	\$8,119,290
FY 2001	\$3,065,220	\$3,249,218	\$2,813,250	\$9,127,688
FY 2002	\$3,339,469	\$3,179,799	\$3,000,184	\$9,519,452
FY 2003	\$3,667,000	\$2,838,537	\$4,183,140	\$10,688,677
FY 2004	\$4,190,139	\$3,272,108	\$2,598,108	\$10,060,355

Source: City of Unalaska Finance Department spreadsheet originally supplied in 2001 and updated December 2004.

Table 2-43 provides information on direct fishery General Fund revenue as a percent of all General Fund revenue for the City of Unalaska for FY 2000 through FY 2004. As shown, this figure has varied between 41 percent and 47 percent over this time span.

Table 2-43. City of Unalaska General Fund Revenue and Direct Fishery Revenue as a Percentage of Total General Fund Revenues, FY 2000 - FY 2004

Year	Local Revenue	Intergovernmental Revenue	Grand Total Revenue	Direct Fishery Revenue Total*	Direct Fishery Revenue as a Percent of All Revenue
FY 2000	\$13,772,606	\$5,640,942	\$19,413,548	\$8,119,290	41.82%
FY 2001	\$15,221,135	\$6,949,345	\$22,170,480	\$9,127,688	41.17%
FY 2002	\$14,893,823	\$7,958,632	\$22,852,455	\$9,519,452	41.66%
FY 2003	\$15,651,253	\$8,295,388	\$23,946,641	\$10,688,677	44.64%
FY 2004	\$14,342,816	\$7,029,969	\$21,372,785	\$10,060,355	47.07%

* For this table, "Direct Fishery Revenue" is defined as being comprised of Unalaska municipal raw fish sales tax, Intergovernmental fisheries business tax, and State-derived resource landings tax (see Table 2-42). It does not include any fisheries influence on other revenue sources.

Source: Derived from City of Unalaska Finance Department spreadsheets supplied December 2004.

AKUTAN



CHAPTER 3.0

AKUTAN

Akutan is located on Akutan Island in the eastern Aleutian Islands, one of the Krenitzin Islands of the Fox Island group. The community is approximately 35 miles east of Unalaska and 766 air miles southwest of Anchorage. Akutan is surrounded by steep, rugged mountains reaching over 2,000 feet in height. The village sits on a narrow bench of flat, treeless terrain. The small harbor is ice-free year-round. Akutan began in 1878 as a fur storage and trading port for the Western Fur & Trading Company. The company's agent established a commercial cod fishing and processing business that quickly attracted Aleut residents of nearby settlements to the community. A Russian Orthodox church and school were built in 1878, over a decade after Alaska became a U.S. Territory, and the Alexander Nevsky Chapel replaced the original church structure in 1918. The roots of commercial fishing in this area apparently include a local saltery that operated in the late 1800s. The Pacific Whaling Company built a whale processing station up Akutan Bay from the village site in 1912 and it operated as the only whaling station in the Aleutians until it closed in 1939. According to local interviews, there was little commercial activity in the area between the closing of the whaling station and 1948, when the processors, including Deep Sea Fisheries, first began using the bay for floating processing operations. Incorporated in 1979, the city of Akutan encompasses 32.4 square miles of land and 8.7 square miles of water.

Akutan lies in the maritime climate zone, with mild winters and cool summers. Mean temperatures range from 22 to 55°F. Precipitation averages 28 inches per year. High winds and storms are frequent in the winter, and fog is common in the summer. The physical setting of the community is portrayed in Plate AKU-1. The physical/spatial relationship between the community and the processor may be seen in Plate AKU-2.

3.1 OVERVIEW

Akutan is incorporated as a Second Class City, and, like King Cove, is part of an organized borough (the Aleutians East Borough [AEB]). Unlike Unalaska and King Cove, Akutan is a Community Development Quota (CDQ) community. The main processor in Akutan is Trident Seafoods, which has a large shoreplant in the community. In recent seasons Trident has also had floating processing capacity in Akutan Bay, as a result of the purchase and relocation of the Arctic Enterprise from Beaver Inlet on Unalaska Island. In the past, seasonal processing by other mobile processing entities has also commonly taken place in the bay for various species. However, for at least the past half-dozen years, Trident has been the only processor in Akutan, reportedly in part because seasonal processing with floaters is less economically viable than in the past. Map AKU-1 shows the community of Akutan and its immediate area.

Akutan is a unique community in terms of its relationship to the Bering Sea commercial fisheries. It is the site of one of the largest of the shoreplants in the region, but it is also the site of a village that is geographically, demographically, socially, and historically distinct from the shoreplant. This “duality” of structure has had marked consequences for the relationship of Akutan to the Bering Sea commercial fisheries. One example of this may be found in Akutan's status as a CDQ community. Initially (in 1992), Akutan was (along with two other AEB communities, King Cove and Sand Point,

as well as nearby Unalaska) deemed not eligible for participation in the CDQ program based upon the fact that the community was home to “previously developed harvesting or processing capability sufficient to support substantial groundfish participation in the BSAI ...” though they met other qualifying criteria. The Akutan Traditional Council initiated action to show that the community of Akutan, per se, was separate and distinct from the seafood processing plant some distance away from the residential concentration of the community site, that interactions between the community and the plant were of a limited nature, and that the plant was not incorporated in the fabric of the community such that little opportunity existed for Akutan residents to participate meaningfully in the Bering Sea pollock fishery (i.e., it was argued that the plant was essentially an industrial enclave or worksite separate and distinct from the traditional community of Akutan and that few, if any, Akutan residents worked at the plant). With the support of the Aleutian Pribilof Islands Community Development Association (APICDA) and others, Akutan was successful in a subsequent attempt to become a CDQ community and obtained that status in 1996, joining the APICDA CDQ group. This action highlights the fundamentally different nature of Akutan and Unalaska. Akutan, while deriving economic benefits from the presence of a large shoreplant near the community proper, has in many ways not integrated large-scale commercial fishing activity with the daily life of the community. As result, Akutan is the only community in the region that is both a direct major/developed participant in the fishery and a CDQ community. Plate AKU-3a and Plate AKU-3b provide views of various community attributes.

3.2 COMMUNITY DEMOGRAPHICS

Akutan is a community that traces its roots to commercial fishing, fur trading, and whaling. In terms of the population components of the community, and the relationship between local commercial fishery-related workers and the rest of the population, Akutan is unlike Unalaska, King Cove, or Sand Point. Compared to King Cove and Sand Point, other AEB communities with a single large shore processing plant, the local processing plant is more of an enclave type of operation than the plants in those communities. In the not-too-distant past, it was decidedly unlike Unalaska, which features plants with a range of “separateness” from the community, as there was little social integration of at least some longer-term plant employees into the social fabric of the community, but this has been changing in recent years in Akutan, as outlined in the community processor characterization discussion below.

3.2.1 Total Population

Table 3-1 provides figures for the community total population by decade from 1880 through 2000. While U.S. Census figures show Akutan had a population of 589 in 1990 and 713 in 2000, the Traditional Council considers the “local” resident population of the community to be around 80 persons, with the balance being considered “non-resident employees” of the seafood plant. This definition, obviously, differs from census, state, and electoral definitions of residency but is reflective of an observed social reality of Akutan. Figures for recent years are known to include processing workers, but it is not clear in earlier years how and if fisheries or other commercial enterprise related workers were counted.

AKU-1

Physical Setting

Clockwise from upper left:
Akutan Bay and city of
Akutan, Akutan Bay from
boardwalk, fishing vessel
in Akutan Bay, and view of
community from beach road



AKU-2

Physical/Spatial Relationship

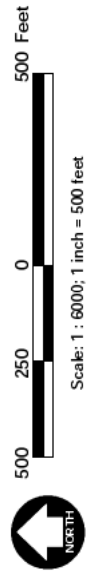
Clockwise from upper left: Akutan Village and Trident processing plant, community boardwalk, skiff moorage basin, and view from community toward processing plant





Map AKU-1
Akutan

Source: Department of Commerce, Division of Community Advocacy



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AKU-3a

Community Attributes

Clockwise from upper left:
seaplane ramp and
nondenominational church,
residential area, community
boardwalk system, and
Russian Orthodox church



AKU-3b

Community Attributes

Nondenominational
church (Trident) and
village scene



Table 3-1. Akutan Population by Decade, 1880-2000

Year	Population
1880	65
1890	80
1900	60
1910	0
1920	66
1930	71
1940	80
1950	86
1960	107
1970	101
1980	169
1990	589
2000	713

Source: Historic data from Alaska Department of Community and Economic Development, 2000 data from U.S. Bureau of the Census.

3.2.2 Ethnicity

The residents of the village of Akutan, proper, are almost all Aleut. The influence of the commercial fishery related workers on the ethnic composition of the total population of the community, however, may be seen in Table 3-2. As shown, less than 16 percent of the population in 2000 was Native American/Alaska Native.

Table 3-2. Ethnic Composition of Population Akutan: 1990 and 2000

Race/Ethnicity	1990		2000	
	N	%	N	%
White	227	38.5%	168	23.6%
African American	6	1.0%	15	2.2%
Native American/Alaska Native	80	13.6%	112	15.7%
Asian/Pacific Islands*	247	41.9%	277	38.9%
Other**	29	4.9%	141	19.7%
Total	589	100%	713	100%
Hispanic***	45	7.6%	148	20.8%

Source: U.S. Bureau of Census.

* In the 2000 census, this was split into Native Hawaii and Other Pacific Islander (pop 2) and Asian (pop 275)

** In the 2000 census, this category was Some Other Race (pop 130) and Two or More Races (pop 11).

*** Hispanic" is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

3.2.3 Age and Sex

Table 3-3 shows the population composition of Akutan by sex in 1990 and 2000. As shown, the population structure is clearly indicative of a male-dominated industrial site rather than a typical residential community.

Table 3-3. Population Composition by Sex, Akutan: 1990 and 2000

	1990		2000	
	N	%	N	%
Male	449	76%	549	77%
Female	140	24%	164	23%
Total	589	100%	713	100%
Median Age	NA		40.2 years	

Source: U.S. Bureau of the Census.

Table 3-4 provides information on school enrollments in Akutan over the period 1991 to 2005. As shown, there has been considerable year-to-year fluctuation over this time, and enrollments have been lower in recent years than in the earlier years in this time span. Enrollment for the 2004-2005 school year was less than one-half the enrollment of the 1992-1993 school year, the peak enrollment year for the time span shown.

Table 3-4. Akutan School Enrollment, FY 1991-2005

Fiscal Year	Student Count
1991	22
1992	24
1993	29
1994	21
1995	24
1996	20
1997	27
1998	23
1999	20
2000	15
2001	15
2002	16
2003	18
2004	14
2005	14

Note: Year designation notes the calendar year in school year ended (e.g., 2003 refers to the 2002-2003 school year).

Source: Adapted from spreadsheet supplied by C. Warner, Aleutians East Borough School District, December, 2004.

3.2.4 Housing Types and Population Segments

Group housing in the community is almost exclusively associated with the seafood processing workforce. As shown in Table 3-5, in 1990 fully 85 percent of the population lived in group quarters and only 15 percent did not. As seen in this same table, in 2000 an even greater percentage of the total population lived in group quarters (89 percent versus 11 percent not in group quarters). Plate AKU-4 provides views of group quarter housing and typical residential housing in the community.

Table 3-5. Group Quarters Housing Information, Akutan, 1990 and 2000

Year	Total Population	Group Quarters Population		Non-Group Quarters Population	
		Number	Percent of Total Population	Number	Percent of Total Population
1990	589	501	85.06%	88	14.94%
2000	713	638	89.48%	75	10.52%

Source: U.S. Bureau of the Census 1990 STF2, Census 2000 Summary File 1

Table 3-6 provides information on group housing and ethnicity for Akutan for 1990, and similar information for 2000 is presented in Table 3-7. Group housing in the community is almost exclusively associated with the processing workforce and non-group housing almost exclusively associated with long-term (non-processing related) residents. Approximately 85 percent of the population lived in group housing in 1990, which represents the extreme of the major fishing ports in this region. In 2000, this figure was over 89 percent. Also as shown, the ethnic composition of the group and non-group housing segments were markedly different, with the non-group housing population being predominately Alaska Native (83 percent and 87 percent in 1990 and 2000, respectively), and the group housing population having little Alaska Native/Native American representation (1 percent in 1990, 7 percent in 2000). Like Unalaska, overall minority population representation was higher in absolute and relative terms in the community as a whole and in both group and non-group quarters in 2000 than in 1990.

Table 3-6. Ethnicity and Group Quarters Housing Information, Akutan, 1990

Race/Ethnicity	Total Population		Group Quarters Population		Non-Group Quarters Population	
	Number	Percent	Number	Percent	Number	Percent
White	227	37.52%	212	42.32%	15	17.05%
Black	6	0.99%	6	1.20%	0	0.00%
American Indian, Eskimo, Aleut	80	13.22%	7	1.40%	73	82.95%
Asian or Pacific Islander	247	40.83%	247	49.30%	0	0.00%
Other race	29	4.79%	29	5.79%	0	0.00%
Total Population	589	100.00%	501	100.00%	88	100.00%
Hispanic origin, any race	45	7.44%	45	8.98%	0	0.00%
Total Minority Population	342	56.53%	298	59.48%	73	82.95%
Total Non-Minority Population (White Non-Hispanic)	247	40.83%	203	40.52%	15	17.05%

Source: U.S. Bureau of the Census 1990 STF2.

Table 3-7. Ethnicity and Group Quarters Housing Information, Akutan, 2000

Race/Ethnicity	Total Population		Group Quarters Population		Non-Group Quarters Population	
	Number	Percent	Number	Percent	Number	Percent
White	168	23.56%	158	24.76%	10	13.33%
Black or African American	15	2.10%	15	2.35%	0	0%
Alaska Native/Native American	112	15.71%	47	7.37%	65	86.66%
Native Hawaiian/Other Pacific Islander	2	0.28%	2	0.31%	0	0%
Asian	275	38.57%	275	43.10%	0	0%
Some Other Race	130	18.23%	130	20.38%	0	0%
Two Or More Races	11	1.54%	11	1.72%	0	0%
Unknown	0	0%	0	0%	0	0%
Total	713	100.00%	638	100.00%	75	100.00%
Hispanic*	148	20.76%	148	23.20%	0	0%
Total Minority Population	561	78.68%	496	77.74%	65	86.66%
Total Non-Minority Population (White Alone, Not Hispanic or Latino)	152	21.32%	142	22.26%	10	13.33%

Source: U.S. Census, 2000.

* “Hispanic” is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

Table 3-8 displays basic information on community housing, households, families, and median household and family income for Akutan in 2000. These figures underline the fact that Akutan, outside of the processing related population, is a very small community.

Table 3-8. Selected Household Information, Akutan, 2000

Community	Total Housing Units	Vacant Housing Units	Total Households	Average Persons Per Household	Median Household Income	Family Households	Average Family Size	Median Family Income
Akutan	38	4	34	2.21	\$33,750	18	3	\$43,125

Source: U.S. Bureau of Census.

3.3 LOCAL ECONOMY AND LINKS TO COMMERCIAL FISHERIES

The community of Akutan participates in commercial fisheries a number of different ways: through locally owned small vessel harvesting, participation in the CDQ program, having a major seafood processing plant located in the community, having floating processors operate locally, and providing limited support services to the fishery in the community. Overall, the private sector economy of the community, exclusive of the local processor, is very limited. The Alaska Department of Community and Economic Development (DCED) listed a total of six active business licenses in the community in 2004: the Akutan Corporation, the Bayview Plaza Hotel, the Grab a Dab Café, the McGlashan store, KQA check cashing service, and the Salmonberry Inn. It would appear that private sector

AKU-4

Housing Types

Group housing at Trident plant and single-family housing in village residential area



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business ownership is highly concentrated among a very few entities. According to senior city officials, the café is no longer in business (as it was no longer economically viable as a café open to the public with the loss of a key subsidy for electricity, but the license has been retained to support construction crews), and the Akutan Corporation owns and operates the Bayview Plaza Hotel and the Salmonberry Inn. The McGlashan store, while named after the original owner of the store in Akutan, is also owned by the Akutan Corporation. There are at least two known businesses in the community that do not show up in the DCED business license data: Pelkey’s Dive Service, operated by two private individuals in the community; and the Roadhouse tavern, another privately owned enterprise in the community not linked to the Akutan Corporation.

Table 3-9 provides information on employment and poverty status for the community of Akutan for 1990 and 2000. These data paint a very different picture in 2000 than was seen in 1990, and a working knowledge of the fishing industry would seem to indicate the 2000 data are anomalous. For example, in 2000 the U.S. Census lists a total of 505 unemployed persons in Akutan. Given that the traditional village of Akutan consists of less than 100 persons (including all age groups, not just adults in the labor pool who could qualify as employed or unemployed), the overwhelming majority of persons enumerated as unemployed must have been idled seafood processing workers. While this unemployment may have been “real” in the sense that processing workers were present and not actively working when the census was taken, it is most likely an artifact of the timing of the census as processing workers are not typically present in the community when the plant is idle for any extended period of time. That is, under normal conditions, there are no unemployed seafood processing workers present in the community (by design). These workers are transported to and from the community by their employer to meet labor demand at the plant. As part of the employment agreement, seafood processors typically provide room and board for workers, so it is uneconomic to have idled workers at the site unless the plant downtime is relatively brief (i.e., the cost of housing and feeding the employees during the idle interval does not exceed transportation, recruiting, training, and other costs associated with sending workers out and bringing them back in, including some level of turnover that always occurs in these situations). One set of circumstances that does result in idled workers at the plant, however, is triggered by a transportation bottleneck. After the plant shuts down (or substantially reduces its workforce) following a busy period, not all of the workers can be flown out of the community at once. According to city staff, it is not unusual to be able to move only 10 to 20 workers per day due to aircraft capacity. Weather may also cause delays.

Table 3-9. Employment and Poverty Information, Akutan, 1990 and 2000

Year	Total Persons Employed	Unemployed	Percent Unemployment	Percent Adults Not Working	Not Seeking Employment	Percent Poverty
1990	527	2	0.4%	7.4%	40	16.6%
2000	97	505	78.9%	84.84%	38	45.5%

Source: U.S. Bureau of Census.

3.3.1 Harvesting

Community Harvester Quantitative Description

Table 3-10 provides information on the characteristics of vessels owned by Akutan residents for the period 1995 through 2002. This information is collected by the CFEC when vessel owners renew their registration. As shown, the large majority of community vessels are 26 feet or less in length overall. Only one only larger vessel (in the 27- to 32-foot class) consistently appears in the data and is considered by residents to be locally owned. One relatively large vessel (60 to 124 feet long) appears in the data, but never for 2 years in a row, suggesting more of a transient than a truly residentially owned vessel.¹ This large vessel is also apparently the only vessel that is fabricated from steel and uses diesel fuel. Only one vessel in the 33- to 49-foot class appears in the data, and then only for one year (1997), so it is likely that this represents a non-resident anomaly as well. In a community with relatively few vessels, and especially very small length/capacity class vessels, the appearance of a single (larger) non-resident vessel can dramatically skew community landings and earnings data as noted below. Akutan represents a classic example of this type of data problem.

Table 3-10. Vessel Characteristics of Vessels Owned by Residents of Akutan, 1995-2002

Characteristics	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Total Number of Vessels	6	5	7	5	8	6	6	6
Number of Vessels Fishing	5	3	4	5	7	4	2	3
Number of Vessels by Size								
0-26 feet length overall	5	5	5	5	6	5	4	5
27-32 feet length overall	0	0	1	0	1	1	1	1
33-49 feet length overall	0	0	1	0	0	0	0	0
50-59 feet length overall	0	0	0	0	0	0	0	0
60-124 feet length overall	1	0	0	0	1	0	1	0
125+ feet length overall	0	0	0	0	0	0	0	0
Average Age of Vessels (years)	15	11	12	10	12	9	12	11
Number of Vessels by Hull Type								
Aluminum	4	4	6	5	7	6	5	6
Wood	1	1	0	0	0	0	0	0
Fiberglass	0	0	1	0	0	0	0	0
Steel	1	0	0	0	1	0	1	0
Number of Vessels with Refrigeration	1	0	0	0	1	0	1	0
Number of Vessels Using Diesel	1	0	1	0	1	0	1	0

Note: CFEC analysts provided vessel registration data of all resident vessel owners by community and year. Vessel registration data are available on the internet at www.cfec.state.ak.us/Mnu_Summary_Info.htm. The data were summarized by Northern Economics, Inc. As noted in the text, the single larger vessels that appear in the data a year at a time are not, according to city officials, owned by residents of the community.

Source: CFEC Vessel Registration Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

¹ Akutan city officials have confirmed that the large vessel in question is not owned by a resident of the community and although the vessel is known to deliver in Akutan, “we don’t know why he registered his vessel in Akutan - we certainly don’t have moorage available . . .”

In addition to vessel ownership information, data on permit holders for Akutan provide a perspective on local harvester engagement in various fisheries. Table 3-11 shows the number of persons in the community who own permits in one, two, three, or all four of the major fishery groups in Alaska, by year, for the period 1995 through 2002. Table 3-12 shows the percentages of all permit holders who own permits in the different combinations listed. (Additional information on permit holders by community may be found in Appendix A.) As shown, no local residents hold salmon permits, and most local permit holders have groundfish and halibut permits. Further, only one person has held permits in more than two major fishery groups for at least part of this time span, and no resident has held permits for all four major groups.

Table 3-11. Distribution of Permit Holders across Fisheries for Akutan, 1995-2002

Fishery	1995	1996	1997	1998	1999	2000	2001	2002
Persons with Permit in only One Major Fishery Group								
Salmon (SM)	-	-	-	-	-	-	-	-
Groundfish (GF)	1	1	4	4	3	2	2	2
Halibut and Sablefish (HS)	2	-	1	-	-	1	4	4
Crab /all other species (CO)	2	-	-	-	1	-	-	-
Persons with Permits in Two Major Fishery Groups								
SM, GF	-	-	-	-	-	-	-	-
SM, HS	-	-	-	-	-	-	-	-
SM, CO	-	-	-	-	-	-	-	-
GF, HS	2	5	1	2	4	3	1	1
GF, CO	-	-	-	-	-	1	-	1
HS, CO	-	-	1	-	-	-	-	-
Persons with Permits in Three Major Fishery Groups								
SM, GF, HS	-	-	-	-	-	-	-	-
SM, GF, CO	-	-	-	-	-	-	-	-
SM, HS, CO	-	-	-	-	-	-	-	-
GF, HS, CO	-	-	1	1	-	-	1	-
Persons with Permits in All Four Major Fishery Groups								
SM, GF, HS, CO	-	-	-	-	-	-	-	-
Total of All Permit Holders								
All Fisheries	7	6	8	7	8	7	8	8

Source: CFEC Permit Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Note: CFEC analysts provided permit ownership of residents of each community by year, although these data are available on the internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm.

Table 3-12. Percentage Distribution of Permit Holders across Fisheries for Akutan, 1995-2002

Fishery	1995	1996	1997	1998	1999	2000	2001	2002
Percent of all Community Permit Holders with Permit in only One Major Fishery Group								
Salmon (SM)	-	-	-	-	-	-	-	-
(Groundfish (GF)	14%	17%	50%	57%	38%	29%	25%	25%
Halibut and Sablefish (HS)	29%	-	13%	-	-	14%	50%	50%
Crab /I other species (CO)	29%	-	-	-	13%	-	-	-
<i>Subtotal, One Fishery Group</i>	<i>71%</i>	<i>17%</i>	<i>63%</i>	<i>57%</i>	<i>50%</i>	<i>43%</i>	<i>75%</i>	<i>75%</i>
Percent of all Community Permit Holders with Permits in Two Major Fishery Groups								
SM, GF	-	-	-	-	-	-	-	-
SM, HS	-	-	-	-	-	-	-	-
SM, CO	-	-	-	-	-	-	-	-
GF, HS	29%	83%	13%	29%	50%	43%	13%	13%
GF, CO	-	-	-	-	-	14%	-	13%
HS, CO	-	-	13%	-	-	-	-	-
<i>Subtotal, Two Fishery Groups</i>	<i>29%</i>	<i>83%</i>	<i>25%</i>	<i>29%</i>	<i>50%</i>	<i>57%</i>	<i>13%</i>	<i>25%</i>
Percent of all Community Permit Holders with Permits in Three Major Fishery Groups								
SM, GF, HS	-	-	-	-	-	-	-	-
SM, GF, CO	-	-	-	-	-	-	-	-
SM, HS, CO	-	-	-	-	-	-	-	-
GF, HS, CO	-	-	13%	14%	-	-	13%	-
<i>Subtotal, Three Fishery Groups</i>	<i>-</i>	<i>-</i>	<i>13%</i>	<i>14%</i>	<i>-</i>	<i>-</i>	<i>13%</i>	<i>-</i>
Percent of all Community Permit Holders with Permits in All Four Major Fishery Groups								
SM, GF, HS, CO	-	-	-	-	-	-	-	-

Source: CFEC Permit Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Note: CFEC analysts provided permit ownership of residents of each community by year, although these data are available on the internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm.

Summary catch and earnings estimates for the community may be made through using the annual CFEC data report called “Permit and Fishing Activity by Year, State, Census Division or Alaskan City.” Table 3-13 aggregates and summarizes estimated landings and gross revenue data for Akutan into 14 gear and species groups. (Note that this table, unlike the previous table, displays the number of permits held, not the number of permit holders.) Where the number of permits in any group is less than that required to permit disclosure of actual data, an algorithm was used to produce “reasonable estimates” of total catch and earnings. (A more detailed explanation of the algorithm methodology is provided in Appendix A.) Total community estimated gross revenue is likely to be inflated by tanner crab and king crab earnings accruing to permit holders who listed Akutan as their residence on their permit for some years but who are not otherwise tied to the community. This may happen some years where an owner receives the permit just prior to a season opening in the port from which they are intending to fish rather than at their community of permanent residence.

Table 3-13. Summary Catch and Earnings Estimates for Akutan Permit Holders by Species Group, 1995-2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
Fishery	Permits Held							
Halibut	4	5	4	3	4	4	5	5
IFQ Sablefish	-	-	1	1	-	-	1	-
Salmon Seine	-	-	-	-	-	-	-	-
Salmon Drift Net	-	-	-	-	-	-	-	-
Salmon Set Net	-	-	-	-	-	-	-	-
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-
Groundfish Longline	1	1	-	2	2	-	1	-
Groundfish Jig	2	3	4	3	3	1	1	1
Groundfish Pot	-	1	-	1	-	-	1	-
Groundfish Trawl	-	-	-	-	-	-	-	-
Tanner Crab	-	-	-	-	1	-	1	-
King Crab	-	-	-	1	1	1	1	-
All Other Fish/Shellfish	1	3	5	5	6	4	2	3
Total All Permits	8	13	14	16	17	10	13	9
Fishery	Permits Fished							
Halibut	4	5	3	3	3	4	3	5
IFQ Sablefish	-	-	-	-	-	-	-	-
Salmon Seine	-	-	-	-	-	-	-	-
Salmon Drift Net	-	-	-	-	-	-	-	-
Salmon Set Net	-	-	-	-	-	-	-	-
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-
Groundfish Longline	-	-	-	-	-	-	-	-
Groundfish Jig	2	1	2	2	2	-	-	1
Groundfish Pot	-	-	-	-	-	-	-	-
Groundfish Trawl	-	-	-	-	-	-	-	-
Tanner Crab	-	-	-	-	1	-	1	-
King Crab	-	-	-	1	-	1	1	-
All Other Fish/Shellfish	1	-	1	3	4	1	-	-
Total All Permits Fished	7	6	6	9	10	6	5	6
Fishery	Estimated Landings (Pounds)							
Halibut	5,288	26,478	31,815	44,488	47,016	93,166	73,841	111,010
IFQ Sablefish	-	-	-	-	-	-	-	-
Salmon Seine	-	-	-	-	-	-	-	-
Salmon Drift Net	-	-	-	-	-	-	-	-
Salmon Set Net	-	-	-	-	-	-	-	-
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-
Groundfish Longline	-	-	-	-	-	-	-	-
Groundfish Jig	33,778	12,633	18,567	30,178	39,092	-	-	34,955
Groundfish Pot	-	-	-	-	-	-	-	-
Groundfish Trawl	-	-	-	-	-	-	-	-
Tanner Crab	-	-	-	-	578,945	-	76,165	-

Year	1995	1996	1997	1998	1999	2000	2001	2002
King Crab	-	-	-	17,091	-	29,729	26,815	-
All Other Fish/Shellfish	1,873	-	4,947	16,120	15,613	4,083	-	-
Total (All Species)	40,939	39,110	55,329	107,877	680,666	126,978	176,821	145,965
Fishery	Estimated Gross Revenue (Dollars)							
Halibut	\$9,896	\$52,235	\$63,140	\$43,371	\$85,320	\$232,628	\$143,611	\$236,284
IFQ Sablefish	-	-	-	-	-	-	-	-
Salmon Seine	-	-	-	-	-	-	-	-
Salmon Drift Net	-	-	-	-	-	-	-	-
Salmon Set Net	-	-	-	-	-	-	-	-
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-
Groundfish Longline	-	-	-	-	-	-	-	-
Groundfish Jig	\$8,350	\$2,989	\$3,626	\$5,161	\$11,414	-	-	\$7,595
Groundfish Pot	-	-	-	-	-	-	-	-
Groundfish Trawl	-	-	-	-	-	-	-	-
Tanner Crab	-	-	-	-	\$569,103	-	\$118,112	-
King Crab	-	-	-	\$35,579	-	\$142,229	\$128,949	-
All Other Fish/Shellfish	\$722	-	\$873	\$3,373	\$5,121	\$1,665	-	-
Total (All Species)	\$18,968	\$55,224	\$67,639	\$87,484	\$670,959	\$376,521	\$390,672	\$243,880

Source: Commercial Fishing Entry Commission "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City" from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

Table 3-14 provides estimates of the percentage of non-confidential gross revenue for Akutan permit holders by species group by year for the period 1995 through 2002. This provides one type of fundamental measure of "dependency" of community harvesters on particular fisheries. The same caveat regarding crab revenues noted for the previous table applies to this table as well.

Table 3-14. Percentage of Gross Revenue Estimates for Akutan Permit Holders by Species Group, 1995-2002

	1995	1996	1997	1998	1999	2000	2001	2002
Fishery	Estimated Gross Revenue							
Halibut	9,896	52,235	63,140	43,371	85,320	232,628	143,611	236,284
IFQ Sablefish	-	-	-	-	-	-	-	-
Salmon Seine	-	-	-	-	-	-	-	-
Salmon Drift Net	-	-	-	-	-	-	-	-
Salmon Set Net	-	-	-	-	-	-	-	-
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-
Groundfish Longline	-	-	-	-	-	-	-	-
Groundfish Jig	8,350	2,989	3,626	5,161	11,414	-	-	7,595
Groundfish Pot	-	-	-	-	-	-	-	-
Groundfish Trawl	-	-	-	-	-	-	-	-
Tanner Crab	-	-	-	-	569,103	-	118,112	-
King Crab	-	-	-	35,579	-	142,229	128,949	-
All Other Fish/Shellfish	722	-	873	3,373	5,121	1,665	-	-
Total (All Species)	18,968	55,224	67,639	87,484	670,959	376,521	390,672	243,880

	1995	1996	1997	1998	1999	2000	2001	2002
Fishery	Percentage of Estimated Gross Revenue							
Halibut	52.17%	94.59%	93.35%	49.58%	12.72%	61.78%	36.76%	96.89%
IFQ Sablefish	-	-	-	-	-	-	-	-
Salmon Seine	-	-	-	-	-	-	-	-
Salmon Drift Net	-	-	-	-	-	-	-	-
Salmon Set Net	-	-	-	-	-	-	-	-
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	-	-	-	-	-	-	-	-
Groundfish Longline	-	-	-	-	-	-	-	-
Groundfish Jig	44.02%	5.41%	5.36%	5.90%	1.70%	-	-	3.11%
Groundfish Pot	-	-	-	-	-	-	-	-
Groundfish Trawl	-	-	-	-	-	-	-	-
Tanner Crab	-	-	-	-	84.82%	-	30.23%	-
King Crab	-	-	-	40.67%	-	37.77%	33.01%	-
All Other Fish/Shellfish	3.81%	-	1.29%	3.86%	0.76%	0.44%	-	-
Total (All Species)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Commercial Fishing Entry Commission "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City" from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

Table 3-15 provides data on volume and value of landings made by Akutan vessel owners for the years 1995 through 2002 (to the extent possible, given confidentiality requirements), and Table 3-16 provides similar information for local permit holders. Due to confidentiality restrictions, no further detail can be provided for Akutan, nor can a breakout of landings inside and outside of the community by local vessel owners or permit holders be provided, again because of confidentiality restrictions. It is also important to note that 1999 data are anomalous due to the appearance of a vessel in the Akutan data that did not appear in previous years and has not appeared in subsequent years. This single vessel had harvests orders of magnitude higher than any other vessels attributed to Akutan; as a result, it is likely that 1999 data should be disregarded in terms of characterizing the local fleet.

Table 3-15. Landings by Akutan Vessel Owners, 1995-2002

Year	Pounds	Estimated Gross Earnings
1995	14,459	\$11,840
1996	--	--
1997	101,269	\$49,127
1998	28,180	\$13,898
1999	526,018	\$627,249
2000	21,620	\$39,930
2001	--	--
2002	--	--

Note: As detailed in the text, 1999 data are anomalous due to the appearance in the data of one large vessel owned by an individual locally identified as a non-resident. Data for 1997 are likely inflated as well by the appearance of a single vessel in the 33-to 49-foot class that does not appear in the data for any other year.

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 3-16. Landings by Akutan Permit Holders, 1995-2002

Year	Pounds	Estimated Gross Earnings
1995	38,746	\$74,705
1996	6,638	\$12,670
1997	18,894	\$16,445
1998	115,327	\$104,200
1999	526,499	\$627,417
2000	37,085	\$114,009
2001	57,810	\$114,688
2002	29,450	\$35,177

Note: As detailed in the text, 1999 data are anomalous due to the appearance in the data of one large vessel (and associated permits) owned by an individual locally identified as a non-resident.

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Communities also directly benefit from the harvest sector through participation of residents as crew members as well as the through the engagement of vessel owners and permit holders. Beginning in 2000, the CFEC has produced estimates of crew members by community, based on the number of permit holders in the community, plus the community residents who have applied for a Crew Member License with the Alaska Department of Fish and Game. (A more complete discussion of this methodology may be found in Appendix A.) Table 3-17 provides estimates of crew members for Akutan for the years 2000 through 2003. These data should be only taken as a rough indicator of the level of involvement of community members, but they do indicate that a substantial proportion of the total population of the community is engaged in commercial fisheries.

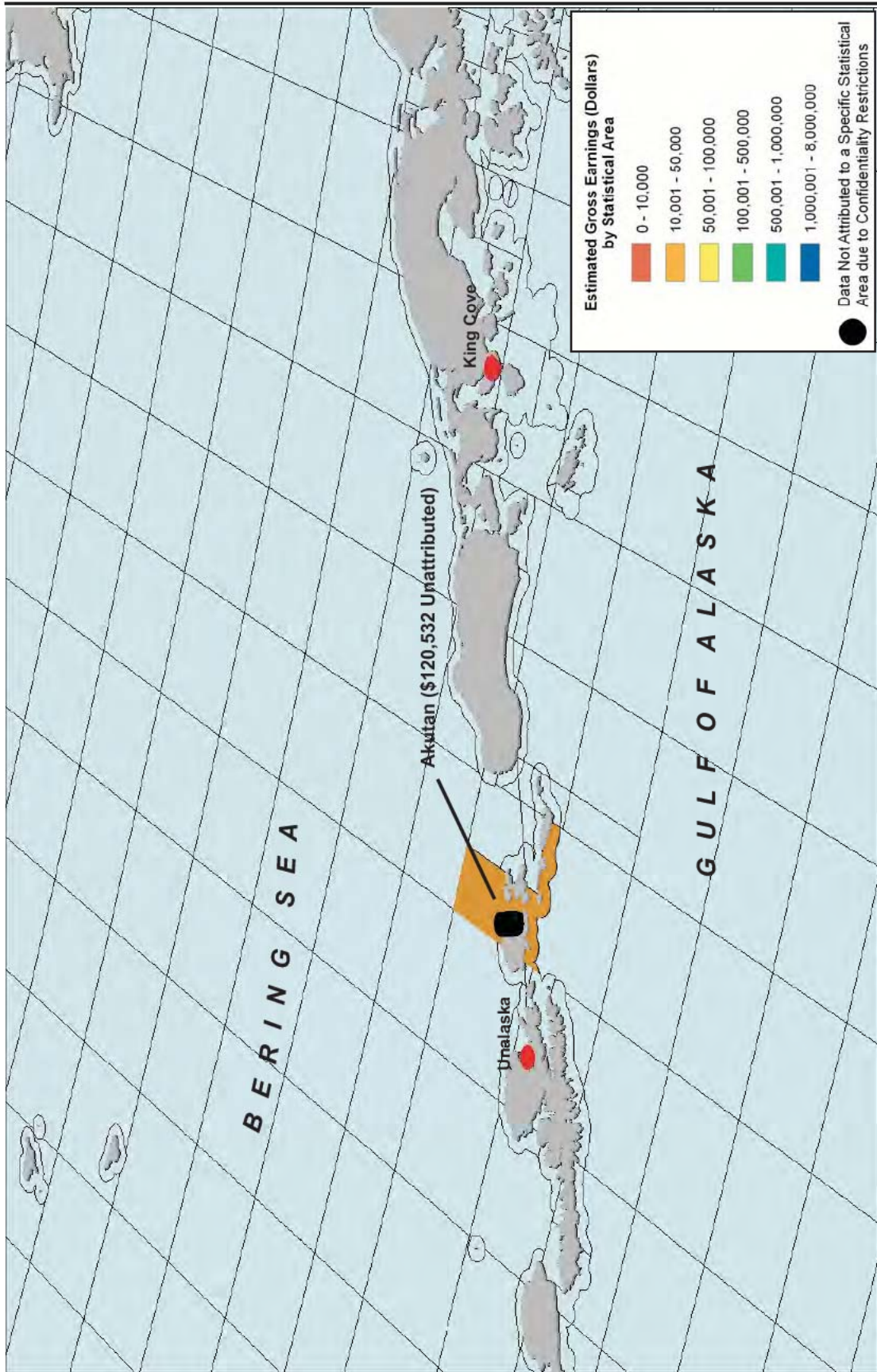
Table 3-17. Estimated Number of Permit Holders and Crew Members from Akutan 2000-2003

Year	Permit Holders	Crew Members	Total
2000	6	15	21
2001	CFEC did not develop this report for 2001		
2002	7	15	22
2003	10	15	25

Source: CFEC permit holder and crew member counts by census area and city of residence report, accessed via www.cfec.state.ak.us/Mnu_Summary_Info.htm.

Spatial Distribution of Harvester Effort

Figure AKU-1 displays information on the area of commercial groundfish catch for Akutan for the years 1995 through 2002. Due to confidentiality restrictions, no finer breakdown of years or gear types is possible. As shown, non-confidential catch is confined to a single statistical area adjacent to the community. This is consistent with the skiff-oriented nature of the local fishery. Figure AKU-2 displays information on the area of commercial salmon catch for Akutan for the years 1995 through 2002. As shown, data are available for this fishery for the community. This is consistent with the data that show no salmon permits being held by local residents of Akutan during these years.



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure AKU-1
Total Commercial Groundfish Catch
For Vessels Local to Akutan
All Gear Types, 1995-2002

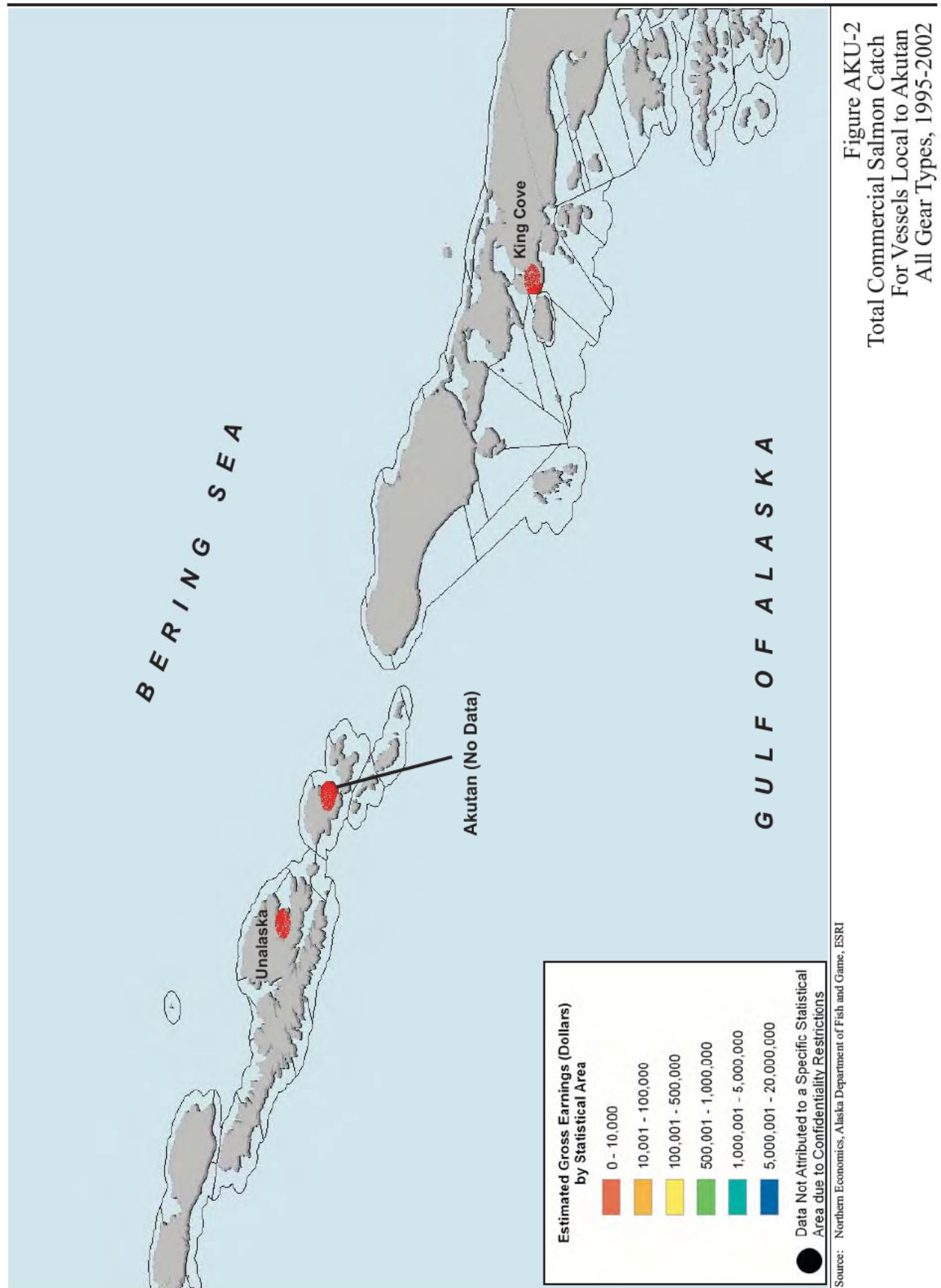


Figure AKU-2
 Total Commercial Salmon Catch
 For Vessels Local to Akutan
 All Gear Types, 1995-2002

Community Harvester Characterization

The vast majority of catch landed in Akutan comes off of vessels from outside of the community. While there is a “local” non-CDQ commercial fishery, it is of a small scale, pursued out of open skiffs. In the early 1990s, the local plant reported taking deliveries of groundfish from approximately 12 skiff-type vessels from the village of Akutan itself, but participation in this type of enterprise is not well documented. During fieldwork in 2002, plant managers reported about the same overall level of activity as in the past, with two local residents in particular singled out as consistently making regular deliveries of halibut and black rockfish over time, and the rest making sporadic deliveries. According to city officials, there is one 28-foot vessel in the community and one that is 24 feet in length, with the rest of the local fleet being comprised of skiffs under 20 feet, with the two larger vessels being the most active. According to interviews, the processor neither encouraged nor discouraged these deliveries but did purchase all that is made available from local sources. This was not a major source of fish for the plant but was probably a significant source of income for at least a few of the local sellers.

Since that time, the local harvesting pattern has changed somewhat. In 2002, the first phase of a skiff moorage facility (named the Simeon M. Vincler skiff moorage) was completed, allowing for easier moorage for local vessels that previously were hauled up on the beach, and also allowing for easy of use of larger vessels by local residents. A second phase, to be completed in the winter of 2004-2005, is adding another hook and small float to deflect waves from the direction of the seaplane ramp and increase capacity. (This moorage facility was originally constructed with funding from a number of different sources, including APICDA contributions and opilio fishery disaster funds that came to the community through the borough; the second phase is reportedly being funded by the city, the borough, and the state.) Originally limited to 32-foot vessels, an exception was made for the APICDA vessel Aleutian Pribilof No. 4 (commonly known as the AP-4) increasing the limit to 34- to 35-foot vessels. Plate AKU-5a and Plate AKU-5b show the local skiff fleet and the skiff moorage facility.

Since its arrival in the community most, but not all, local IFQ holders have had their IFQ fished off of the AP-4. The advantage of the AP-4 over smaller local vessels is that it can go out in rougher weather and stay out longer. For at least some resident permit holders, these advantages are offset by the need to pay for the boat, skipper, and expenses, leaving less return than they feel they can get fishing out of their own skiffs. The AP-4 is operated under a lease arrangement that included a CDQ group grant to the local fishermen’s association (which has approximately 14 members and was formed specifically to qualify for CDQ grants). Using this grant as seed money, the operation of the vessel is predicated on a share basis, including earmarking a 15 percent share to the boat and another 15 share for the skipper. According to field interviews, the skipper share does not provide the individual involved with sufficient income to be a full-time commercial fisherman, such that it remains the case that no local harvesters are full-time fishermen. According to field interviews, in 2004 full-time residents landed approximately 40,000 pounds of IFQ halibut and would have purchased more IFQs but were unable to find sellers. One local resident was reported to have jigged for cod in 2004 and while APICDA owns jig gear, this was not used during 2004 due to poor winter weather conditions. Apparently the AP-4 was used to try bairdi fishing in 2003, but this attempt was not repeated in 2004.

According to field interviews, there are local fishermen who would be interested in acquiring larger vessels if sufficient harbor facilities were available. APICDA has to date not facilitated loans for a local fleet as it has in some of its other member communities. Akutan differs significantly from other APICDA communities, as in Akutan there is already processing capacity present that provides a certain level of economic development. This, in turn, presumably has an impact on the way APICDA prioritizes its community-specific efforts. One action APICDA is contemplating is moving its sport charter vessel *Grand Aleutian* from Unalaska/Dutch Harbor to Akutan to help foster the development of a sport fishery/tourism niche in the local economy. According to local sources, Akutan fishermen are also looking into purchasing halibut IFQs with the idea of forming a community quota pool in excess of the IFQ held by five or so individuals in the community at present.

Local Akutan residents do participate in other commercial fisheries as crew members. According to field interviews, in 2004 there were three local residents working on the Prowler factory longline boats fishing for IFQ black cod, two were deckhands on the Trident trawl fleet, and about six individuals worked as crew fishing for king or opilio crab.

The Akutan delivery fleet for the single processor, including “outside” vessels, was characterized by processing company management as comprising the following components:

- About 20 “large” boats have capacities of 500,000 to 1,000,000 pounds, mainly fishing pollock, and primarily with Seattle-area ownership (although they spend most of their time in and around Akutan).
- About 20 “smaller” boats have capacities of 150,000 to 300,000 pounds, mainly fishing pollock and cod, and primarily with Kodiak and Newport ownership.
- The crab boat fleet has little overlap with the groundfish fleet (and much less than was the case in the past). A few of the biggest crab boats also fish groundfish, but Trident’s fishermen generally seem to specialize in one or the other. Crab boats are a mixture of Kodiak and Seattle-area boats, and the increased specialization in crab or groundfish may be due to the American Fisheries Act, sideboards, and relative stock sizes. This degree of specialization was the only change in the nature of Trident’s delivery fleet in recent years that was described by Trident representatives.
- There is a truly local “skiff” fleet.

As a CDQ community, the community of Akutan has access to the Bering Sea/Aleutian Islands (BSAI) commercial fishery resources independently of direct participation in the fishery. Akutan, like the other CDQ communities, has benefitted from the increase under AFA from 7.5 percent to 10 percent of each BSAI groundfish Total Allowable Catch (TAC) (except for the fixed gear sablefish TACs, of which CDQ communities receive 20 percent for the eastern Bering Sea and the Aleutian Islands areas). Also, like other CDQ communities, Akutan has access to the 7.5 percent CDQ allocation of relevant BSAI crab species. APICDA, including the community of Akutan, has participated in the crab fishery via acquiring partial (25 percent) ownership interest in two crab harvest vessels, the *Golden Dawn* and the *Farwest Leader*. In general, APICDA has substantial investments in both harvesting and processing sectors of the BSAI fishery. The most recent

AKU-5a

Harvest Sector

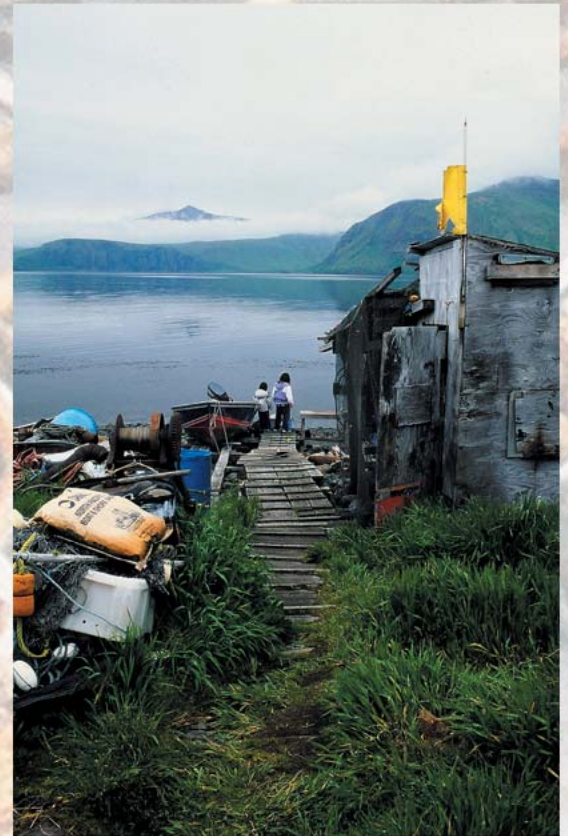
**Fishing skiffs and beach
ramps**



AKU-5b

Harvest Sector

Skiffs in moorage basin and on beach



executive summary of APICDA’s community development plan (APICDA 2002) describes the scope of these investments, as well as the community development goals they serve. In Akutan, the primary thrust is to develop a partnership with Trident to custom process the harvest of local fishermen. As described by a Trident representative, this is still a relatively small operation for Trident but quite important for a number of local fishermen. APICDA encourages local hire for all of its joint ventures and partnerships, but information on how many locals are actually so employed, and more specifically how many are from Akutan, is not available.

3.3.2 Processing

Community Processor Quantitative Description

The following two tables provide information on processors operating in Akutan during the period 1995 through 2002. Table 3-18 provides a count of active shore processors by year based on the number of processors that submitted fish tickets indicating delivery was made in the community. As shown, for most years a single processor (Trident) operated in the community. The second processor, which shows up in the data in 1999 and continues through the later years, is the floating processor Arctic Enterprise, which is owned and was brought to the community by the same company that owns and operates the shoreplant. In other words, although the data show two processors in the community, there is still only one processing company in Akutan, although it now operates two processing facilities.

Table 3-18. Number of Active Processors in Akutan, 1995-2002

1995	1996	1997	1998	1999	2000	2001	2002	Unique Count over All Years
1	1	1	1	2	2	2	2	2

Note: Data include the floating processor Arctic Enterprise.

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Table 3-19 summarizes Commercial Operators Annual Report (COAR) processing data by year for the period 1995 through 2002 by major species of pounds purchased by processors in the community, along with the ex-vessel and wholesale value associated with those purchases. This information may be used to gauge community processing sector relative engagement in and dependency on particular fisheries. While the number of processors by species group can be disclosed, none of the volume or value data are reportable for Akutan due to confidentiality restrictions.

Table 3-19. Processing Summary for Akutan, 1995-2002

Species	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Number of Processors								
cod, Pacific (gray)	1	1	1	1	2	2	2	1
crab, Tanner, bairdi	1	1	-	-	-	-	-	-
halibut, Pacific	1	1	1	1	1	1	1	1
herring, Pacific	-	-	-	-	-	-	1	1
king crab, all species	1	1	1	1	1	1	1	1
other species	1	1	1	1	1	1	1	1
pollock, walleye	1	1	1	1	2	2	2	1
sablefish (blackcod)	1	-	-	-	-	-	-	-
Pounds Purchased								
cod, Pacific (gray)	x	x	x	x	x	x	x	x
crab, Tanner, bairdi	x	x	-	-	-	-	-	-
halibut, Pacific	x	x	x	x	x	x	x	x
herring, Pacific	-	-	-	-	-	-	x	x
king crab, all species	x	x	x	x	x	x	x	x
other species	x	x	x	x	x	x	x	x
pollock, walleye	x	x	x	x	x	x	x	x
sablefish (blackcod)	x	-	-	-	-	-	-	-
Ex-Vessel Value								
cod, Pacific (gray)	x	x	x	x	x	x	x	x
crab, Tanner, bairdi	x	x	-	-	-	-	-	-
halibut, Pacific	x	x	x	x	x	x	x	x
herring, Pacific	-	-	-	-	-	-	x	x
king crab, all species	x	x	x	x	x	x	x	x
other species	x	x	x	x	x	x	x	x
pollock, walleye	x	x	x	x	x	x	x	x
sablefish (blackcod)	x	-	-	-	-	-	-	-
Wholesale Value								
cod, Pacific (gray)	x	x	x	x	x	x	x	x
crab, Tanner, bairdi	x	x	-	-	-	-	-	-
halibut, Pacific	x	x	x	x	x	x	x	x
herring, Pacific	-	-	-	-	-	-	x	x
king crab, all species	x	x	x	x	x	x	x	x
other species	x	x	x	x	x	x	x	x
pollock, walleye	x	x	x	x	x	x	x	x
sablefish (blackcod)	x	-	-	-	x	-	-	-

Source: ADFG Commercial Operator Annual Report Summary, provided to Northern Economics, Inc. in September 2004 by ADFG.

Note: An "x" indicates the data are confidential and cannot be released.

Community Processor Characterization

Trident Seafoods operates the major shore processing facility in the community of Akutan. Trident first opened a shoreplant in the community in the summer of 1982, but the original structure was destroyed by fire in the summer of 1983. The plant was rebuilt later that year, and major expansions occurred in the 1990s. Plate AKU-6 shows contemporary views of the plant.

Like the large processing plants in Unalaska, the Trident Akutan plant is an AFA-qualified plant with its own pollock co-op. Also like the large Unalaska plants, it is a multi-species processing facility, and it accounts for a significant amount of regional crab processing as well as groundfish processing. Specific figures are confidential. Company representatives report that BSAI crab can comprise a significant percent of the total value of processing at the plant, although the present depressed status of most crab stocks has reduced this percentage in recent years. As a high-value species, however, crab is quite important to the overall operation of the plant (although pollock is still the prime mover in terms of labor requirements and overall economic operations).

In terms of the processing labor force, there has been little change reported in overall size, seasonal patterns, or composition in recent years. Pollock is still the driving force for Akutan employment dynamics. During periods when both pollock and crab may both require significant effort (primarily opilio season) the pollock product mix may be adjusted to less labor-intensive forms (surimi instead of fillets). The same labor force is used for all operations, adjusted as necessary in size by sending people out as the need for labor decreases once the pollock season is over. According to interviews of community residents, no long-term local residents work at the processing plant, despite the fact that the company offers a “town premium” wage. This is reportedly due to the long workdays, which can exceed 16 hours during peak times. The very thing that makes processing attractive to many non-locals – the ability to earn quite a bit of money working very long hours over the course of a few weeks or months – makes it unattractive to locals who have obligations outside of the workplace. According to one resident, it is difficult to have a family if you work 12-hour days, much less longer days.

In addition to its shore facility, Trident has operated the floating processor Arctic Enterprise in Akutan Bay since its purchase several years ago. Previously operated in Beaver Inlet on Unalaska Island, this is currently (2004) the only floater that operates in Akutan Bay on an ongoing basis, or has for several years. While multiple floaters used to be common, according to city officials this changed due to environmental constraints (as well as changing fishery economics). Around 1990, the U.S. Environmental Protection Agency (EPA) declared the inner portion of Akutan Bay an “impaired water body” with the result that floaters could not operate in that area. According to city officials, the bay has subsequently moved up on EPA’s water quality scale as restrictions placed on Trident have improved conditions, but the inner bay remains on the impaired list, and floaters have not returned in number. The Arctic Enterprise operates outside of this inner bay area, but still within Akutan Bay itself. According to city officials, other mobile processing capacity for crab has been brought in by Trident in recent years to help with finishing up during crab seasons.

In terms of the relationship between the plant and the community, social interactions between Trident employees and the other residents of the community are somewhat limited because the Trident site is more or less an industrial enclave and is separated from the village proper by Russian Orthodox church-owned land (part of which the city leases for a warehouse and a ball field), the sea

plane ramp, and coastal bluffs. Access and interaction has changed at least to some degree in recent years, however, due to several factors. First was the opening of a beach level road connecting the seaplane ramp (which is connected to the residential community by road and a boardwalk system that is used by both pedestrians and all-terrain vehicles) to the Trident site. Prior to this road being built, the plant could be reached from the community only by boat or by a hiking trail that traversed coastal bluffs so steep that one section of the trail had a fixed rope to assist walkers. A second factor was the construction by Trident of a non-denominational church and gymnasium/community building that is utilized by plant workers and local residents alike.² This building housings a modest-sized church, attached living quarters for a minister and family members, and a full-sized gym. (Because the gym has “church windows,” it is sometimes mistaken for a very large church.) The building is located adjacent to the seaplane ramp on privately owned land and the gym in particular attracts individuals from both the plant and the community, fostering social interaction. (The school gym, which used to draw plant workers for recreational activities, is now only used by children, according to city staff, as it requires a supervisor during open recreation; whereas, at the Trident church/gym, supervision is provided by the resident minister’s family.) A third factor was the recent opening of the Akutan community library, museum, and recreation center located within the village itself that also draws patrons from both the plant and the rest of the community. The availability of computers at this facility is reportedly very popular with both processing workers and fishermen passing through the community. As in years past, plant workers make incidental purchases at the village store, cash checks, and frequent the Roadhouse tavern adjacent to the community that is also patronized by village residents.

Another change in recent years in terms of the social interaction between the Trident facility and the village proper has been the integration of some long-term Trident personnel into the fabric of the community. In the not-too-distant past, this was not reported to occur and for many years no Trident employees lived in the residential portion of the community, and no residents from the village proper worked at the plant. In the recent past, however, one Trident manager married into the community and lived in the village for a while before he and his family moved to another community. At present (2004-2005), a second Trident worker who also married a local has been living in the village proper for a couple of years. Further, in 2001, a Trident manager who had been working at the local plant for many years was elected to the city council and was re-elected to this position in 2004. He and at least a few other long-term employees living at the plant site now consider Akutan their primary residence. (In Akutan, as elsewhere in Alaska, individuals are eligible to vote in local elections after 30 days of residence and city officials report that about one-third of local voters are Trident employees.) One Trident environmental employee has been engaged in the larger community through service in the local EPA Indian General Assistance Program (IGAP) community group and has otherwise assisted the community through his involvement in local emergency planning efforts. These various types of significant social integration, unknown in the past, are apparently becoming more common over time. While housing and land use factors will likely mean that there will not be the same degree of social integration between the community and the

² According to city officials, Aleut residents of the community have remained members of the Russian Orthodox faith and view the Trident-built church as somewhat of an outside institution, considering the Russian Orthodox church to be the only Akutan church. Reportedly the Trident-built structure is typically referred to by long-term residents of the community as “the Trident Church” or simply “the gym,” with the latter designation highlighting the local importance of having access to a full-size gym where residents can participate in basketball games, a very popular participation sport. The non-denominational church operations are overseen by a committee that hires the minister and oversees operations, and this committee is reportedly not a local institution.

AKU-6

Processing

Trident processing plant and
shipping area



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processing industry in Akutan that is seen in Unalaska, it is occurring in the community on a smaller scale. City officials do report that in the mid-1990s, two women from the community did work at the plant for approximately 2 years, but found it difficult to maintain a family life and arrange for child care given the long hours inherent in processing work during busy seasons. Trident is viewed as continuing to be open to hiring local community residents, but on the whole processing employment is seen as being very difficult to balance with family responsibilities.

In terms of local CDQ involvement in processing, unlike their participation in the groundfish fisheries, APICDA-owned processing capacity does not have a history of BSAI crab processing. APICDA partners with Trident for its CDQ crab processing, which has been most commonly processed in Akutan but is also sometimes processed in St. Paul or on a floater, depending on quota size and fishing conditions. Trident serves as a custom processor for this CDQ crab. APICDA also partners with the Starbound and Trident for CDQ pollock, and Trident's share of the CDQ pollock has usually been processed by the Akutan plant, while most of APICDA's share has been processed by the CP Starbound. Other APICDA CDQ species are harvested and processed primarily through non-Trident enterprises (APICDA 2002).

3.3.3 Support Services

Akutan differs sharply from nearby Unalaska in terms of opportunity to provide a support base for the commercial fishery. Akutan does not have a boat harbor, other than a small skiff moorage facility, or an airport in the community, with air service limited to either float planes or amphibious aircraft servicing the community out of Unalaska. There is also very little privately held land available for development in or around the community (outside of lands held by the local Akutan Corporation).

There has been some recent (2001) investment by APICDA in a local mooring basin that will help local residents keep their vessels in the water. Located near the seaplane ramp, this facility includes a floating dock for the skiff-sized local vessels, and APICDA has also been involved with obtaining a trailer that can handle up to 45-foot vessels to facilitate getting local small boats in and out of the water. Other than the very small boat facility, there is no boat harbor in the community, although this has been in planning for a number of years. The Environmental Impact Statement for this project has been completed and the final Record of Decision was signed on December 15, 2004, with construction and completion at least a few years away. According to city officials, there is no Water Resources Development Act bill provisions for design and construction costs in 2005, but there is some amount of funding to continue with soils work and design of this project. APICDA has also reportedly earmarked matching funds in the range of \$1 million to be used when development of the boat harbor has begun. While these plans exist, the situation at present is that beyond the limited services provided by the plant, essentially no opportunity exists in Akutan to provide a support base for other major commercial fisheries. Indeed, alternative economic opportunities of any kind are extremely limited.

The only direct fishery support business in the community at present (2004) is Pelkey's Dive Service, which involves the two owners plus a couple of helpers on occasion. This operation caters in part to fishing vessels, changing zincs and clearing fouled propellers, among other services. This business also has performed underwater maintenance on the main town outfall and the freshwater line since the mid-1980s, but is not a full-time enterprise. The owners of this company are also involved in marine pilot work, as well as enterprises that are not directly fishing or marine support oriented.

There are other enterprises in Akutan that derive benefits from the fishery in less direct ways. The Akutan Corporation does derive economic benefits from the local shoreplant through sales of goods and services to local seafood plant employees at the community store the corporation owns and operates. Processing workers utilize the store for check cashing purposes, for which they are charged a 10 percent cashing fee. According to corporation management, sales to processing workers commonly include rice, canned foods, and microwavable foods, with processing worker business accounting for perhaps 20 to 25 percent of the overall store business. The corporation also encourages store sales to vessels by offering 10 percent boat case lot discounts. According to corporation staff, although vessels tend to ship in their own supplies, or re-supply at the Trident plant, some of the vessels do make local purchases if Trident runs out of supplies or if direct shipped goods do not make it in due to adverse weather conditions.

Despite being the major landowner in the community, however, the Akutan Corporation does not derive substantial leasing income from the local seafood processor. Prior to ANCSA, a private individual outside of the community obtained ownership of three parcels of land: the parcel on which the processing plant is located, a parcel across the bay from the community that is the site of a pot dock, and a parcel near the head of the bay that was the historic site of the local whaling station. Although according to city officials these lands changed hands in the late 1990s, they have remained in private ownership outside of the community. Until recently, the only land leased by the Akutan Corporation to the seafood processor was the antennae site on the hill above the processing facility. In 2004, however, Trident began leasing 67 acres of corporation land on the hillsides near the plant as an “impact area” lease. This lease arrangement was necessitated by plant emission levels exceeding a threshold determined in part by the existing footprint of the plant.

The Akutan Corporation does derive at least some income from direct and indirect fisheries related activity through its ownership of the Bayview Hotel and the Salmonberry Inn. The Bayview Hotel, a six-room facility of which two rooms are larger apartment-style accommodations, does see some business from such groups as marine pilots or fisheries observers, particularly when space is not available at the processing plant. (This facility also derives business from Caterpillar mechanics and electricians in the community on a short-term basis, as well as transient health care or school related personnel.) The Salmonberry Inn is a former processing bunkhouse facility that is a five-room structure with four bunks per room that derives processing related business, particularly when the processing activity ramps up in January and the processor is in need of overflow housing capacity. These type of pollock “A season” leases, while desirable for a number of reasons, are described as more-or-less “break even” ventures by the corporation. The Akutan Corporation also built the local post office building, then utilizing the lease income for other enterprises. This may be considered partially related to commercial fishery, as postal service demand does feel the influence of commercial fishing activities. (The Akutan Corporation, as part of a coalition involving a few other Aleutian-Pribilof region communities along with a village in Alaska’s interior, is also a participant in a cattle ranching operation on nearby Akun Island.)

Another business in the community that derives income from fishery related activity is the Roadhouse tavern. Owned by private individuals from Akutan who are no longer physically resident in the community, this business regularly draws patrons from both the processing plant workforce and the community itself. According to a family member, the Roadhouse was opened in 1964 and continues to be operated by members of the same family, with about 25 to 30 percent of the business volume attributable directly to commercial fishing activity. Akutan Bay has also been the site of

some transfer of product from at least one mothership to cargo vessels in recent years, but very little if any local business has resulted from these types of activities.

Akutan is a small enough community that nearly the complete range of employment can be characterized. Among permanent, long-term community residents, the large majority of employment is linked to the public sector. Of these residents, the largest employer is the City of Akutan, which accounts for 9 salaried positions and a couple of permanent part-time positions (dockworker, janitorial), along with up to 20 hourly variable part-time workers who may get at least some work during the year. The Traditional Council accounts for another 2 full-time positions, and the IGAP environmental watch function accounts for 1 full-time and 1 part-time position. Health care related employment includes 3 full-time clinic workers (including a community health aide, a technician, and a human resources person), along with 1 person who administers a number of health and social service programs, such as a range of programs encompassed by the Rural Alaska Community Action Program, Inc. (RurAL CAP), and a suicide prevention program, among others. Local employment specific to the school is limited to a teacher's aide position. Employment that may be considered as "quasi-public" includes 6 positions with the Akutan Corporation (3 full-time jobs, including 2 office workers and 1 weekday store employee, along with 3 part-time jobs, including a weekend store employee, hotel service, and a maintenance position), and 1 local position with APICDA. Project related employment of limited duration is also important in the community and includes an ongoing water/sewer project (scheduled to run into 2005), with other projects for bulk storage and additional skiff moorage planned.

The only unambiguously private sector employment among permanent community residents is related to the dive business previously noted (which does not provide steady work), along with limited employment at the tavern, and an estimated 3 to 4 individuals who intermittently pick up stevedoring or longshore work, moving containers and working on barges and trampers. One individual who continues to work at the Trident plant itself has "married into" the community and now lives in the residential section of the village away from the plant, but with this singular exception the plant does not draw workers from the permanent resident labor pool. Additional local employment (exclusive of the seafood processing plant) that typically draws from other than permanent, long-term residents includes teaching positions at the school, a mid-level practitioner position at the clinic, and a pastor's position at the Trident non-denominational church.

3.4 LOCAL GOVERNANCE AND REVENUES

In addition to benefits derived from an AEB 2 percent fish tax, the community benefits from municipal revenues deriving from a local 1 percent raw fish tax on landings made in the community. These revenues, of course, are dependent on price as well as volume of landings, which are, in turn, linked to relevant TACs/Guideline Harvest Levels (GHLs). Table 3-20 presents information on Akutan municipal revenues for 1999 through 2002 obtained off of the DCED website and/or from DCED personnel (unlike the other communities profiled, 2003 data are not yet available for Akutan). As with other communities in the region, fish taxes have varied considerably from year to year, but more detailed information on local fish taxes cannot be presented due to confidentiality restrictions, given that there is but a single processor in the community. Clearly, however, fish taxes are a large proportion of local revenue, as processing is virtually the only industrial activity in the community. Akutan also receives revenue from Fisheries Resource Landing taxes, but these

revenues are characterized by city management as being “not very large amounts.” Akutan does not have a local sales tax or property tax.

Table 3-20. Akutan Municipal Revenues, 1999 -2002

Revenue Source	1999	2000	2001	2002	2003
Local Operating Revenues					
Taxes	\$430,095	\$559,219	\$647,147	\$614,300	NA
License/Permits	\$0	\$0	\$0	\$0	NA
Service Charges	\$51,488	\$56,392	\$103,103	\$79,303	NA
Enterprise	\$216,493	\$266,416	\$166,042	\$334,749	NA
Other Local Revenue	\$96,016	\$127,420	\$182,224	\$116,482	NA
Total Local Operating Revenues	\$794,092	\$1,009,447	\$1,098,516	\$1,144,834	NA
Outside Operating Revenues					
Federal Operating	\$0	\$0	\$25,370	\$0	NA
State Revenue Sharing	\$25,969	\$24,986	\$24,987	\$24,987	NA
State Municipal Assistance	\$7,650	\$6,813	\$7,523	\$7,523	NA
State Fish Tax Sharing	\$558,663	\$654,402	\$756,180	\$720,466	NA
Other State Revenue	\$50,025	\$6,300	\$6,300	\$0	NA
Other Intergovernmental	\$0	\$0	\$0	\$139,994	NA
State/Federal Education Funds	\$0	\$0	\$0	\$0	NA
Total Outside Revenues	\$642,307	\$695,038	\$820,360	\$892,970	NA
Total Operating Revenues	\$1,436,399	\$1,704,485	\$1,918,876	\$2,037,804	NA
Operating Revenue Per Capita	\$3,521	\$4,011	\$2,691	\$2,724	NA
State/Federal Capital Project Revenues	\$0	\$0	\$56,647	\$408,219	NA
TOTAL ALL REVENUES	\$1,436,399	\$1,704,485	\$1,975,523	\$2,446,023	NA

Source: DCED Website, 2001, 2002, personal communication 2004.

Unlike a number of other communities, the City of Akutan does not derive revenues from sales of water, power, wastewater, or other similar services to the seafood processing plant in the community. At the time of its construction, the plant was physically isolated from the community and thus was built as a completely self-contained facility. Although a road link to the community was subsequently established, the way services are provided to the plant has not changed. Trident does currently lease 21 acres from the City of Akutan where it currently stores shipping containers, but the City is not yet collecting lease payments. As part of the lands between the processor and the community, the status of this lease is exceptionally complicated, as previous land ownership and leasing rights within this area involved such entities as the Bureau of Indian Affairs, a previous seafood processing enterprise, the Akutan Corporation, and the City of Akutan. Current or planned developments on other portions of this land that do or will have a reversion clause include the Trident non-denominational church and some planned housing. The area used for shipping activities designated for a renewable lease, and future plans include building/expansion of a dock and related structures, which likely will result in increased City revenues in the long run. A portrayal of various community services may be found on Plate AKU-7a and Plate AKU-7b.

AKU-7a

Community
Services/Facilities

Clockwise from
upper left: Post
office, oil boom
storage building, and
City of Akutan offices



AKU-7b

**Community Services/
Facilities**

**Clockwise from upper left:
Public Library Museum
and Rec Center, Akutan
School, medical clinic,
and public safety building**



KING COVE



CHAPTER 4.0

KING COVE

King Cove is located on a sand spit fronting Deer Passage and Deer Island on the south side of the Alaska Peninsula near its western tip. It is 18 miles southeast of Cold Bay and 625 miles southwest of Anchorage. Although there are numerous pre-contact sites throughout the area, the contemporary community of King Cove traces its name to the 1880s when English immigrant Robert King married a local woman, became a trapper and sea otter hunter, and moved with his family to the cove. The present structure of the community can be traced to 1911 when Pacific American Fisheries built a salmon cannery on the present-day town site. According to local sources, early population growth was precipitated by the plant, as Aleut and Yupik Alaskans came to work at the cannery along with Japanese and Chinese workers brought in by the company, with Scandinavian fishermen following. The cannery operated continuously between 1911 and 1976 (under the name Pacific Alaska Fisheries before it became Peter Pan Seafoods), when it was partially destroyed by fire. The adoption of the 200-mile Exclusive Economic Zone fisheries limit spurred rebuilding. Incorporated in 1949, King Cove encompasses 25.3 square miles of land and 4.5 square miles of water. It is a part of an organized borough (the Aleutians East Borough [AEB]).

King Cove lies in the maritime climate zone with temperatures averaging 25 to 55°F, though extremes range from -9 to 76°F. Snowfall averages 52 inches, and total annual precipitation is 33 inches. Fog, common during summer, and high winds during winter, can limit accessibility. The physical setting of King Cove may be seen in Plate KC-1 and the spatial layout of the community may be viewed on Plate KC-2.

4.1 OVERVIEW

Early permanent residents of King Cove were Scandinavian, Euroamerican, and Aleut fishermen. Of the first 10 founding families, 5 consisted of a European father and an Aleut mother. For a number of decades, the community was primarily involved in the commercial salmon fisheries of the area, but with the decline of the salmon fishery, processing in the community has diversified into other species, including both Gulf of Alaska and Bering Sea fisheries, and both Bering Sea crab and groundfish have come to be important components of local processing operations. The shore processor in King Cove is now Peter Pan Seafoods, and the plant processes salmon, crab, and halibut, along with pollock, Pacific cod, and other groundfish. Other species, such as herring, are processed occasionally. In the not-too-distant past, some small operators conducted processing or tendering operations in and around King Cove, but currently Peter Pan is the only local processor. While cash buyers for salmon operating just outside city limits may be a thing of the past, Peter Pan does occasionally or seasonally operate mobile processing capacity nearby – but outside of the city limits – to supplement its local shoreplant operations.

King Cove, in some respects, is like and unlike both Unalaska and Akutan. Like Unalaska (and unlike Akutan), King Cove is incorporated as a First Class City, but like Akutan (and unlike Unalaska) it is part of an organized borough. Like Unalaska (and unlike Akutan), King Cove is not a CDQ community. Like Akutan (and unlike Unalaska), King Cove is a one-processor town, with some historical attributes of a “company town.” King Cove is a historical commercial fishing

community that has had processing facilities as part of the community for decades, like Unalaska; however, unlike Unalaska it has long had a significant residential commercial fishing fleet that delivers to the local seafood processors.

Map KC-1 also provides an aerial overview of the community. Plate KC-3a and Plate KC-3b provide some details of the attributes of the community.

4.2 COMMUNITY DEMOGRAPHICS

King Cove is a community that traces its founding directly to commercial fishing. Unlike Unalaska, it developed around a commercial fish processing plant and did not grow from an existing traditional Aleut village. The contemporary community is ethnically heterogeneous, but much greater diversity is found among the population components associated with fish processing and support services than for those associated with other economic activities such as fish harvesting, government, or education. While the fish processing employment force does display continuity from year to year, the local perception is that the employees are much more transient than other King Cove residents and are not considered to be truly “local” residents as are those with other occupations and who do not live in company housing.

4.2.1 Total Population

Historically, King Cove has seen a large influx of non-resident fish tenders, seafood processing workers, fishers, and crew members each summer due to local salmon fisheries. With the increased importance of crab, followed by cod and pollock in the winter, a second employment/population peak has been seen in more recent years. Table 4-1 provides figures for community total population by decade from 1940 through 2000. These figures clearly include some processing workers but do not represent the numbers of persons present in the community during peak processing periods.

Table 4-1. King Cove Population by Decade, 1940-2000

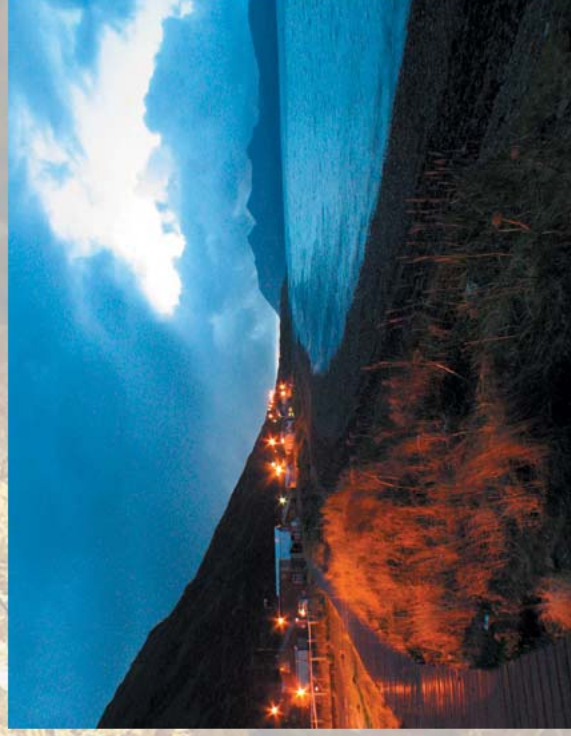
Year	Population
1940	135
1950	162
1960	290
1970	283
1980	460
1990	451
2000	792

Source: Historical data from Alaska Department of Community and Economic Development, 2000 data from U.S. Bureau of the Census.

KC-1

Physical Setting

Aerial views of the community and surrounding area; views from the community



KC - 2

**Physical/Spatial
Relationship**

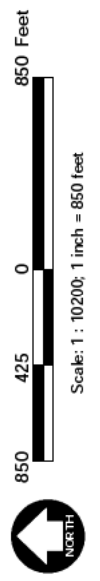
Aerial view of commu-
nity and view of
downtown area in the
distance





**Map KC-1
King Cove**

Source: Department of Commerce Division of Community Advocacy



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KC-3a

Community Attributes

Clockwise from upper left:
Windy Walk Way, residential
neighborhood, King Cove
Clinic, and typical housing



KC-3b

Community Attributes

Clockwise from upper left:
King Cove Airport, post
office, Protestant church, and
Russian Orthodox church



4.2.2 Ethnicity

The ethnic diversity of population associated with an imported fish processing workforce is evident in Table 4-2. King Cove differs from other established major commercial fishing communities in the region, however, in that the percentage of its Alaska Native population component has increased at the same time as the community total population increased significantly. As shown in the table, the total population of the community grew by about 76 percent between 1990 and 2000. During this same time, the Alaska Native component of the population grew by 109 percent, increasing from 39 to 47 percent of the total population. It is likely that this represents population consolidation from smaller regional communities, as well as the natural increase of the excess of births over deaths.

Table 4-2. Ethnic Composition of Population King Cove, 1990 and 2000

Race/Ethnicity	1990		2000	
	N	%	N	%
White	127	28.2%	119	15.0%
African American	6	1.3%	13	1.6%
Native American/Alaskan	177	39.2%	370	46.7%
Asian/Pacific Islands*	125	27.7%	213	26.9%
Other**	16	3.5%	77	9.7%
Total	451	100%	792	100%
Hispanic***	53	11.8%	59	7.4%

* In the 2000 census, this was split into Native Hawaii and Other Pacific Islander (pop 1) and Asian (pop 212).

** In the 2000 census, this category was Some Other Race (pop 47) and Two or more races (pop 30).

*** "Hispanic" is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

Source: U.S. Bureau of the Census.

4.2.3 Age and Sex

Table 4-3 provides information on age and the male/female ratio of King Cove's population. As shown, the community population is predominantly male. This is consistent with a significant proportion of the overall population being comprised of a transient male-dominated processing workforce, although the male-female imbalance was somewhat less in 2000 than in 1990.

Table 4-3. Population by Age and Sex, King Cove: 1990 and 2000

Attribute	1990		2000	
	N	%	N	%
Male	292	65%	472	60%
Female	159	35%	320	40%
Total	451	100%	792	100%
Median Age	NA		34.9 years	

Source: U.S. Bureau of the Census.

King Cove school enrollment figures obtained from the AEB School District 1991 through 2005 are displayed in Table 4-4, along with enrollment figures obtained from the school itself for a subset of those years. While enrollment figures from these two different sources vary somewhat, the overall trends are consistent between the two sources. As shown, there was a peak of enrollments in the mid-1990s, and a subsequent decline, with the most recent data available showing a current student population of less than two-thirds the size of the peak student population during this time period.

Table 4-4. King Cove City School Enrollment, FY 1991-2005

Fiscal Year	Student Count (District)	Student Count (Local)
1991	148	NA
1992	150	NA
1993	157	NA
1994	159	NA
1995	154	162
1996	139	150
1997	143	143
1998	142	130
1999	129	133
2000	112	115
2001	124	122
2002	119	116
2003	105	103
2004	103	105
2005	100	101

Note: Year designation notes the calendar year in school year ended (e.g., 2003 refers to the 2002-2003 school year).

Source(s): District numbers adapted from spreadsheet supplied by C. Warner, Aleutians East Borough School District, December, 2004. Local numbers from manual tabulation supplied by King Cove school staff, September 2002 and October 2004.

It is difficult to assign causality of the drop in student counts to any specific fishery conditions, but clearly the overall local fisheries economic decline has had an influence on general socioeconomic conditions in the community, and at the same time the school has had to face some very hard choices. With declining enrollments and overall funding challenges, the King Cove school has combined grades 1 and 2, as well as 3 and 4, and 5 and 6. Budget difficulties have also brought about the recent elimination of two teaching positions. As some funding is based on a student count basis, continuing declines in enrollment have meant continuing budget cuts. Beyond combination classrooms and cuts in teaching positions, the school has also restructured other services it provides, such as the lunch program, and some specialty classes and certified counseling services are not available (although some counseling remains available). Given the importance of maintaining enrollments, potential candidates for various positions in the community who have children are particularly valued.

Despite the relatively large overall employment at the local seafood processor, according to school staff as of 2004 no children of processing employees attend the school. This is reportedly due to the high cost of living in the community, which makes it impractical to bring a family to King Cove on typical processing wages other than for those in management positions, and even then some of these positions are less than year-round jobs in the community. (Although summer managers have been reported to sometimes bring families in seasonally, this has had no impact on school attendance.) Housing is also in short supply, especially during peak processing seasons. Some families are reportedly considering sending children out to Mt. Edgecumbe school (in Sitka) as an alternative to allow them access to more academic resources. While no students from King Cove are currently reported to attend this school, several from Sand Point are, so there is regional precedent for this type of decision. While this could be academically advantageous to some students, it would pose further budgetary challenges for those remaining in the community.

4.2.4 Housing Types and Population Segments

Group housing in the community is largely associated with the seafood processing workforce. As shown in Table 4-5, 42 percent of the population lived in group housing in 1990 and 38 percent of the population did so in 2000. Some typical housing types may be seen in Plate KC-4.

Table 4-5. Group Quarters Housing Information, King Cove, 1990 and 2000

Year	Total Population	Group Quarters Population		Non-Group Quarters Population	
		Number	Percent of Total Population	Number	Percent of Total Population
1990	451	189	41.91%	262	58.09%
2000	792	299	37.75%	493	62.25%

Source: U.S. Bureau of the Census 1990 STF2, Census 2000 Summary File 1.

Table 4-6 provides information on group housing and ethnicity for King Cove in 1990, and similar information for 2000 is presented in Table 4-7. As with Unalaska and Akutan (and Sand Point), group housing in the community is largely associated with the processing workforce. The distribution of ethnicity between housing types is striking. In 1990, the Alaska Natives/Native Americans comprised 67 percent of the non-group quarters population in the community, and the analogous figure for 2000 was 75 percent. For both 1990 and 2000, however, there was only one Alaska Native/Native American individual living in group quarters in the community (about one-half of 1 percent of the total group quarters population). Shifts in ethnic populations are also apparent between 1990 and 2000, with the “Asian” group comprising over 64 percent of the group quarters population in 2000, up substantially from 1990. The “White” component of the population was smaller in absolute and relative terms in 2000 than in 1990 for the community as a whole and in group quarters. Among non-group quarters residents, the number of “White” residents was larger in 2000 than in 1990 but still represented a smaller proportion of the non-group quarters population in 2000 than in 1990.

Table 4-6. Ethnicity and Group Quarters Housing Information, King Cove, 1990

Race/Ethnicity	Total Population		Group Quarters Population		Non-Group Quarters Population	
	Number	Percent	Number	Percent	Number	Percent
White	127	28.16%	57	30.16%	70	26.72%
Black	6	1.33%	6	3.17%	0	0.00%
American Indian, Eskimo, Aleut	177	39.25%	1	0.53%	176	67.18%
Asian or Pacific Islander	125	27.72%	109	57.67%	16	6.11%
Other race	16	3.55%	16	8.47%	0	0.00%
Total Population	451	100.00%	189	100.00%	262	100.00%
Hispanic origin, any race	53	11.75%	53	28.04%	0	0.00%
Total Minority Population	331	73.39%	139	73.54%	192	73.28%
Total Non-Minority Population (White Non-Hispanic)	120	26.61%	50	26.46%	70	26.72%

Source: U.S. Bureau of the Census 1990 STF2.

Table 4-7. Ethnicity and Group Quarters Housing Information, King Cove, 2000

Race/Ethnicity	Total Population		Group Quarters Population		Non-Group Quarters Population	
	Number	Percent	Number	Percent	Number	Percent
White	119	15.02%	37	12.37%	82	16.63%
Black or African American	13	1.64%	0	0%	0	0%
Alaska Native/Native American	370	46.72%	1	0.33%	369	74.85%
Native Hawaiian/Other Pacific Islander	1	0.13%	0	0%	0	0%
Asian	212	26.77%	192	64.21%	20	4.06%
Some Other Race	47	5.93%	0	0%	0	0%
Two Or More Races	30	3.79%	0	0%	0	0%
Unknown	0	0%	69	23.07%	22	4.46%
Total	792	100.00%	299	100.00%	493	100.00%
Hispanic*	59	74.49%	52	17.39%	7	1.42%
Total Minority Population	679	85.73%	268	89.63%	411	83.37%
Total Non-Minority Population (White Alone, Not Hispanic or Latino)	113	14.27%	31	10.37%	82	16.63%

Source: U.S. Census, 2000.

* "Hispanic" is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

KC-4

Housing Types

Clockwise from upper left:
Company housing at Peter Pan Seafoods, single-family housing in the community, company housing adjacent to seafood plant, and single-family houses on boardwalk



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Table 4-8 displays basic information on community housing, households, families, and median household and family income for King Cove in 2000.

Table 4-8. Selected Household Information, King Cove, 2000

Community	Total Housing Units	Vacant Housing Units	Total Households	Average Persons Per Household	Median Household Income	Family Households	Average Family Size	Median Family Income
King Cove	207	37	170	2.9	\$45,893	117	3.53	47,188

Source: U.S. Bureau of Census.

4.3 LOCAL ECONOMY AND LINKS TO COMMERCIAL FISHERIES

In terms of employment, a relatively recent study concluded that more than 80 percent of King Cove’s workforce is employed full time in the commercial fishery (USACE 1997). Fishing employment was followed by local government (borough and local) and then by private businesses. These results need to be interpreted in context, however, as this report ranked seafood processing after each of these other employers in terms of local employment, meaning that the vast majority of the workforce at the shoreplant was either not counted as community residents under the study methodology or the study was conducted during an off-season time when most workers were not present in the community. Also, commercial fishermen are self-employed, are difficult to enumerate, and thus are often not well represented in employment discussions. Thus, the 80 percent employment “dependency” of the local economy on the commercial fishing sector is probably underestimated.

The King Cove economy in general is cyclical, due largely to its strong relationship to fishing and fish processing. In recent years, because of a number of factors, including but not limited to low salmon prices, the community has experienced severe local effects from a number of fisheries related downturns as well as non-fisheries related events. Given that many of the factors cited for these effects are regional and cumulative in nature (low fish prices, Steller sea lion protection measures, competition from farmed fish, Area M restrictions, low Bering Sea crab Guideline Harvest Levels (GHLs), and other management and resource concerns), it is possible that King Cove has grown in size because of population movement from smaller regional communities in even worse economic shape. This dynamic is likely to continue but is not, however, likely to strengthen the local economy.

One recent indirect source of fisheries income in the community has been emergency relief funding. People participating in fisheries negatively affected by the imposition of measures to protect Steller sea lions and to promote the recovery of Steller sea lion populations recently received compensation funds allocated by Congress. While this program has had positive local effects, the degree of long-term benefit remains to be seen and an overall evaluation is not possible at this time.

Subsistence continues to play an important role in the household economies for some families in the community. Joint production opportunities, where commercial gear or fishing vessels are used for subsistence pursuits, were mentioned by community residents as being important. For example, one skipper reported running to good hunting grounds following tendering activities in the Shumagin Islands, thereby saving fuel costs, while another example was given of fishermen bird hunting when out tending pots. Where stand-alone costs are unavoidable, some fishermen reported that costs were made more manageable by having several families involved to spread out the out-of-pocket expenditures. At least some individuals who are out near productive hunting grounds in the course of commercial fishing also act as designated hunters for others in the community to further reduce overall subsistence costs and increase productivity.

Table 4-9 provides summary information on employment, unemployment, and poverty levels in King Cove for 1990 and 2000. As shown, all indicators are higher in 2000 than they were in 1990.

Table 4-9. Employment and Poverty Information, King Cove, 1990 and 2000

Year	Total Persons Employed	Unemployed	Percent Unemployment	Percent Adults Not Working	Not Seeking Employment	Percent Poverty
1990	276	5	1.8%	24.0%	82	10.0%
2000	450	31	4.7%	31.50%	176	11.9%

Source: U.S. Bureau of Census.

4.3.1 Harvesting

Community Harvester Quantitative Description

Table 4-10 provides information on the characteristics of vessels owned by King Cove residents for the period 1995 through 2002. This information is collected by the Commercial Fisheries Entry Commission (CFEC) when vessel owners renew their registration. As shown, the total number of vessels and the number of vessels fishing have steadily declined during this period. The number of vessels fishing in 2002 is approximately half the number of vessels that were fishing in 1995. Also as shown, there is a strong bimodal distribution of vessels by length, with most vessels being in either the smallest vessel class (26 feet length overall or less) or in the 33 to 49 feet length overall class. Very few local vessels are 60 feet or greater, and none are 125 feet length overall or greater.

Table 4-10. Vessel Characteristics of Vessels Owned by Residents of King Cove, 1995-2002

Characteristics	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Total Number of Vessels	135	131	126	119	111	104	90	80
Number of Vessels Fishing	59	46	46	45	42	37	34	32
Number of Vessels by Size								
0-26 feet length overall	79	78	76	71	67	64	55	48
27-32 feet length overall	5	5	6	4	3	3	2	0
33-49 feet length overall	39	34	30	31	26	23	21	21
50-59 feet length overall	8	10	10	9	11	10	9	9
60-124 feet length overall	4	4	4	4	4	4	3	2
125+ feet length overall	0	0	0	0	0	0	0	0
Average Age of Vessels (years)	14	15	16	17	17	18	19	19
Number of Vessels by Hull Type								
Aluminum	32	31	31	30	31	31	26	25
Wood	46	44	42	41	34	30	25	20
Fiberglass	51	50	47	42	40	37	34	31
Steel	6	6	6	6	6	6	5	4
Number of Vessels with Refrigeration	14	16	18	19	19	16	15	15
Number of Vessels Using Diesel	77	71	68	65	63	60	50	46

Source: CFEC Vessel Registration Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Note: CFEC analysts provided vessel registration data of all resident vessel owners by community and year. Vessel registration data are available on the internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm. The data were summarized by Northern Economics, Inc.

In addition to vessel ownership information, data on permit holders for King Cove provide a perspective on local harvester engagement in various fisheries. Table 4-11 shows the number of persons in the community that own permits in one, two, three, or all four of the major fishery groups in Alaska, by year, for the period 1995 through 2002. Table 4-12 shows the percentages of all permit holders who own permits in the different combinations listed. (Additional information on permit holders by community may be found in Appendix A.) As shown, salmon permits dominate all other permits, with relatively few individuals holding only one type of permit other than salmon. Over time, roughly half of all persons with permits held permits in one fishery group, about a quarter held permits for two major fisheries groups, and around one-fifth held permits for three major fisheries groups.

Table 4-11. Distribution of Permit Holders across Fisheries for King Cove, 1995-2002

Fishery	1995	1996	1997	1998	1999	2000	2001	2002
Persons with Permit in only One Major Fishery Group								
Salmon (SM)	19	23	23	25	26	24	19	24
Groundfish (GF)	3	3	5	8	4	6	3	7
Halibut and Sablefish (HS)	3	3	3	2	3	3	4	4
Crab /all other species (CO)	6	7	6	3	3	3	3	3
Persons with Permits in Two Major Fishery Groups								
SM, GF	7	4	8	13	12	10	4	11
SM, HS	5	4	5	6	7	6	5	4
SM, CO	2	3	2	1	-	1	1	1
GF, HS	3	4	3	3	2	1	-	-
GF, CO	4	2	3	3	2	2	7	-
HS, CO	-	-	1	-	-	-	-	-
Persons with Permits in Three Major Fishery Groups								
SM, GF, HS	10	13	14	9	4	8	3	7
SM, GF, CO	2	3	3	5	6	6	14	2
SM, HS, CO	-	1	1	1	-	-	-	-
GF, HS, CO	1	2	-	-	-	-	1	-
Persons with Permits in All Four Major Fishery Groups								
SM, GF, HS, CO	14	9	5	0	2	1	6	1
Total of All Permit Holders								
All Fisheries	79	81	82	79	71	71	70	64

Source: CFEC Permit Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Note: CFEC analysts provided permit ownership of residents of each community by year, although these data are available on the internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm.

Table 4-12. Percentage Distribution of Permit Holders across Fisheries for King Cove, 1995-2002

Fishery	1995	1996	1997	1998	1999	2000	2001	2002
Percent of all Community Permit Holders with Permit in only One Major Fishery Group								
Salmon (SM)	24%	28%	28%	32%	37%	34%	27%	38%
(Groundfish (GF)	4%	4%	6%	10%	6%	8%	4%	11%
Halibut and Sablefish (HS)	4%	4%	4%	3%	4%	4%	6%	6%
Crab /l other species (CO)	8%	9%	7%	4%	4%	4%	4%	5%
<i>Subtotal, One Fishery Group</i>	<i>39%</i>	<i>44%</i>	<i>45%</i>	<i>48%</i>	<i>51%</i>	<i>51%</i>	<i>41%</i>	<i>59%</i>
Percent of all Community Permit Holders with Permits in Two Major Fishery Groups								
SM, GF	9%	5%	10%	16%	17%	14%	6%	17%
SM, HS	6%	5%	6%	8%	10%	8%	7%	6%
SM, CO	3%	4%	2%	1%	-	1%	1%	2%
GF, HS	4%	5%	4%	4%	3%	1%	-	-
GF, CO	5%	2%	4%	4%	3%	3%	10%	-
HS, CO	-	-	1%	-	-	-	-	-
<i>Subtotal, Two Fishery Groups</i>	<i>27%</i>	<i>21%</i>	<i>27%</i>	<i>33%</i>	<i>32%</i>	<i>28%</i>	<i>24%</i>	<i>25%</i>

Fishery	1995	1996	1997	1998	1999	2000	2001	2002
Percent of all Community Permit Holders with Permits in Three Major Fishery Groups								
SM, GF, HS	13%	16%	17%	11%	6%	11%	4%	11%
SM, GF, CO	3%	4%	4%	6%	8%	8%	20%	3%
SM, HS, CO	-	1%	1%	1%	-	-	-	-
GF, HS, CO	1%	2%	-	-	-	-	1%	-
<i>Subtotal, Three Fishery Groups</i>	<i>16%</i>	<i>23%</i>	<i>22%</i>	<i>19%</i>	<i>14%</i>	<i>20%</i>	<i>26%</i>	<i>14%</i>
Percent of all Community Permit Holders with Permits in All Four Major Fishery Groups								
SM, GF, HS, CO	18%	11%	6%	-	3%	1%	9%	2%

Source: CFEC Permit Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Note: CFEC analysts provided permit ownership of residents of each community by year, although these data are available on the internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm.

Summary catch and earnings estimates for the community may be made through using the annual CFEC data report called “Permit and Fishing Activity by Year, State, Census Division or Alaskan City.” Table 4-13 aggregates and summarizes estimated landings and gross revenue data for King Cove into 14 gear and species groups. (Note that this table, unlike the previous table, displays the number of permits held, not the number of permit holders.) Where the number of permits in any group is less than that required to permit disclosure of actual data, an algorithm was used to produce “reasonable estimates” of total catch and earnings. (A more detailed explanation of the algorithm methodology is provided in Appendix A.) As shown, there is considerable variability in catch and earnings from year to year, with especially high volatility seen in salmon. For example, estimated gross revenue for seine salmon was about \$6 million in 1995, but only about \$700,000 in 2002. Overall estimated gross revenue dropped from well over \$10 million in 1999 to just over \$4 million in 2002.

Table 4-13. Summary Catch and Earnings Estimates for King Cove Permit Holders by Species Group, 1995-2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
Fishery	Permits Held							
Halibut	33	33	28	17	15	15	14	12
IFQ Sablefish	7	8	6	2	-	1	-	-
Salmon Seine	34	34	33	33	32	33	28	27
Salmon Drift Net	14	13	12	12	11	12	11	9
Salmon Set Net	9	13	14	14	11	10	12	14
Salmon Other Gear	-	-	1	-	-	-	-	-
Herring	20	25	19	12	11	11	9	3
Groundfish Longline	13	9	3	1	1	1	2	2
Groundfish Jig	6	4	4	3	2	3	11	10
Groundfish Pot	31	33	36	37	29	29	31	19
Groundfish Trawl	13	11	9	10	9	9	9	8
Tanner Crab	7	4	4	4	3	5	29	3
King Crab	8	12	9	7	9	7	5	5
All Other Fish/ Shellfish	15	9	4	4	1	1	1	1
Total All Permits	210	208	182	156	134	137	162	113

Fishery	Permits Fished							
	19	21	17	13	12	13	13	10
Halibut	19	21	17	13	12	13	13	10
IFQ Sablefish	-	3	2	-	-	1	-	-
Salmon Seine	34	31	25	24	22	23	20	15
Salmon Drift Net	14	14	12	11	10	10	10	8
Salmon Set Net	12	14	15	14	12	13	11	10
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	6	10	8	3	3	4	2	-
Groundfish Longline	1	2	-	-	-	-	-	-
Groundfish Jig	3	1	-	1	-	-	4	5
Groundfish Pot	26	24	26	24	20	22	23	15
Groundfish Trawl	10	9	9	8	9	9	9	7
Tanner Crab	7	4	3	3	2	5	22	2
King Crab	8	10	7	6	5	5	5	4
All Other Fish/ Shellfish	2	-	-	-	-	-	-	-
Total All Permits Fished	142	143	124	107	95	105	119	76
Fishery	Estimated Landings (pounds)							
	19	21	17	13	12	13	13	10
Halibut	92,582	119,823	181,875	154,630	217,503	247,602	263,943	243,530
IFQ Sablefish	-	93,584	16,017	-	-	22,624	-	-
Salmon Seine	22,082,406	4,908,200	4,666,724	9,463,778	11,691,415	5,829,353	6,040,684	5,083,378
Salmon Drift Net	1,586,555	893,147	1,003,801	835,336	762,212	999,709	748,844	618,021
Salmon Set Net	936,231	461,928	587,972	768,821	821,261	827,817	599,149	522,367
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	234,318	667,376	887,515	381,612	596,781	520,695	422,811	-
Groundfish Longline	14,190	70,309	-	-	-	-	-	-
Groundfish Jig	50,668	12,633	-	15,089	-	-	68,897	267,486
Groundfish Pot	3,392,057	3,746,349	6,560,506	7,007,655	4,704,157	4,955,883	4,394,162	4,781,878
Groundfish Trawl	3,049,627	4,580,342	6,210,320	6,362,485	6,848,469	3,707,726	3,474,762	2,594,075
Tanner Crab	422,120	403,958	1,190,501	2,232,270	1,157,890	575,288	313,939	241,795
King Crab	64,959	262,111	201,481	167,294	211,038	148,647	134,075	100,063
All Other Fish/ Shellfish	62,298	-	-	-	-	-	-	-
Total (All Species)	31,988,010	16,219,760	21,506,712	27,388,970	27,010,727	17,835,345	16,461,267	14,452,594
Fishery	Estimated Gross Revenue (dollars)							
	19	21	17	13	12	13	13	10
Halibut	\$172,817	\$235,932	\$366,842	\$139,159	\$393,436	\$570,647	\$492,347	\$491,559
IFQ Sablefish	-	\$194,147	\$36,972	-	-	\$51,364	-	-
Salmon Seine	\$5,936,908	\$1,269,500	\$1,491,812	\$2,545,118	\$3,518,905	\$1,722,654	\$830,588	\$655,015
Salmon Drift Net	\$1,346,377	\$613,653	\$776,990	\$649,296	\$686,732	\$625,102	\$229,474	\$170,731
Salmon Set Net	\$661,867	\$246,190	\$432,238	\$469,061	\$624,102	\$469,147	\$207,095	\$200,148
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	\$85,946	\$299,056	\$120,329	\$59,150	\$113,019	\$61,207	\$34,735	-
Groundfish Longline	\$2,691	\$20,025	-	-	-	-	-	-
Groundfish Jig	\$12,525	\$2,989	-	\$2,580	-	-	\$16,966	\$58,243
Groundfish Pot	\$637,383	\$745,683	\$1,206,941	\$1,175,963	\$1,186,270	\$1,493,210	\$1,085,029	\$1,049,864
Groundfish Trawl	\$526,003	\$669,373	\$1,009,479	\$934,113	\$1,408,572	\$1,111,359	\$768,150	\$533,677
Tanner Crab	\$1,029,391	\$566,939	\$938,114	\$1,261,233	\$1,138,206	\$1,068,645	\$475,825	\$333,995
King Crab	\$237,113	\$889,397	\$578,134	\$412,100	\$1,322,366	\$711,145	\$644,744	\$618,668
All Other Fish/ Shellfish	\$170,697	-	-	-	-	-	-	-
Total (All Species)	\$10,819,718	\$5,752,883	\$6,957,851	\$7,647,772	\$10,391,608	\$7,884,480	\$4,784,955	\$4,111,900

Source: Commercial Fishing Entry Commission "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City" from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

Table 4-14 provides estimates of the percentage of non-confidential gross revenue for King Cove permit holders by species group by year for the period 1995 through 2002. This provides one type of fundamental measure of “dependency” of community harvesters on particular fisheries. As shown, seine caught salmon, pot caught groundfish, and trawl caught groundfish have consistently comprised more than 10 percent of total estimated gross revenue over the most recent 7 years shown, with seine salmon going over 30 percent some years and pot groundfish going over 20 percent some years. For each of the most recent 7 years shown, either tanner or king crab has accounted for over 10 percent of total estimated gross earnings and for each of these years the estimated gross revenue for tanner and king crab combined has exceeded 20 percent of the total estimated gross revenue for local permit holders.

Table 4-14. Percentage of Gross Revenue Estimates for King Cove Permit Holders by Species Group, 1995-2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
Fishery	Estimated Gross Revenue							
Halibut	172,817	235,932	366,842	139,159	393,436	570,647	492,347	491,559
IFQ Sablefish	-	194,147	36,972	-	-	51,364	-	-
Salmon Seine	5,936,908	1,269,500	1,491,812	2,545,118	3,518,905	1,722,654	830,588	655,015
Salmon Drift Net	1,346,377	613,653	776,990	649,296	686,732	625,102	229,474	170,731
Salmon Set Net	661,867	246,190	432,238	469,061	624,102	469,147	207,095	200,148
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	85,946	299,056	120,329	59,150	113,019	61,207	34,735	-
Groundfish Longline	2,691	20,025	-	-	-	-	-	-
Groundfish Jig	12,525	2,989	-	2,580	-	-	16,966	58,243
Groundfish Pot	637,383	745,683	1,206,941	1,175,963	1,186,270	1,493,210	1,085,029	1,049,864
Groundfish Trawl	526,003	669,373	1,009,479	934,113	1,408,572	1,111,359	768,150	533,677
Tanner Crab	1,029,391	566,939	938,114	1,261,233	1,138,206	1,068,645	475,825	333,995
King Crab	237,113	889,397	578,134	412,100	1,322,366	711,145	644,744	618,668
All Other Fish/Shellfish	170,697	-	-	-	-	-	-	-
Total (All Species)	10,819,718	5,752,883	6,957,851	7,647,772	10,391,608	7,884,480	4,784,955	4,111,900
Fishery	Percentage of Estimated Gross Revenue							
Halibut	1.60%	4.10%	5.27%	1.82%	3.79%	7.24%	10.29%	11.95%
IFQ Sablefish	-	3.37%	0.53%	-	-	0.65%	-	-
Salmon Seine	54.87%	22.07%	21.44%	33.28%	33.86%	21.85%	17.36%	15.93%
Salmon Drift Net	12.44%	10.67%	11.17%	8.49%	6.61%	7.93%	4.80%	4.15%
Salmon Set Net	6.12%	4.28%	6.21%	6.13%	6.01%	5.95%	4.33%	4.87%
Salmon Other Gear	-	-	-	-	-	-	-	-
Herring	0.79%	5.20%	1.73%	0.77%	1.09%	0.78%	0.73%	-
Groundfish Longline	0.02%	0.35%	-	-	-	-	-	-
Groundfish Jig	0.12%	0.05%	-	0.03%	-	-	0.35%	1.42%
Groundfish Pot	5.89%	12.96%	17.35%	15.38%	11.42%	18.94%	22.68%	25.53%
Groundfish Trawl	4.86%	11.64%	14.51%	12.21%	13.55%	14.10%	16.05%	12.98%
Tanner Crab	9.51%	9.85%	13.48%	16.49%	10.95%	13.55%	9.94%	8.12%
King Crab	2.19%	15.46%	8.31%	5.39%	12.73%	9.02%	13.47%	15.05%
All Other Fish/Shellfish	1.58%	-	-	-	-	-	-	-
Total (All Species)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Commercial Fishing Entry Commission “Permit and Fishing Activity by Year, State, Census Division, or Alaskan City” from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

An important factor in characterizing the economic relationship of the local harvesters to the larger economy of the community is the pattern of landings associated with local vessels and permits. When a vessel owner or permit holder delivers catch to processors inside their home community, revenues will accrue to that community in different ways than if local vessel or permit holders deliver to processors outside of their home community (that is, to processors located in other communities). This would include both tax revenue accruing to local jurisdictions as well private sector economic benefits deriving from activities related to the deliveries, such as processing, shipping, support service demand, and the like.

Table 4-15 provides data on volume and value of landings made inside and outside the community by King Cove vessel owners for the years 1995 through 2002, and Table 4-16 provides similar information for local permit holders. As shown, for vessel owners, estimated earnings for landings inside the community outpaced estimated earnings for landings made outside the community by a factor of 2 or more for every year except for 2002. In 2000 and 2001, estimated earnings for landings inside the community exceeded estimated earnings for landings made outside the community more than four-fold. For 2002, however, estimated earnings for landings made outside the community exceeded estimated earnings for landings made inside the community. This same pattern holds true for local resident permit holders as well as local resident vessel owners.

Table 4-15. Value of Landings by King Cove Vessel Owners—Summary, 1995-2002

Year	Landing Location	Pounds	Estimated Gross Earnings
1995	Landed in Community	24,925,661	\$6,250,844
	Landed Outside Community	2,365,677	\$3,265,442
	Total	27,291,338	\$9,516,286
1996	Landed in Community	12,039,803	\$2,705,688
	Landed Outside Community	2,646,794	\$1,988,358
	Total	14,686,597	\$4,694,045
1997	Landed in Community	19,487,490	\$4,322,353
	Landed Outside Community	1,700,148	\$1,199,486
	Total	21,187,638	\$5,521,839
1998	Landed in Community	22,002,862	\$4,563,849
	Landed Outside Community	5,981,587	\$2,165,145
	Total	27,984,449	\$6,728,995
1999	Landed in Community	18,824,251	\$5,709,153
	Landed Outside Community	2,245,031	\$2,069,164
	Total	21,069,282	\$7,778,317
2000	Landed in Community	12,954,544	\$3,865,959
	Landed Outside Community	1,701,870	\$966,152
	Total	14,656,414	\$4,832,110
2001	Landed in Community	14,743,799	\$2,915,111
	Landed Outside Community	938,047	\$546,544
	Total	15,681,846	\$3,461,655
2002	Landed in Community	6,492,678	\$1,347,698
	Landed Outside Community	5,640,440	\$1,522,930
	Total	12,133,118	\$2,870,628

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 4-16. Value of Landings by King Cove Permit Holders—Summary, 1995-2002

Year	Landing Location	Pounds	Estimated Gross Earnings
1995	Landed in Community	26,994,868	\$6,797,751
	Landed Outside Community	1,964,307	\$2,391,000
	Total	28,959,175	\$9,188,751
1996	Landed in Community	12,360,746	\$2,875,249
	Landed Outside Community	2,370,781	\$1,347,686
	Total	14,731,527	\$4,222,935
1997	Landed in Community	19,256,215	\$4,436,308
	Landed Outside Community	3,133,072	\$2,546,251
	Total	22,389,287	\$6,982,559
1998	Landed in Community	23,993,556	\$5,711,189
	Landed Outside Community	3,252,387	\$2,228,996
	Total	27,245,943	\$7,940,184
1999	Landed in Community	20,961,350	\$7,462,582
	Landed Outside Community	3,153,052	\$3,378,645
	Total	24,114,402	\$10,841,227
2000	Landed in Community	13,501,977	\$4,160,540
	Landed Outside Community	1,726,499	\$1,077,788
	Total	15,228,476	\$5,238,328
2001	Landed in Community	15,064,841	\$3,545,419
	Landed Outside Community	1,066,327	\$652,468
	Total	16,131,168	\$4,197,887
2002	Landed in Community	6,973,253	\$1,434,716
	Landed Outside Community	6,536,466	\$1,803,588
	Total	13,509,719	\$3,238,304

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 4-17 provides a detailed breakout by species group (to the extent possible given confidentiality restraints) by year for landings within the community by King Cove vessel owners, and Table 4-18 provides parallel information for landings these vessel owners made to other communities outside of King Cove. Table 4-19 displays detailed information by species group (again, to the extent possible given confidentiality restraints) by year for landings by permit holders within the community, and Table 4-20 provides parallel information for landings made outside the community. For all of these tables, aggregations vary by year, and totals do not necessarily match those provided in previously presented summary tables, due to confidentiality restrictions.

Table 4-17. Landings by King Cove Vessel Owners—Detail of Landings in Community, 1995-2002

Permit Type	Species	Year							
		1995	1996	1997	1998	1999	2000	2001	2002
Landed in Community, Tons									
Halibut/Sablefish/Herring (All Gears)/ King Crab/Tanner Crab/Groundfish (All Gears)/Miscellaneous Shellfish and Other Species	ALL	1,705	48	3,432	3,008	203	144	2,023	-
Groundfish-Jig	ALL	-	-	-	-	-	-	-	58
Groundfish-Pot	ALL	1,313	1,362	-	3,238	2,173	2,213	-	1,913
Groundfish-Trawl	ALL	-	2,640	3,289	-	3,067	1,580	1,680	1,275
King Crab/Tanner Crab	ALL	-	70	-	-	-	-	51	-
Salmon Drift Net	Chum Salmon	98	40	56	58	56	83	104	-
Salmon Drift Net	Coho Salmon	55	39	44	38	20	56	76	-
Salmon Drift Net	King Salmon	1	1	0	0	1	1	0	-
Salmon Drift Net	Pink Salmon	56	17	20	70	10	8	26	-
Salmon Drift Net	Sockeye Salmon	177	87	168	124	145	189	121	-
Salmon-Seine	Chum Salmon	1,708	602	741	352	459	854	1,116	-
Salmon-Seine	Coho Salmon	53	27	18	20	29	37	8	-
Salmon-Seine	King Salmon	18	2	3	1	5	3	0	-
Salmon-Seine	Pink Salmon	6,458	729	1,419	3,501	2,448	996	1,990	-
Salmon-Seine	Sockeye Salmon	617	241	389	415	797	313	110	-
Salmon-Set Net or Troll	Chum Salmon	28	21	28	18	-	-	17	-
Salmon-Set Net or Troll	Coho Salmon	14	12	27	13	-	-	2	-
Salmon-Set Net or Troll	King Salmon	0	0	0	-	-	-	-	-
Salmon-Set Net or Troll	Pink Salmon	77	33	13	73	-	-	22	-
Salmon-Set Net or Troll	Sockeye Salmon	82	48	98	73	-	-	27	-
Landed in Community, Estimated Gross Earnings (\$1000s)									
Halibut/Sablefish/Herring (All Gears)/ King Crab/Tanner Crab/Groundfish (All Gears)/Miscellaneous Shellfish and Other Species	ALL	769	33	1,437	880	306	154	999	-
Groundfish-Jig	ALL	-	-	-	-	-	-	-	25
Groundfish-Pot	ALL	459	477	-	1,033	1,015	1,327	-	795
Groundfish-Trawl	ALL	-	760	1,054	-	1,340	946	742	528
King Crab/Tanner Crab	ALL	-	534	-	-	-	-	138	-
Salmon Drift Net	Chum Salmon	49	7	11	15	12	19	24	-
Salmon Drift Net	Coho Salmon	47	28	44	26	13	30	25	-
Salmon Drift Net	King Salmon	2	0	0	0	1	1	0	-
Salmon Drift Net	Pink Salmon	18	2	4	19	2	2	5	-
Salmon Drift Net	Sockeye Salmon	376	155	323	302	340	344	130	-
Salmon-Seine	Chum Salmon	734	100	176	99	110	205	268	-
Salmon-Seine	Coho Salmon	45	18	10	12	16	21	3	-
Salmon-Seine	King Salmon	26	2	3	1	4	3	0	-
Salmon-Seine	Pink Salmon	2,118	93	301	1,001	671	257	426	-
Salmon-Seine	Sockeye Salmon	1,382	394	735	965	1,879	557	117	-
Salmon-Set Net or Troll	Chum Salmon	14	4	5	5	-	-	4	-
Salmon-Set Net or Troll	Coho Salmon	12	8	26	9	-	-	1	-
Salmon-Set Net or Troll	King Salmon	1	0	0	-	-	-	-	-
Salmon-Set Net or Troll	Pink Salmon	24	4	3	19	-	-	5	-
Salmon-Set Net or Troll	Sockeye Salmon	175	85	189	178	-	-	29	-

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 4-18. Landings by King Cove Vessel Owners—Detail of Landings Outside Community, 1995-2002

Permit Type	Species	Year							
		1995	1996	1997	1998	1999	2000	2001	2002
Landed Outside Community, Tons									
Herring (All Gears)/Halibut/Groundfish (All Gears)/Salmon (All Gears)/King Crab/Tanner Crab/Miscellaneous Shellfish and Other Species	ALL	454	600	409	1,010	844	247	389	202
Groundfish-Trawl/Groundfish-Pot	ALL	32	228	50	1,741	-	359	-	107
Halibut	ALL	35	39	70	83	102	104	-	-
Salmon Drift Net	Chum Salmon	33	14	11	12	11	9	-	113
Salmon Drift Net	Coho Salmon	6	4	1	9	3	12	-	30
Salmon Drift Net	King Salmon	1	1	2	1	0	0	-	0
Salmon Drift Net	Pink Salmon	1	3	3	0	0	3	-	37
Salmon Drift Net	Sockeye Salmon	580	248	252	135	162	118	80	207
Salmon-Seine/Salmon-Set Net or Troll	Chum Salmon	3	46	-	-	-	-	-	787
Salmon-Seine/Salmon-Set Net or Troll	Coho Salmon	-	-	-	-	-	-	-	12
Salmon-Seine/Salmon-Set Net or Troll	King Salmon	0	0	-	-	-	-	-	1
Salmon-Seine/Salmon-Set Net or Troll	Pink Salmon	12	132	-	-	-	-	-	937
Salmon-Seine/Salmon-Set Net or Troll	Sockeye Salmon	24	9	53	-	-	-	-	386
Landed Outside Community, Estimated Gross Earnings (\$1000s)									
Herring (All Gears)/Halibut/Groundfish (All Gears)/Salmon (All Gears)/King Crab/Tanner Crab/Miscellaneous Shellfish and Other Species	ALL	1,788	1,212	296	1,384	1,342	64	476	484
Groundfish-Trawl/Groundfish-Pot	ALL	29	135	44	292	-	224	-	53
Halibut	ALL	132	153	281	150	368	479	-	-
Salmon Drift Net	Chum Salmon	17	2	2	3	2	2	-	25
Salmon Drift Net	Coho Salmon	5	3	1	6	2	6	-	8
Salmon Drift Net	King Salmon	2	1	2	1	0	0	-	0
Salmon Drift Net	Pink Salmon	0	0	1	0	0	1	-	5
Salmon Drift Net	Sockeye Salmon	1,232	442	483	329	355	190	147	218
Salmon-Seine/Salmon-Set Net or Troll	Chum Salmon	1	8	-	-	-	-	-	158
Salmon-Seine/Salmon-Set Net or Troll	Coho Salmon	-	-	-	-	-	-	-	3
Salmon-Seine/Salmon-Set Net or Troll	King Salmon	0	0	-	-	-	-	-	1
Salmon-Seine/Salmon-Set Net or Troll	Pink Salmon	4	17	-	-	-	-	-	158
Salmon-Seine/Salmon-Set Net or Troll	Sockeye Salmon	55	15	89	-	-	-	-	410

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 4-19. Landings by King Cove Permit Holders—Detail of Landings in Community, 1995-2002

Permit Type	Species	Year							
		1995	1996	1997	1998	1999	2000	2001	2002
Landed in Community, Tons									
Halibut/Sablefish/Herring (All Gears)/King Crab/Tanner Crab/Groundfish (All Gears)/Miscellaneous Shellfish and Other Species	All	25	49	231	4,072	309	2,403	22	2,178
King Crab/Tanner Crab	All	50	108	30	-	-	-	114	-
Groundfish-Trawl	All	1,644	2,328	3,124	3,190	3,397	1,586	1,740	1,308
Groundfish-Pot	All	1,617	1,657	3,246	-	2,133	-	2,217	-
Salmon-Seine	Chum Salmon	1,834	632	735	339	489	814	1,111	-
Salmon-Seine	Coho Salmon	45	28	18	19	31	35	7	-
Salmon-Seine	King Salmon	18	2	3	1	5	3	0	-
Salmon-Seine	Pink Salmon	7,015	784	1,370	3,342	2,674	961	1,760	-
Salmon-Seine	Sockeye Salmon	688	268	398	403	849	306	104	-
Salmon Drift Net	Chum Salmon	87	38	50	52	54	84	96	-
Salmon Drift Net	Coho Salmon	51	39	42	36	19	56	71	-
Salmon Drift Net	King Salmon	1	0	0	0	1	1	0	-
Salmon Drift Net	Pink Salmon	51	17	18	65	8	8	23	-
Salmon Drift Net	Sockeye Salmon	155	74	140	107	139	204	112	-
Salmon Drift Net/Salmon-Set Net or Troll	All	-	-	-	-	-	0	-	-
Salmon-Set Net or Troll	Chum Salmon	28	28	37	42	64	66	35	-
Salmon-Set Net or Troll	Coho Salmon	10	16	33	25	6	34	3	-
Salmon-Set Net or Troll	King Salmon	0	0	0	0	0	-	-	-
Salmon-Set Net or Troll	Pink Salmon	80	48	18	153	81	40	50	-
Salmon-Set Net or Troll	Sockeye Salmon	97	65	132	150	223	151	67	-
Total		13,497	6,180	9,628	11,997	10,481	6,751	7,532	3,487
Landed in Community, Estimated Gross Earnings (\$1000s)									
King Crab/Tanner Crab/Groundfish (All Gears)	All	8	37	217	2,025	1,277	1,459	11	905
King Crab/Tanner Crab	All	313	619	197	-	-	-	653	-
Groundfish-Pot	All	526	669	1,009	934	1,403	950	768	530
Groundfish-Pot	All	568	580	1,158	-	996	-	1,094	-
Salmon-Seine	Chum Salmon	789	105	175	95	117	195	267	-
Salmon-Seine	Coho Salmon	39	19	10	11	17	20	2	-
Salmon-Seine	King Salmon	26	2	3	1	5	2	0	-
Salmon-Seine	Pink Salmon	2,301	100	291	956	733	248	377	-
Salmon-Seine	Sockeye Salmon	1,541	437	753	938	2,003	545	110	-
Salmon Drift Net	Chum Salmon	44	6	9	14	12	20	22	-
Salmon Drift Net	Coho Salmon	43	28	42	24	12	30	24	-
Salmon Drift Net	King Salmon	2	0	0	0	1	1	0	-
Salmon Drift Net	Pink Salmon	16	2	4	17	2	2	5	-
Salmon Drift Net	Sockeye Salmon	328	132	269	262	325	371	121	-
Salmon Drift Net/Salmon-Set Net or Troll	All	-	-	-	-	-	0	-	-
Salmon-Set Net or Troll	Chum Salmon	14	5	7	11	14	15	8	-
Salmon-Set Net or Troll	Coho Salmon	9	11	32	17	4	19	1	-
Salmon-Set Net or Troll	King Salmon	0	0	0	0	0	-	-	-
Salmon-Set Net or Troll	Pink Salmon	25	6	4	41	20	10	10	-
Salmon-Set Net or Troll	Sockeye Salmon	206	116	254	365	523	274	73	-
Total		6,798	2,875	4,436	5,711	7,463	4,161	3,545	1,435

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 4-20. Landings by King Cove Permit Holders—Detail of Landings Outside Community, 1995-2002

Permit Type	Species	Year							
		1995	1996	1997	1998	1999	2000	2001	2002
Landed Outside Community, Tons									
Groundfish-Pot	All	32	326	50	98	107	-	-	-
Salmon Drift Net	Chum Salmon	25	14	7	-	10	9	-	108
Salmon Drift Net	Coho Salmon	3	3	1	-	3	12	-	27
Salmon Drift Net	King Salmon	1	1	2	-	0	0	-	0
Salmon Drift Net	Pink Salmon	1	2	3	-	0	3	-	17
Salmon Drift Net	Sockeye Salmon	443	201	238	-	160	120	-	157
All Other Species	All	476	639	1,266	1,529	1,296	720	533	2,959
Total		982	1,185	1,567	1,626	1,577	863	533	3,268
Landed Outside Community, Estimated Gross Earnings (\$1000s)									
Groundfish-Pot	All	29	166	44	87	91	-	-	-
Salmon Drift Net	Chum Salmon	13	2	1	-	2	2	-	24
Salmon Drift Net	Coho Salmon	3	2	1	-	2	6	-	7
Salmon Drift Net	King Salmon	2	1	2	-	0	0	-	0
Salmon Drift Net	Pink Salmon	0	0	1	-	0	1	-	3
Salmon Drift Net	Sockeye Salmon	941	358	455	-	350	195	-	161
All Other Species	All	1,404	818	2,042	2,142	2,933	874	652	1,609
Total		2,391	1,348	2,546	2,229	3,379	1,078	652	1,804

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Communities also directly benefit from the harvest sector through participation of residents as crew members as well as through the engagement of vessel owners and permit holders. Beginning in 2000, the CFEC has produced estimates of crew members by community, based on the number of permit holders in the community, plus the community residents who have applied for a Crew Member License with the Alaska Department of Fish and Game (ADFG). (A more complete discussion of this methodology may be found in Appendix A.) Table 4-21 provides estimates of crew members for King Cove for the years 2000 through 2003. As shown, the total number of permit holders plus crew members is a substantial proportion of the community's population, indicative of the central place of fishing in the community and the fact that even individuals with steady employment in other economic sectors often take part in fishing at least on a part-time or episodic basis.

Table 4-21. Estimated Number of Permit Holders and Crew Members from King Cove 2000-2003

Year	Permit Holders	Crew Members	Total
2000	62	165	227
2001	CFEC did not develop this report for 2001		
2002	55	108	163
2003	54	110	164

Source: CFEC permit holder and crew member counts by census area and city of residence report, accessed via www.cfec.state.ak.us/Mnu_Summary_Info.htm.

Spatial Distribution of Harvester Effort

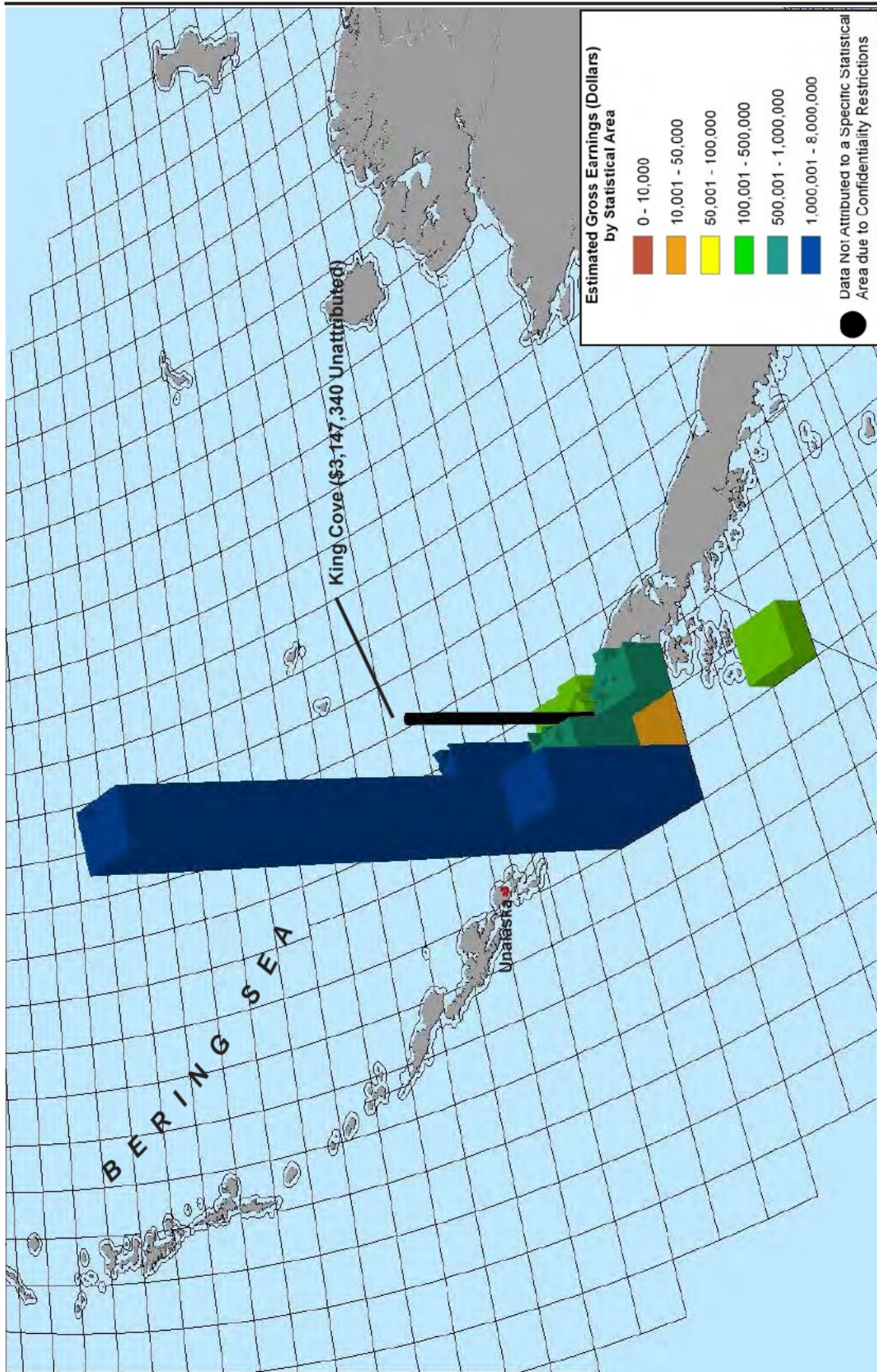
Figure KC-1 provides information on the spatial distribution of groundfish catch for vessels owned by King Cove residents for all gear types for the years 1995 through 2002. Figure KC-2, Figure KC-3, Figure KC-4, and Figure KC-5 show the spatial distribution of catch for groundfish in 2-year intervals for within this same overall time period. For some areas, catch could not be aggregated to 2-year intervals and maintain confidentiality, so Figure KC-6 and Figure KC-7 show this same type of information, but for those data that needed to be aggregated to 4-year intervals. These figures show a marked concentration of effort to the south of the community, with a secondary effort to the southeast, but with some activity taking place on the north side of the Alaska Peninsula. Figure KC-8, Figure KC-9, and Figure KC-10 show breakouts of groundfish catch by gear type (to the extent possible given confidentiality restrictions) for the most recent 2-year interval (2001-2002). These figures show the different patterns of effort by the trawl, pot, and other gear groups.

The next series of figures provides information on the spatial distribution of salmon catch for vessels owned by King Cove residents. Figure KC-11, shows the spatial distribution of salmon catch for vessels owned by King Cove residents for all gear types for the years 1995 through 2002. Figure KC-12, Figure KC-13, Figure KC-14, and Figure KC-15 show the spatial distribution of catch for salmon in 2-year intervals for within this same overall time period. Figure KC-16, Figure KC-17, and Figure KC-18 show breakouts of salmon catch by gear type (to the extent possible given confidentiality restrictions) for the most recent 2-year interval (2001-2002). These figures show the different patterns of effort by the drift net, seine, and set net gear groups.

Community Harvester Characterization

King Cove, as already noted, has a sizable residential fleet. Local vessels deliver primarily to the King Cove Peter Pan Seafoods shoreplant, but outside vessels deliver to this plant as well. Outside vessels also provide income and employment opportunities for King Cove residents, both in terms of support service opportunities (as discussed in a subsequent section) and in terms of direct fishery participation employment, as noted below. Peter Pan representatives report that they have designed their local processing operations around serving the smaller range of the catcher vessel fleet, and the fishery around the Pribilof Islands (Schwarzmilller and Sterling, personal communication, 2002).

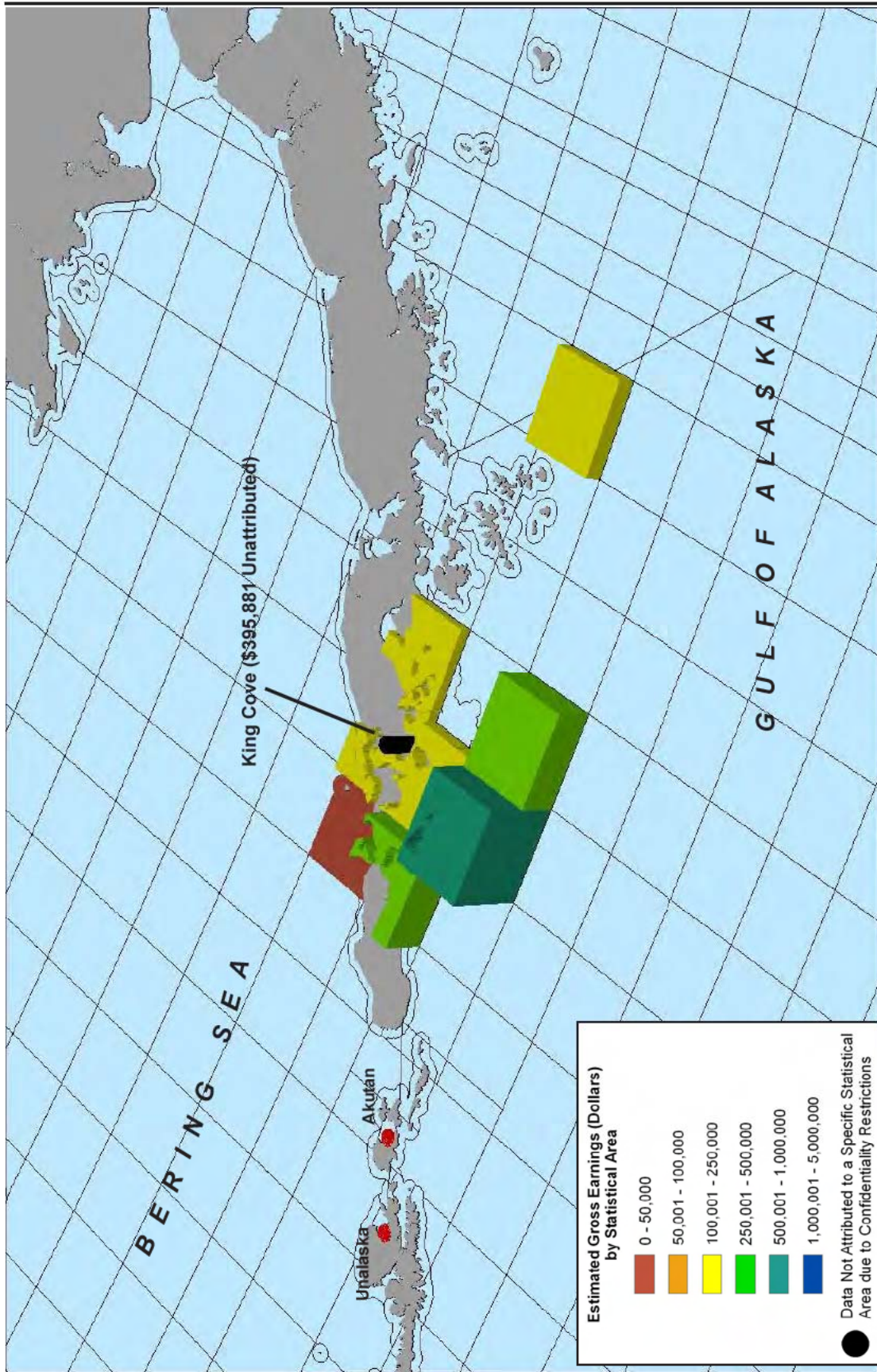
The local residential fleet in King Cove as a whole is primarily focused on salmon, with a secondary focus on cod. Within the overall fleet, however, there are several different types of vessels with different operational foci. According to local fishermen, there is currently (2004) only one vessel owned by a long-term community resident that is greater than 58 feet. Not only is this the only locally owned vessel larger than the 58-foot-limit boats that trawl, it is the single locally owned vessel that fishes Bering Sea crab. The next largest vessels in the community are a group of 58-foot-limit seiners. In interviews, local fishermen stated that there were either six or seven of these vessels owned by local residents. According to local fishermen, this fleet is characterized by “everybody does everything,” as, in addition to fishing salmon, these 58-foot vessels all trawl (or “drag”) for cod, and all pot for cod following the trawl season. (The local trawl fleet then consists of the seven or eight vessels in the community that are 58 feet or greater in length.) In addition to the versatile 58-footers, there are numerous smaller vessels, with a number of seiners in the 42- to 44-foot range that participate in a range of fisheries, and a range of smaller vessels that have a particular focus on



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-1
Total Commercial Groundfish Catch
For Vessels Local to King Cove
All Gear Types, 1995-2002

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Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-2
Commercial Groundfish Catch
For Vessels Local to King Cove
All Gear Types, 1995-1996

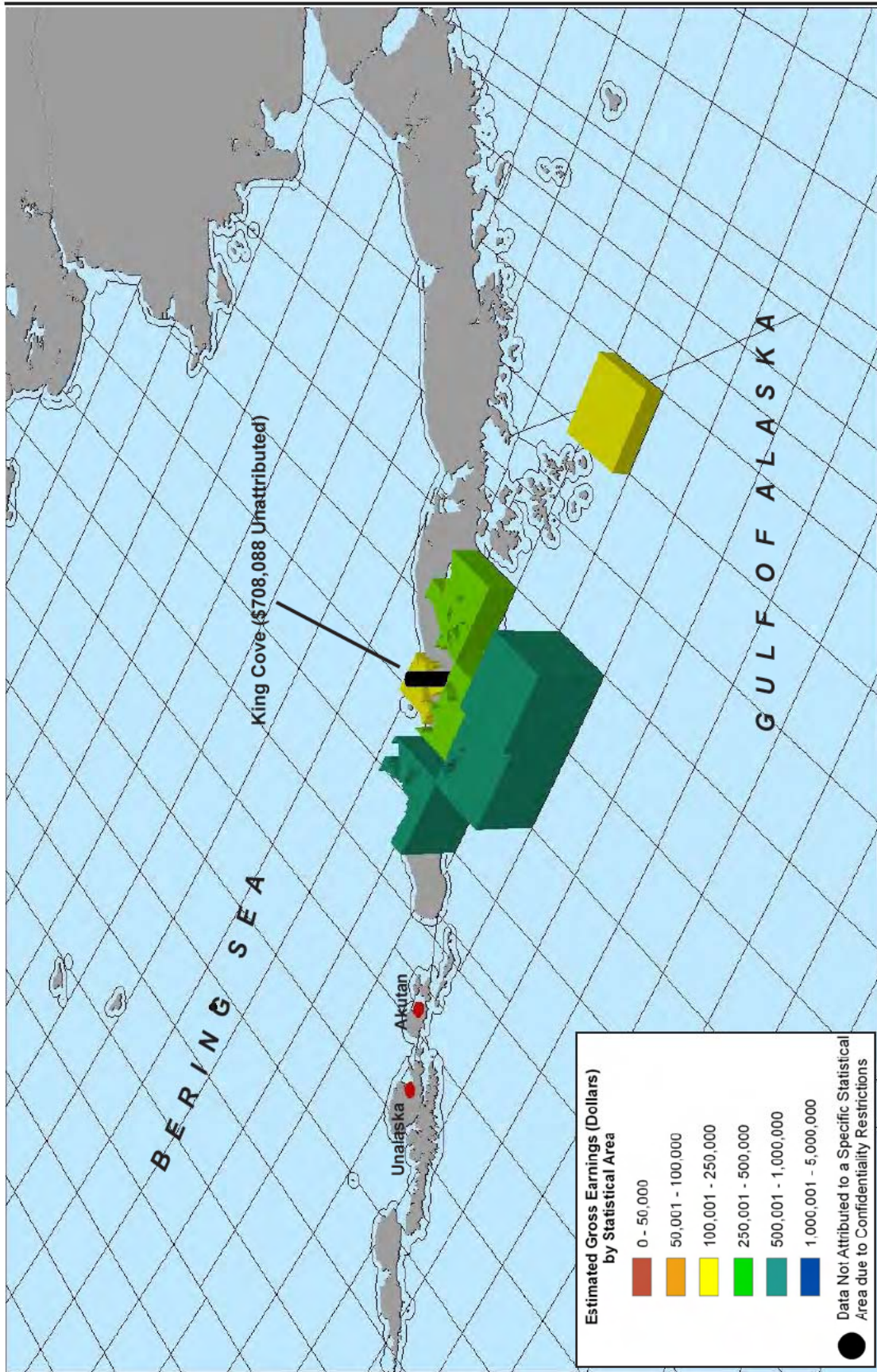
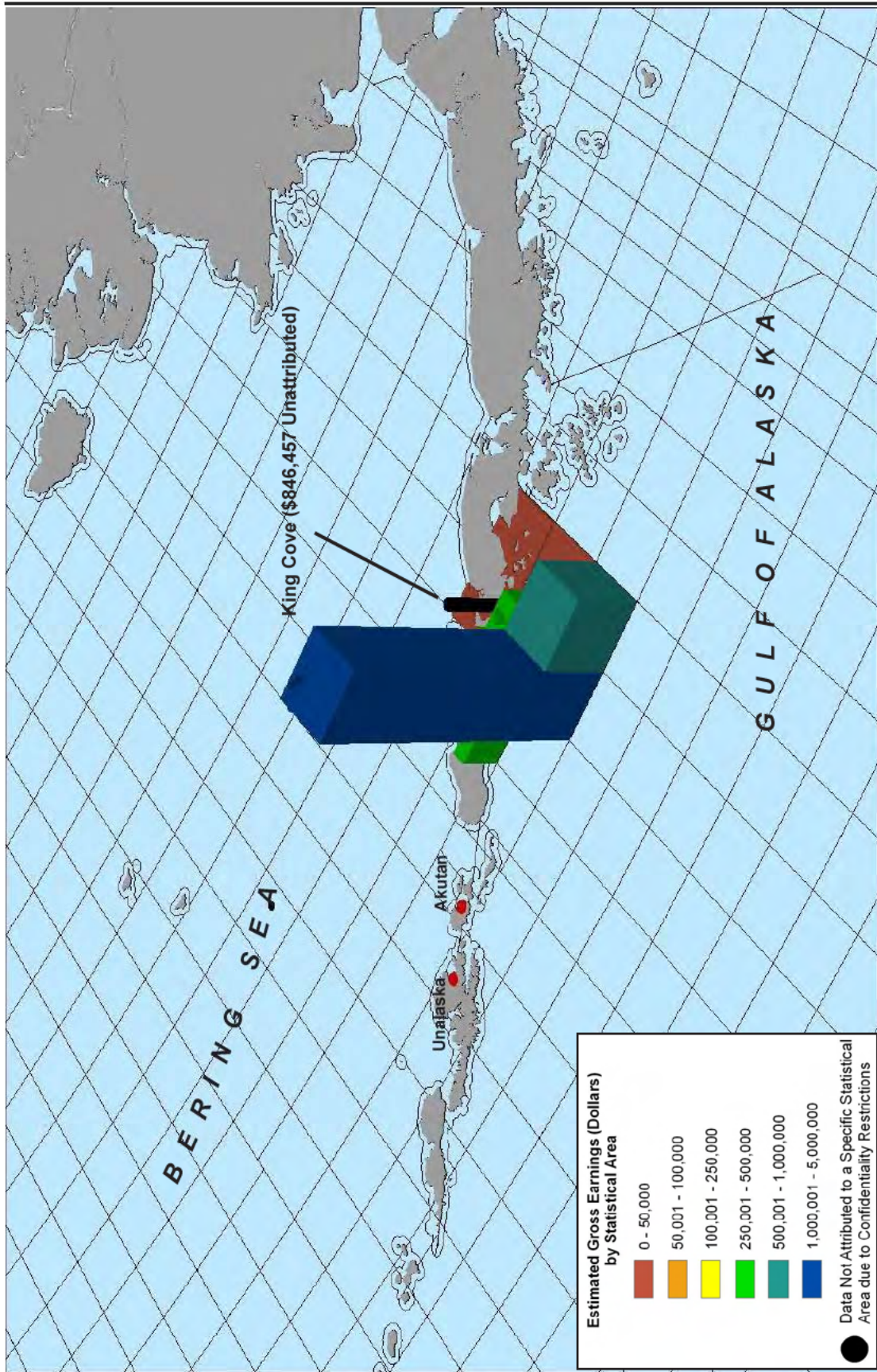
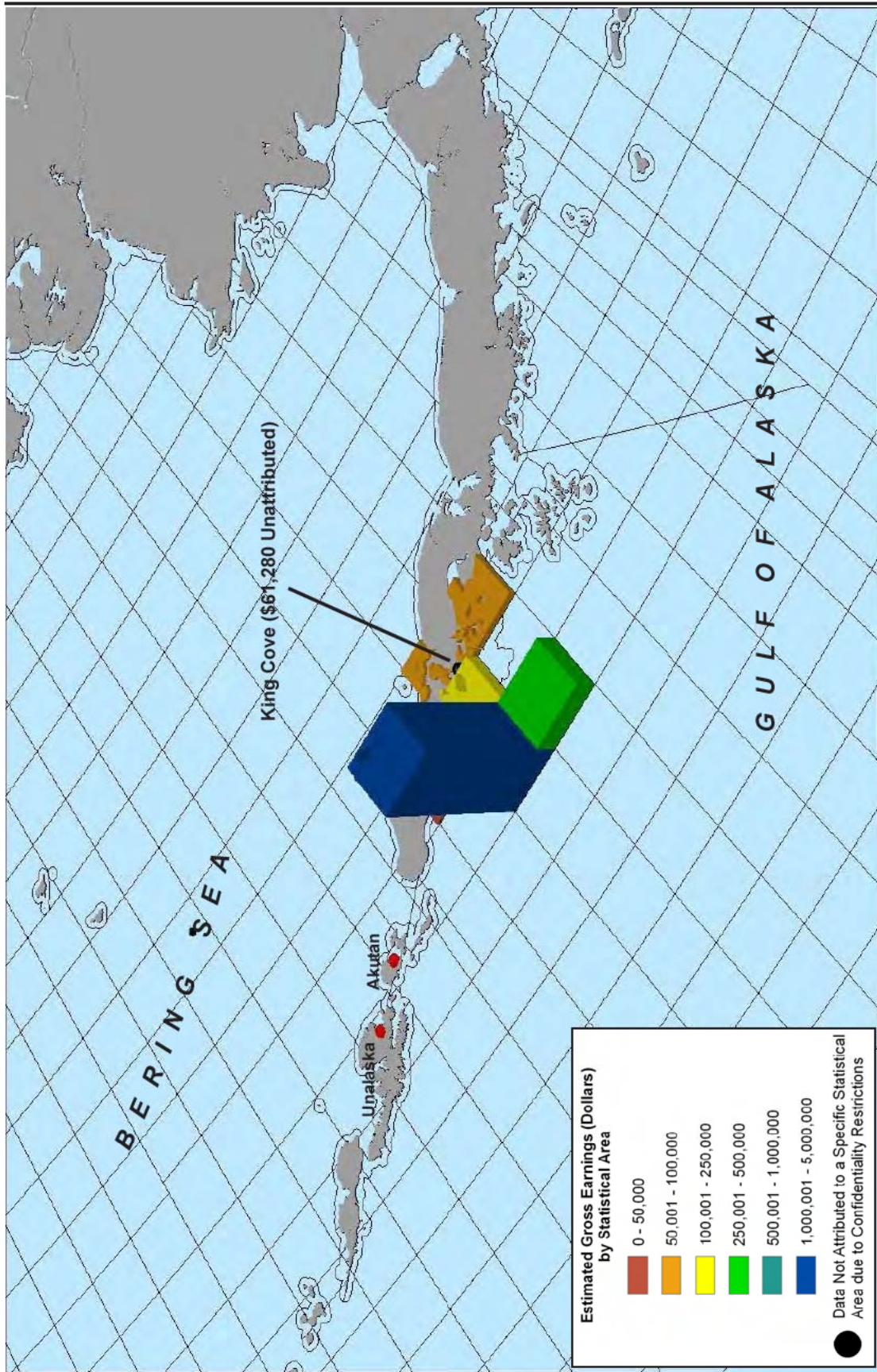


Figure KC-3
Commercial Groundfish Catch
For Vessels Local to King Cove
All Gear Types, 1997-1998



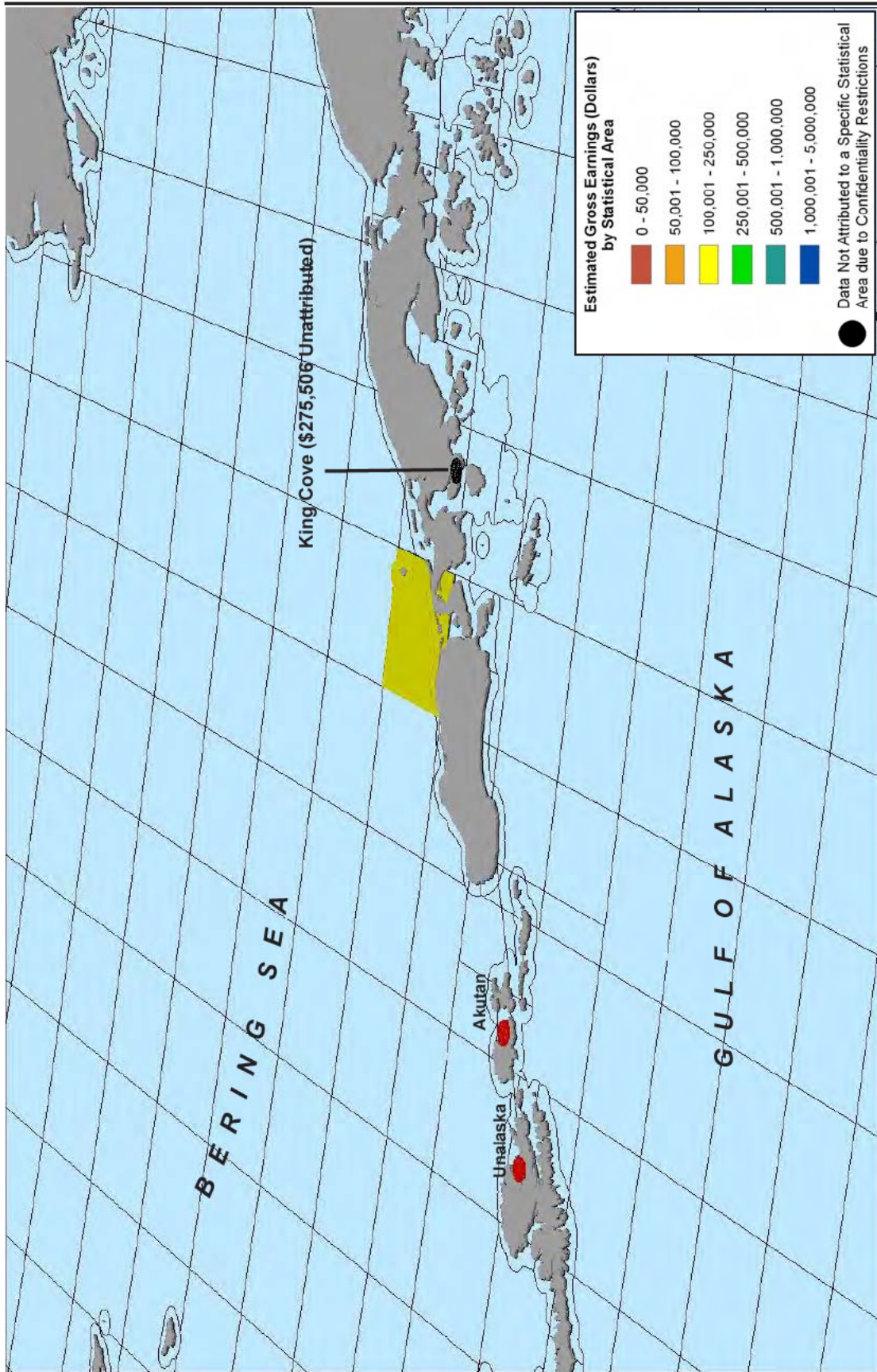
Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-4
Commercial Groundfish Catch
For Vessels Local to King Cove
All Gear Types, 1999-2000



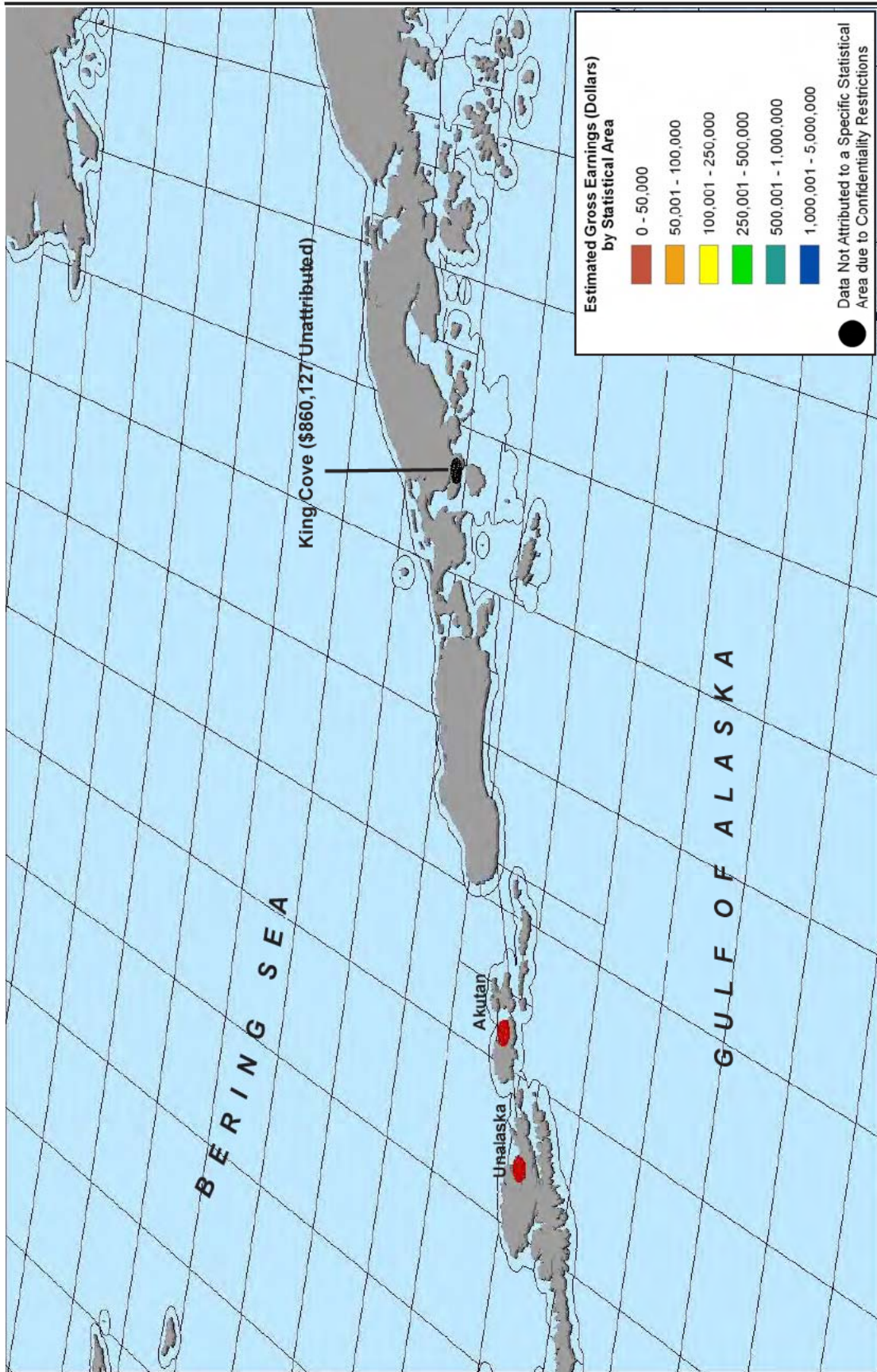
Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-5
Commercial Groundfish Catch
For Vessels Local to King Cove
All Gear Types, 2001-2002



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-6
Commercial Groundfish Catch
For Vessels Local to King Cove
All Gear Types, 1995-1998



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-7
Commercial Groundfish Catch
For Vessels Local to King Cove
All Gear Types, 1999-2002

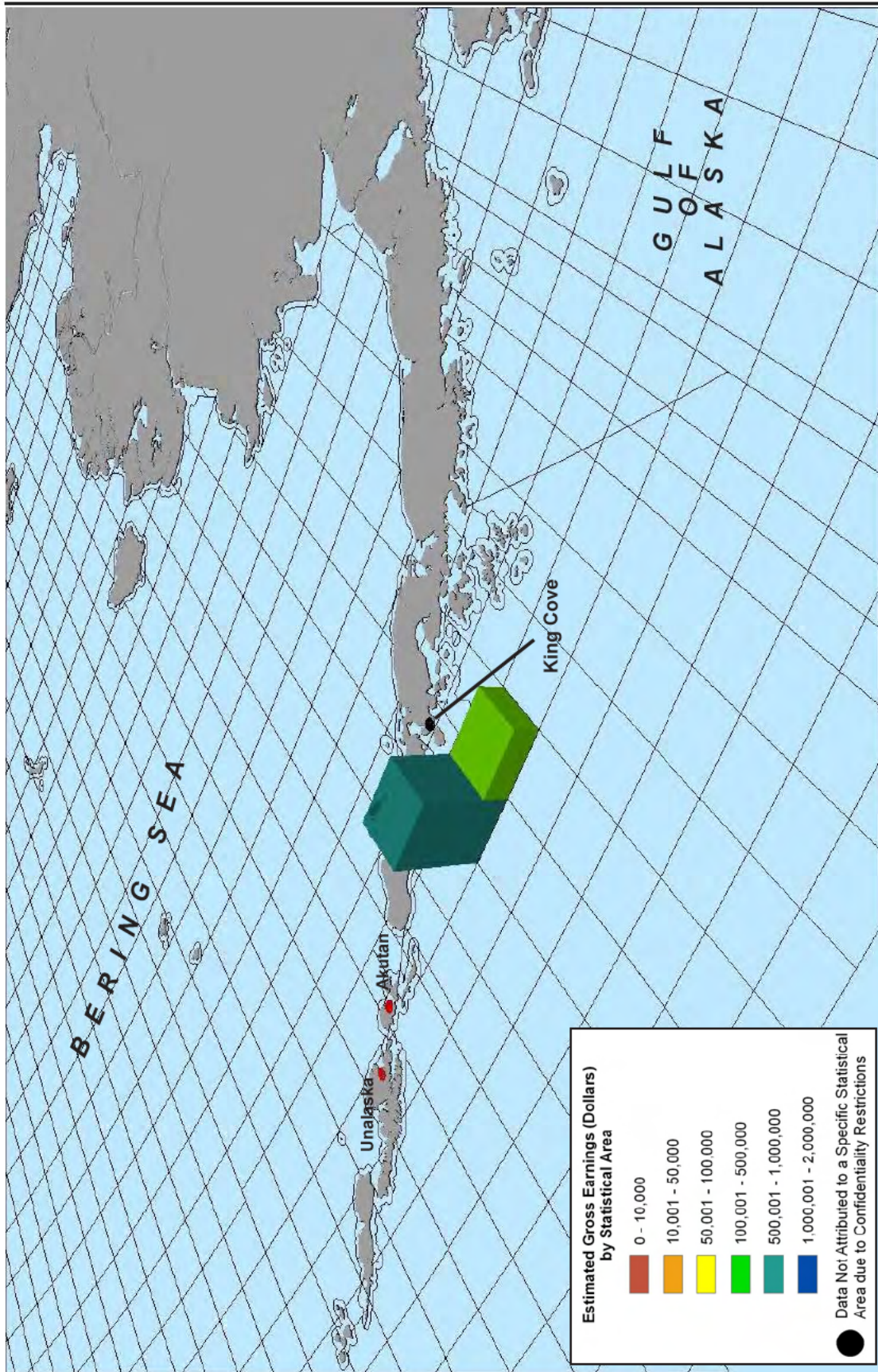


Figure KC-8
Commercial Groundfish Catch
From Vessels Local to King Cove
Trawl Gear Only, 2001-2002

Source: Northern Economics, Alaska Department of Fish and Game, ESRI

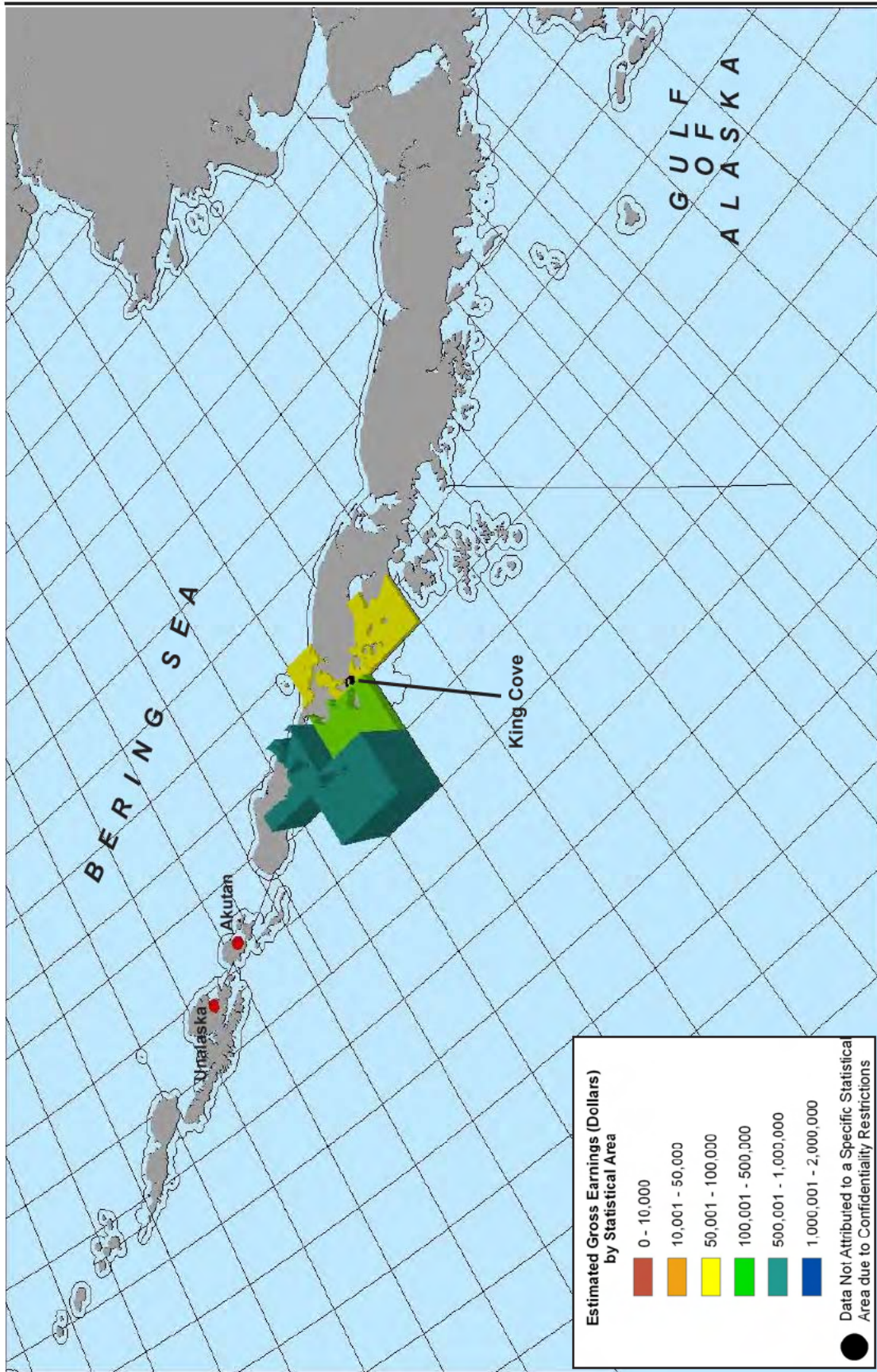
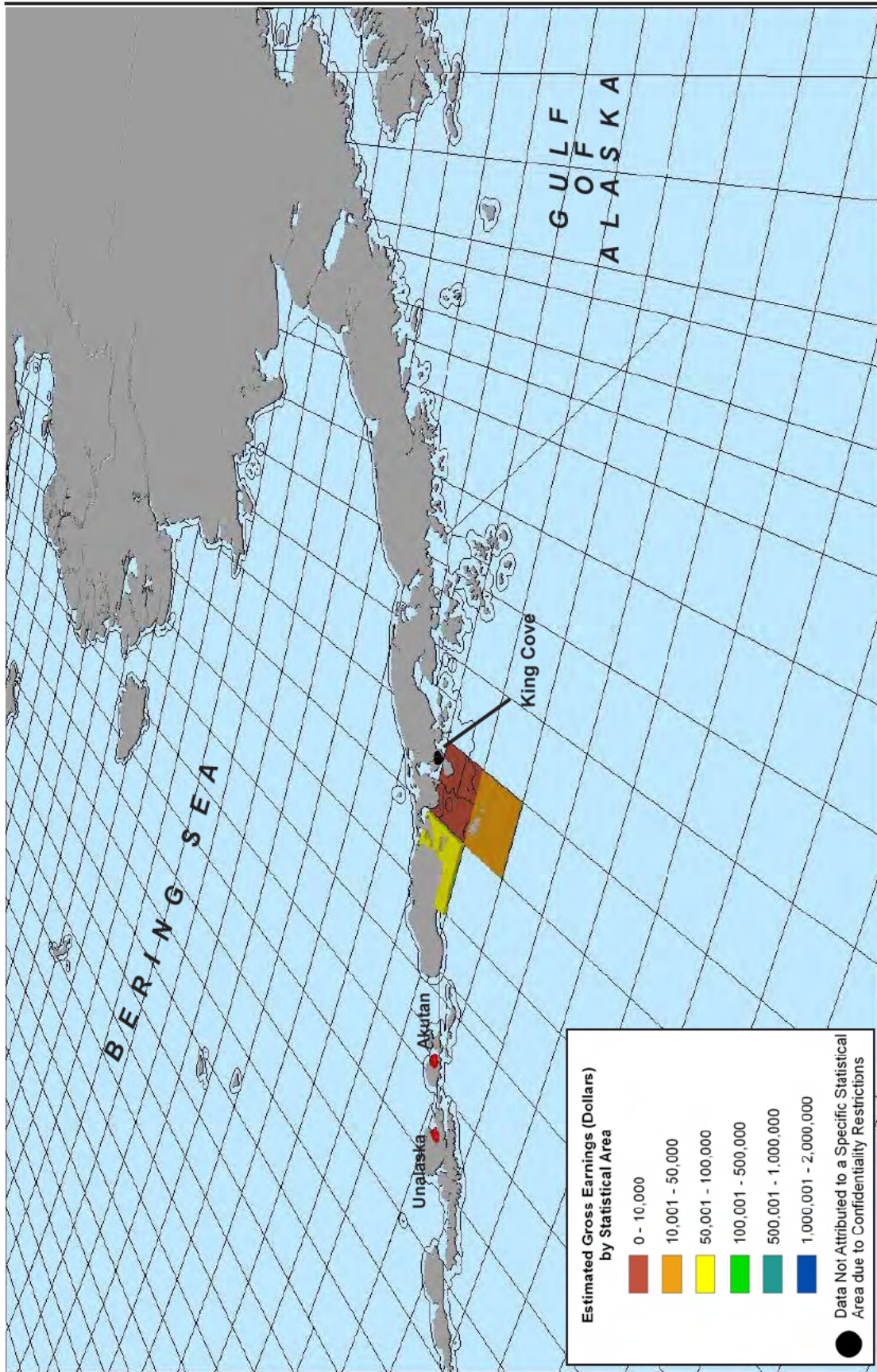


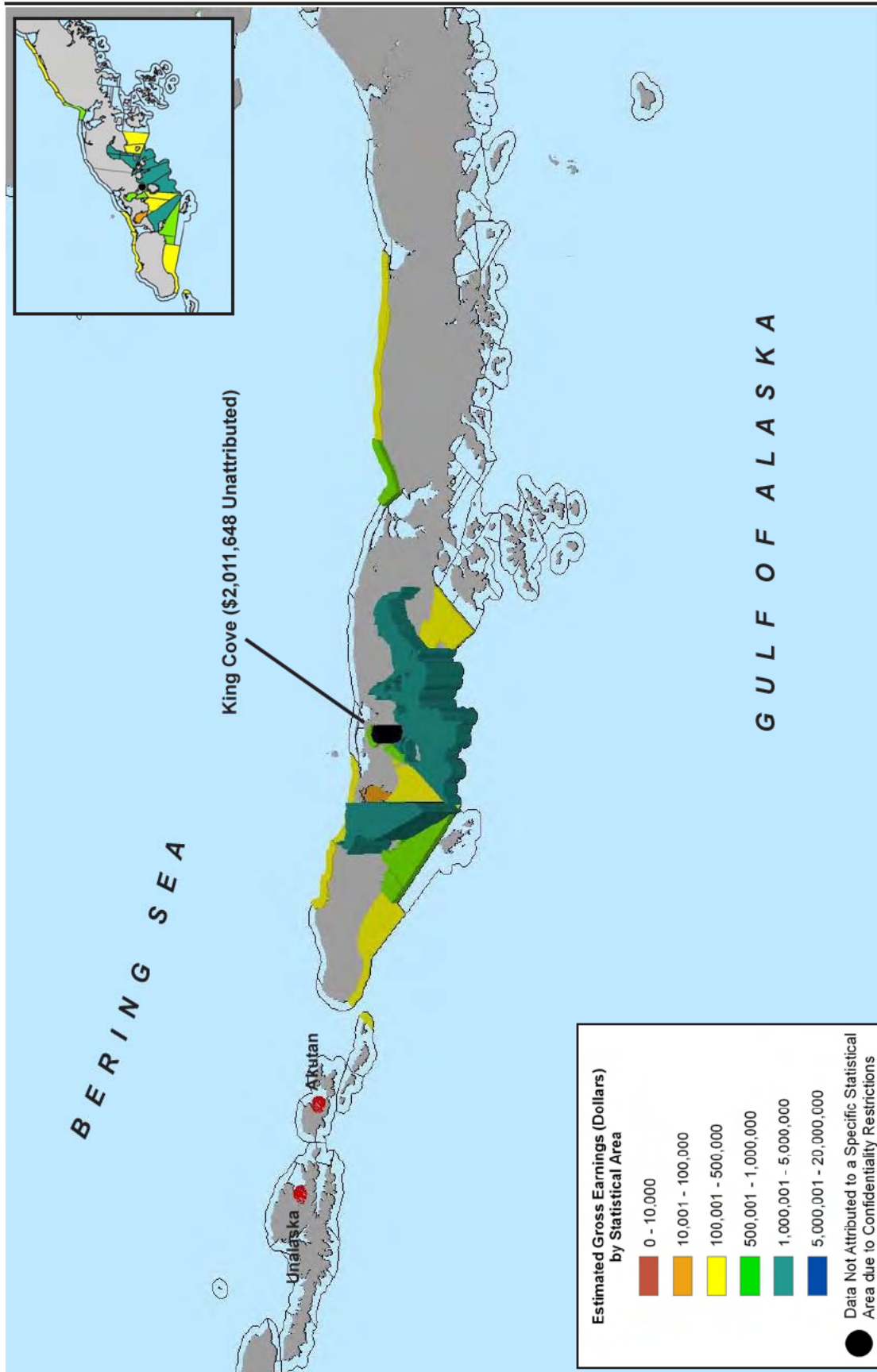
Figure KC-9
Commercial Groundfish Catch
From Vessels Local to King Cove
Pot Gear Only, 2001-2002



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-10
Commercial Groundfish Catch
For Vessels Local to King Cove
All Other Gear, 2001-2002

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Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-11
Total Commercial Salmon Catch
For Vessels Local to King Cove
All Gear Types, 1995-2002

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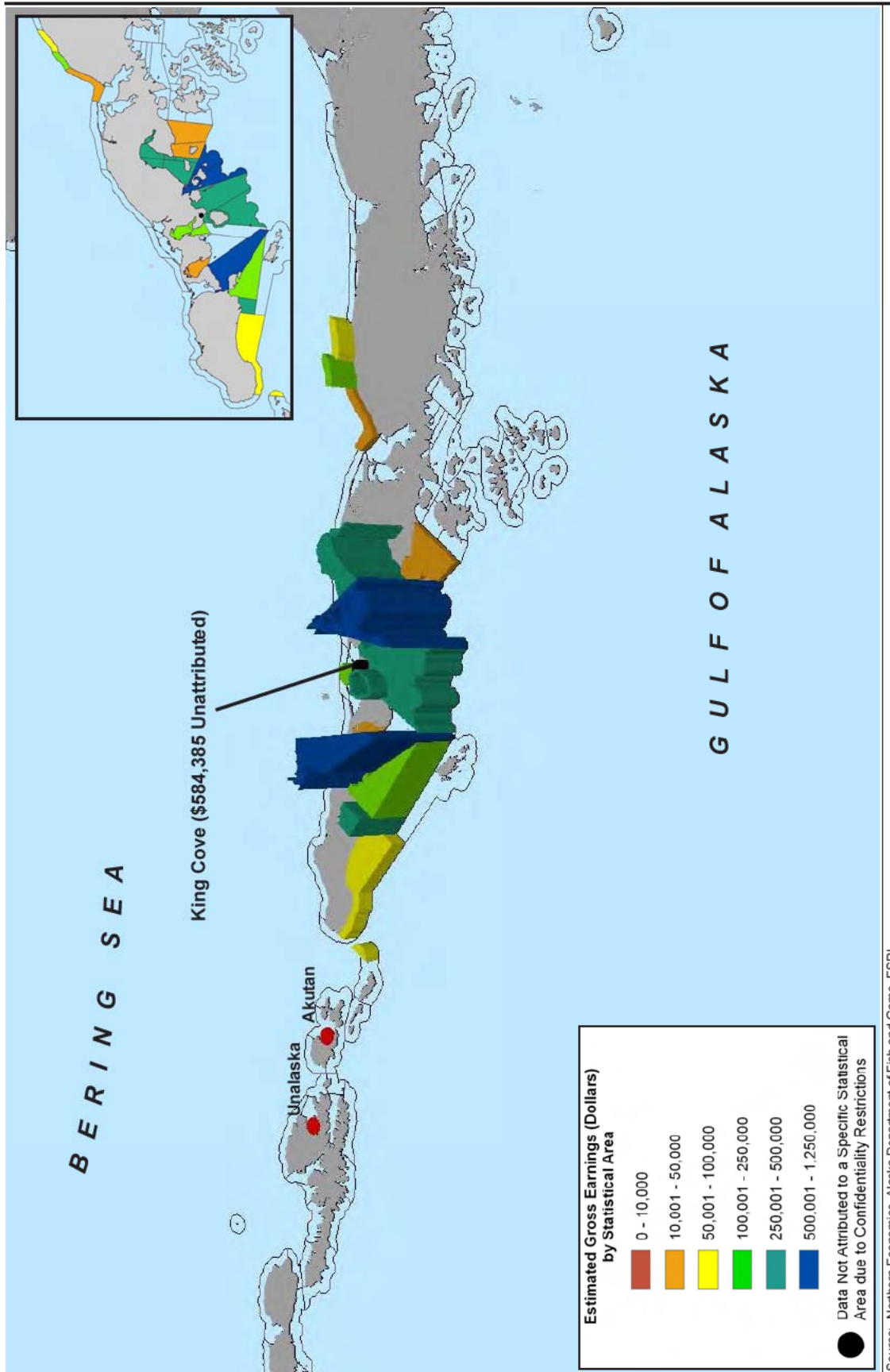
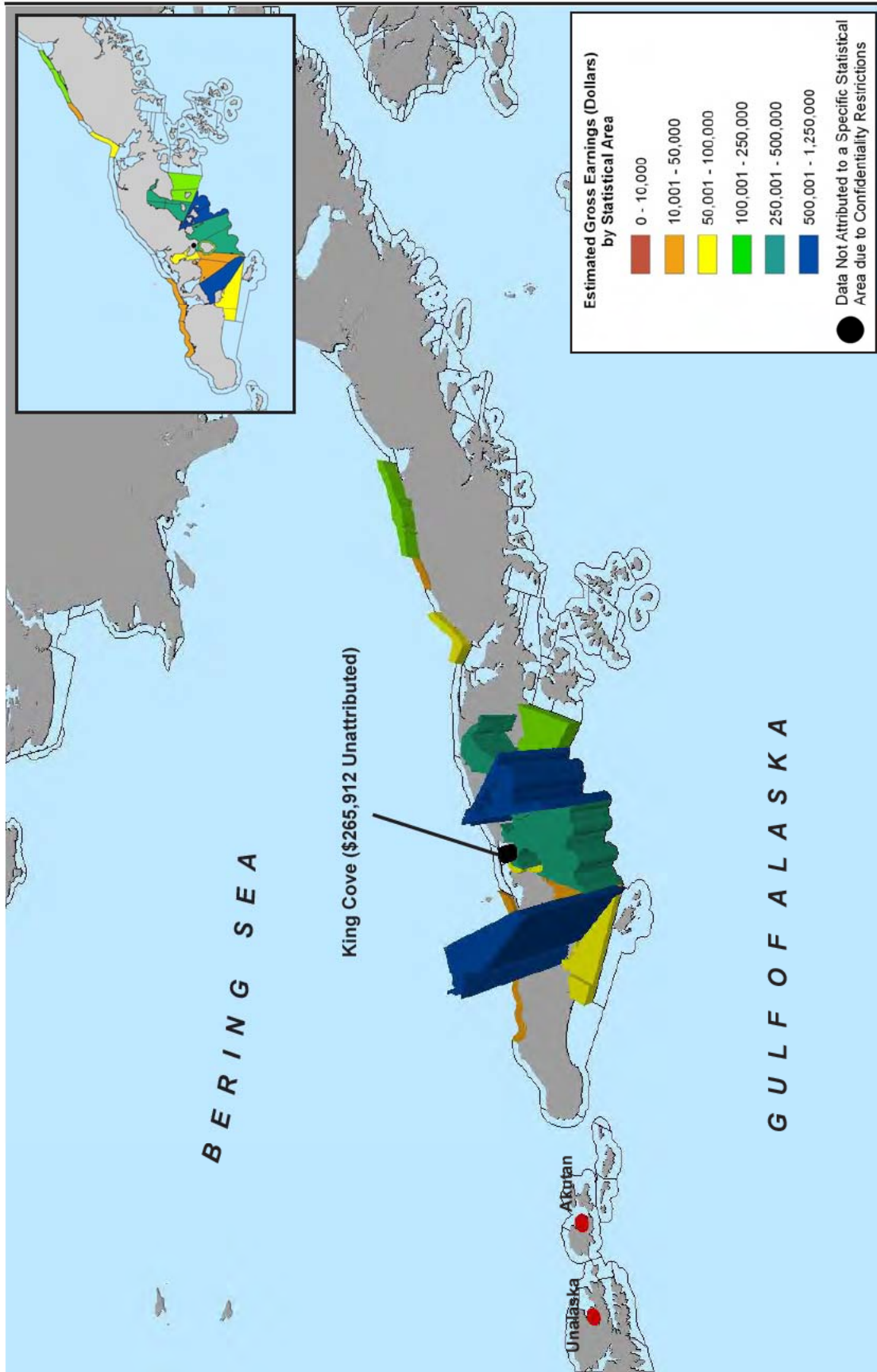


Figure KC-12
Commercial Salmon Catch
For Vessels Local to King Cove
All Gear Types, 1995-1996

Source: Northern Economics, Alaska Department of Fish and Game, ESRI



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-13
Commercial Salmon Catch
For Vessels Local to King Cove
All Gear Types, 1997-1998

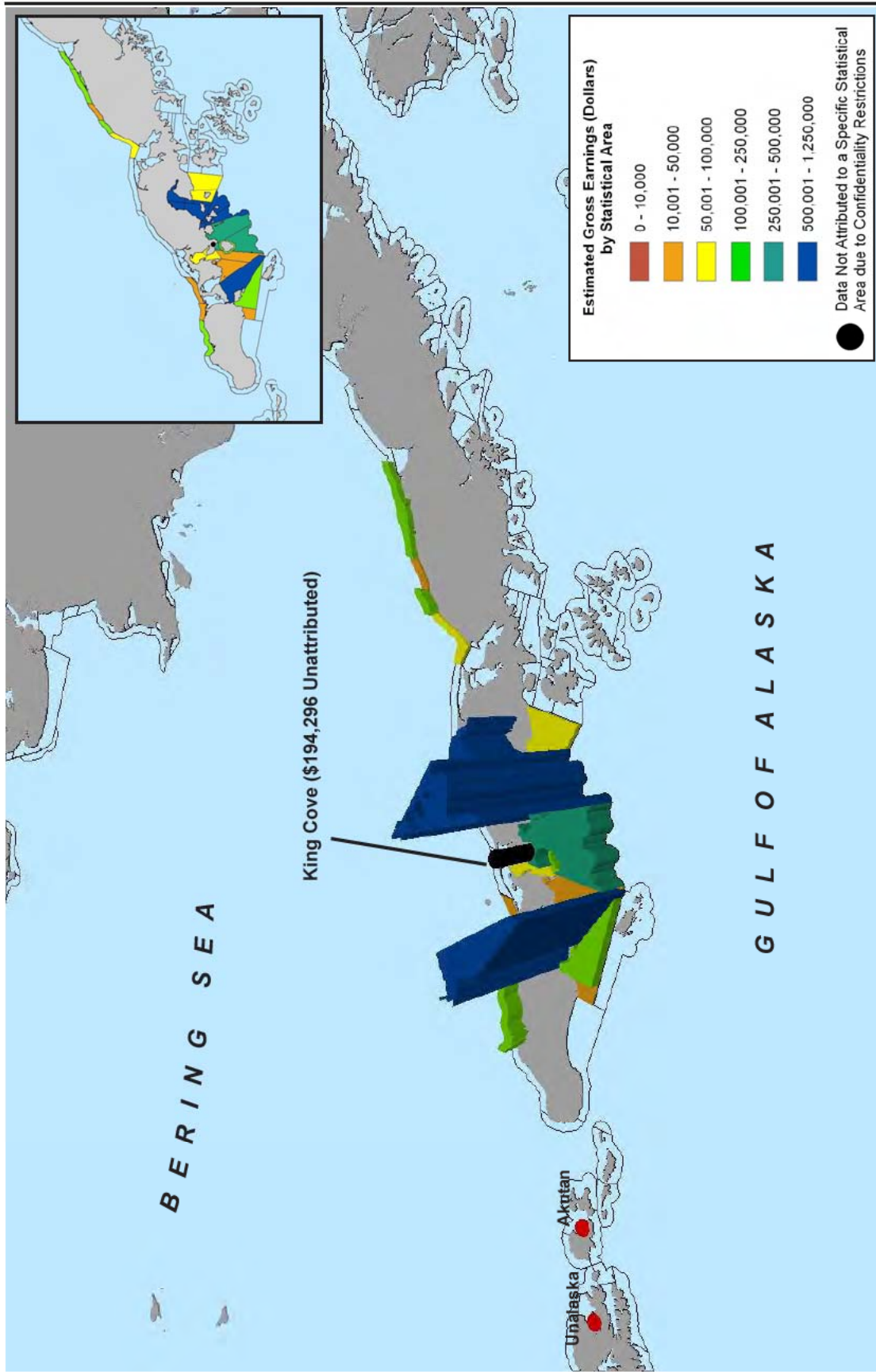
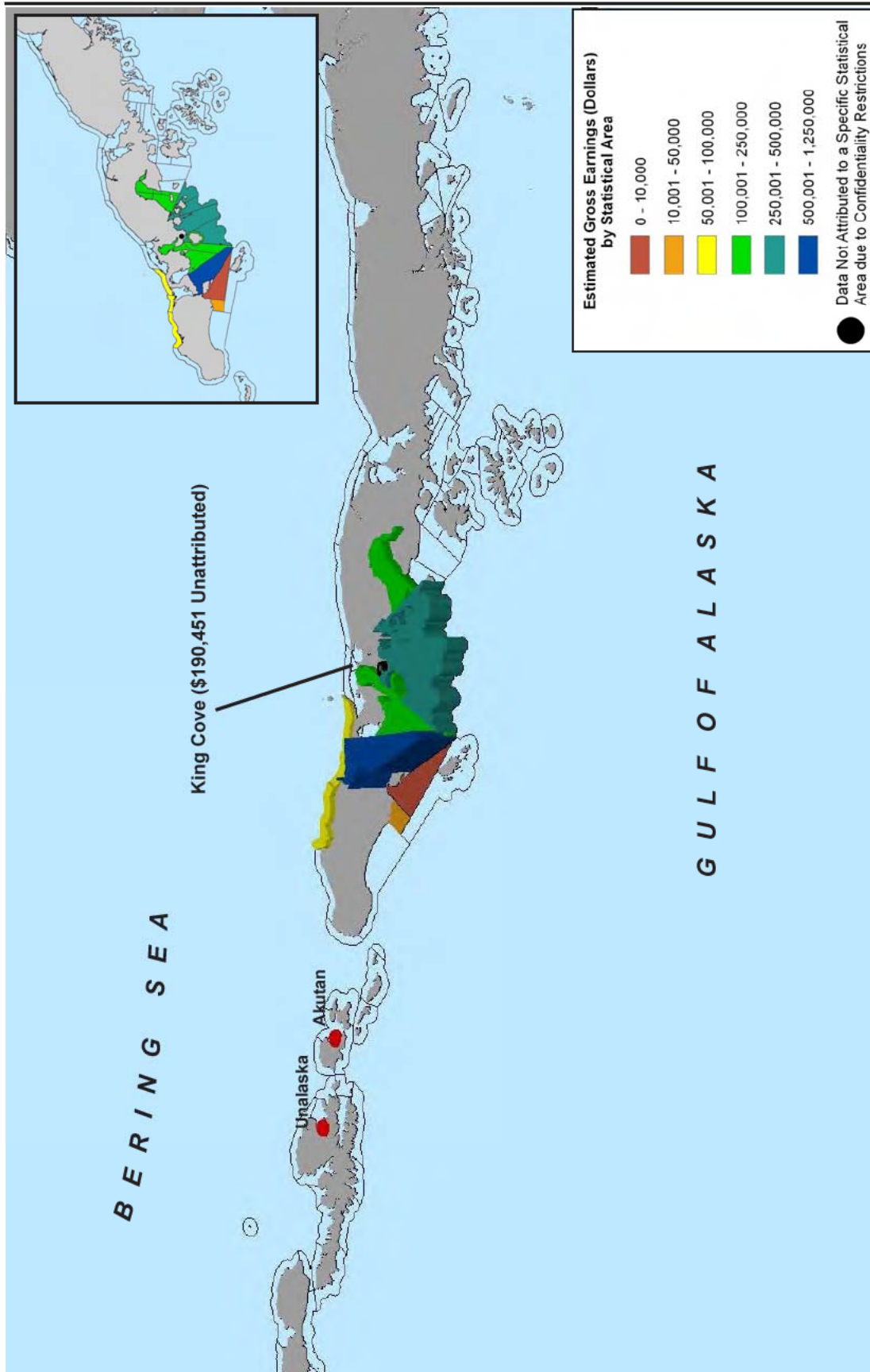


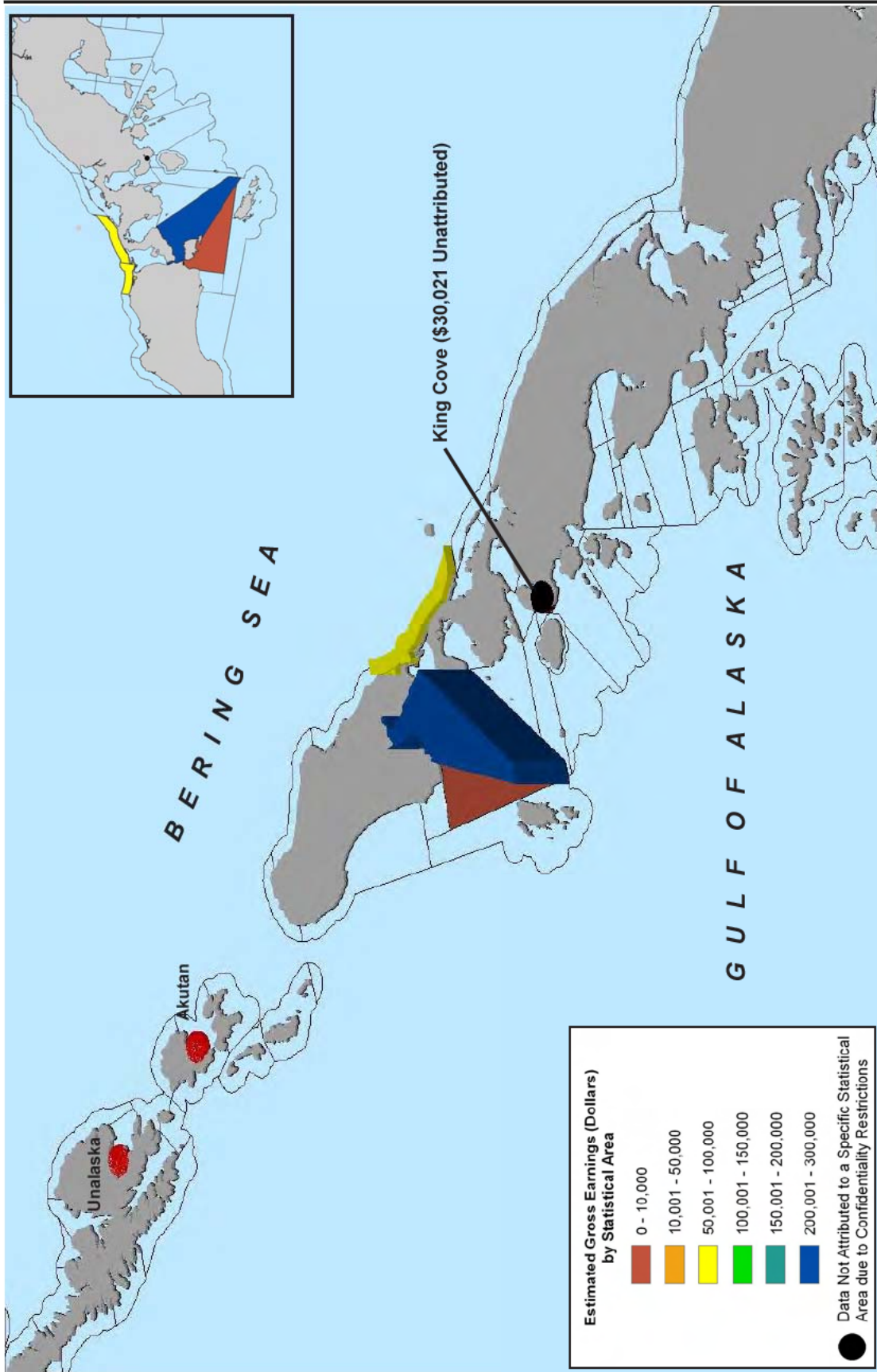
Figure KC-14
Commerical Salmon Catch
For Vessels Local to King Cove
All Gear Types, 1999-2000

Source: Northern Economics, Alaska Department of Fish and Game, ESRI



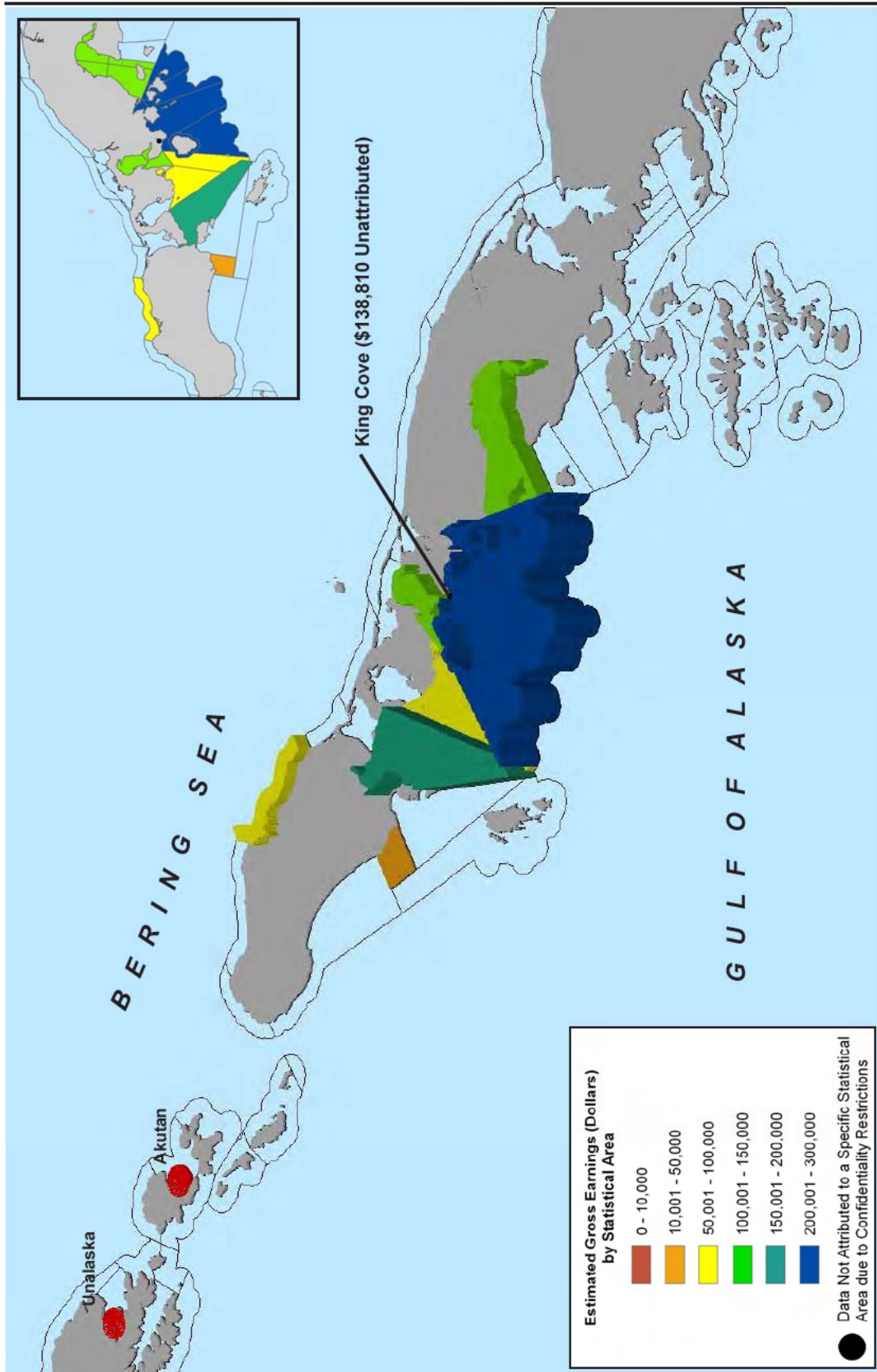
Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-15
Commercial Salmon Catch
For Vessels Local to King Cove
All Gear Types, 2001-2002



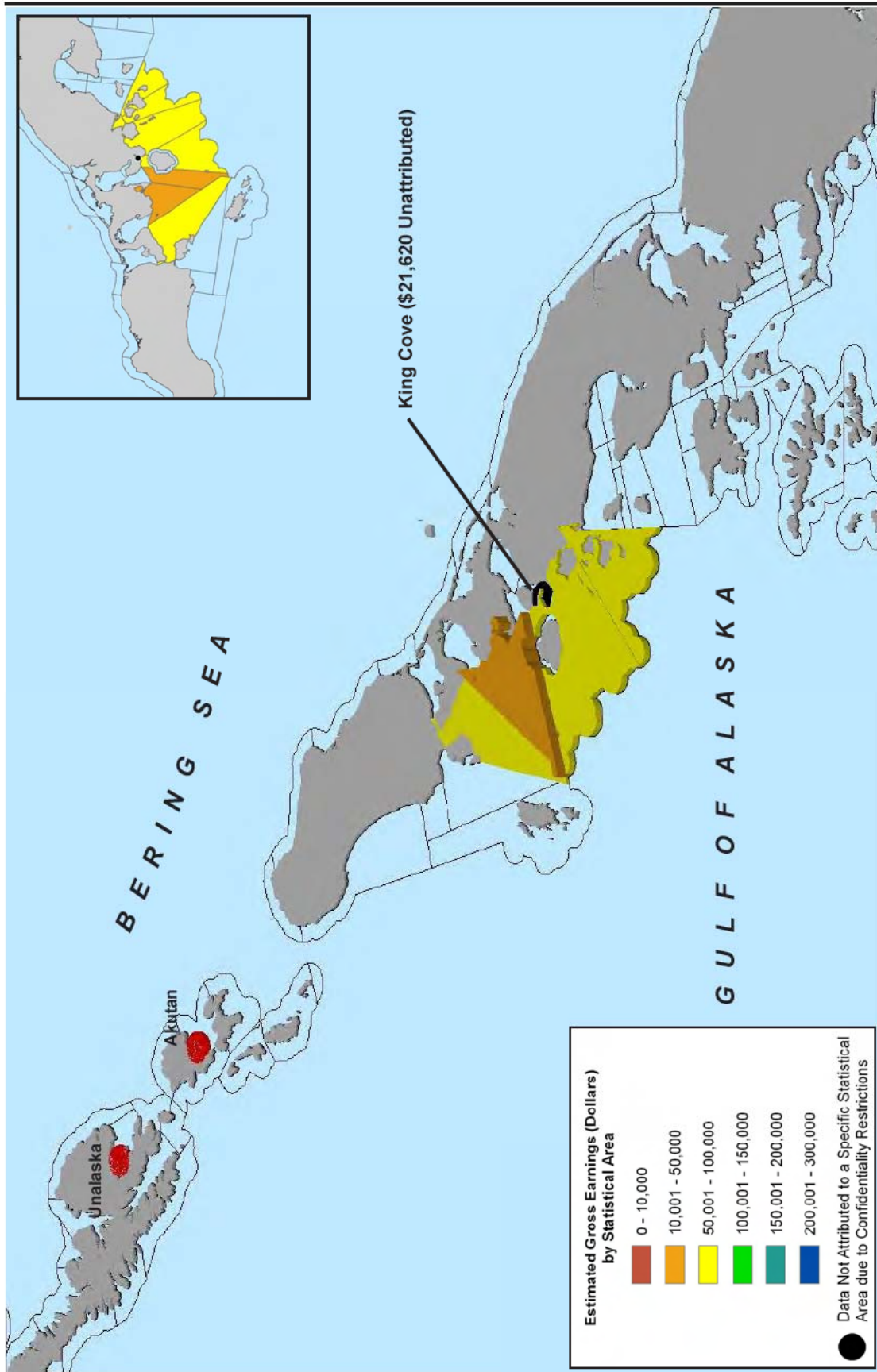
Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-16
Commercial Salmon Catch
For Vessels Local to King Cove
Using Driftnet Only, 2001-2002



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-17
Commercial Salmon Catch
For Vessels Local to King Cove
Using Seine Only, 2001-2002



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KC-18
Commercial Salmon Catch
For Vessels Local to King Cove
Using Set Net Only, 2001-2002

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salmon, and drift or gill netting as gear specialties. A number of the smaller vessels also pot for cod. The smaller vessels are, of course, somewhat less flexible in their gear options and more constrained by weather and sea conditions than the 58-foot (and larger) vessels. In recent years, local salmon fishing effort has been constrained by Area M measures designed to lessen Yukon-Kuskokwim stock intercept potential by staggering openings, reducing quota, and providing smaller fishing windows. Plate KC-5a and Plate KC-5b show some examples of local vessels.

According to local fishermen, the annual round for larger local harvest vessels in King Cove in recent years has included bottom trawling for cod starting in the third week of January and lasting through the first week of March. Following a 1-week break, the vessels switch to cod pot fishing in state waters, which ends around mid-March. Early June sees salmon activity start, which lasts through August. The autumn season has, in recent years, been a kind of “doldrums” for local activity, with “only a couple of boats” participating in the pot fishery, and the October trawling season not being promising enough to even attempt. Lately, one change seen locally is more vessels rigged for jigging, but these are primarily outside boats that work near the community (that stay in the area after salmon season), as it is still the case that few locals jig. According to local fishermen, three local vessels did qualify to fish pollock, but all have discontinued doing so. Also according to local fishermen, only one individual qualified for a substantial initial allocation of Individual Fishing Quota (IFQ) halibut (due to the particulars of the qualification parameters and conflicts with local fisheries during those years), but since the allocation others have acquired IFQ, so that there are now at least several local fishermen who do fish halibut in some quantity (with knowledgeable individuals estimating that three or so individuals have larger quotas than others, but that seven or eight individuals altogether have at least some reasonable amount). Also, according to local fishermen, few locals qualified for sablefish IFQs, and those who did have subsequently sold their IFQs, with one exception.

With respect to crab, beyond the one locally owned relatively large vessel that fishes Bering Sea crab with a local crew (skipper plus four crew for a total of five persons on board), three other local boats (58-footers) did qualify for the Pribilof fisheries, but reportedly not one is active at present. Conditions are extremely difficult for these relatively small vessels, and one of these vessels was lost in the mid-1990s, with the loss of one life. Many more small vessels reportedly have fished the local tanner crab fishery during the years that it was open. Additionally, before seasons were changed from the fall to the winter, a time of year much less favorable for fishing by small vessels, several local boats in the 58-foot class were also reported to have fished in the Bering Sea crab fisheries but have not done so since the change a number of years ago.

There is also significant local direct participation in the Bering Sea crab fisheries on non-locally owned vessels. One outside owner keeps four Bering Sea crab vessels in King Cove most of the time, and two of these vessels are skippered by King Cove residents and have crews that 100 percent comprise King Cove residents (i.e., four crew in addition to the skipper), while the other two have outside skippers but local crew members. In addition to these four vessels, local fishermen estimate that about a half-dozen to a dozen other King Cove residents have crewed aboard outside crab boats in any given season in recent years (but apparently no King Cove residents crew on other outside vessels for other fisheries). These vessels and their crew opportunities become known to King Cove residents in a variety of ways. Most vessels spend at least some time in the community before and after crab seasons, an estimated 40 to 50 outside vessels store crab pots in the community, and others

become known to locals when they act as tenders during other fisheries. Individuals who crew on these outside boats include, among others, owners of King Cove local fleet vessels. Thus, while only one locally owned vessel fishes crab in the Bering Sea, crabbing in the Bering Sea nonetheless represents a significant source of income and employment for commercial fishermen in King Cove. Additional employment from outside crab vessels being in King Cove is outlined in the support services discussion below. Plate 5c shows some scenes of vessels preparing for king crab season in King Cove in October 2004, and Plate 5d shows a number of non-locally owned vessels in King Cove, including one of the vessels (Denali) skippered and crewed by local residents.

The crew composition on local vessels reportedly varies widely by season. In one pattern that was reported as common for the 58-foot boats, four crew members are used in the winter (skipper/owner plus three) and three in the summer (skipper/owner plus two). Winter fishing comprises what could be termed “professional” crew, while summer crew tends to comprise family members, including children. This, apparently, is a viable strategy for at least two reasons. First, school-aged children are not available to crew on vessels during the school year. Second, returns have been so poor during summer salmon seasons during recent years that it has been difficult at times to get non-family crew (and, of course, hiring family crew during tough times helps household economies). Some community members volunteered the opinion that during the continuing low ebb in the local fisheries economy, family members have bumped others from crew positions and that during the winter fisheries older crew have bumped younger ones as positions became tighter and/or relatively more valuable. Others volunteered that younger crew in general are being used than in the past (to reduce costs and to get the job done when sufficient money was not available to pay crew consistent with past practices) and more children are fishing than ever before. Also, more young women are helping out than before. Systematic information has not been collected to verify or elaborate on either reported trend, but it is apparent from unsolicited comments that King Cove residents feel that declining fisheries are having an adverse impact on crew composition, although there does not appear to be unanimity regarding the particular form of that impact. Given that the economics of the local salmon fisheries have rebounded within the last year, it is also unclear whether these trends will continue into better economic times.

King Cove and Sand Point vessels have reportedly competed for the same fishing grounds in recent years, particularly during cod trawling near Sanak Island. Steller sea lion protection measures near Sand Point have reportedly had the effect of shifting effort into areas further to the southwest, including areas earlier targeted primarily by the King Cove fleet, more heavily concentrating effort than was the case in the past. The area to the east of the island sees significant trawl activity, and then the areas within state waters around the island see pot cod activity following the federal trawl effort. Sand Point vessels have felt the impacts related to the Steller sea lion protection measure of a 3-mile no-trawl zone around the Lookout Point haul-out as well as the 1-mile transit only zone around Clubbing Rocks, but these are relatively small exclusion areas compared to those in the Sand Point fleet’s typical operating areas (e.g., Castle Rock, Bird Island, and Chernabura Island, among others).

Local vessels deliver primarily or exclusively to the processor in King Cove. While not typical, deliveries reportedly may be made in Sand Point for a number of reasons, including bad weather (the run between the two communities may take 8 to 9 hours in a typical vessel). Cod may also be delivered to Sand Point if the vessel is in the area, or salmon may be delivered there if the plant

KC-5a

Harvest Sector

Local fleet



KC-5b

Harvest Sector

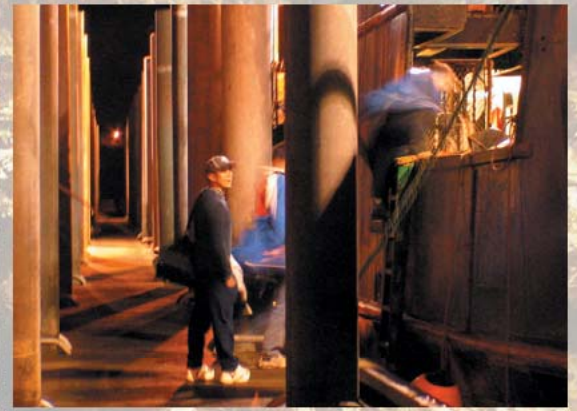
Local fleet



KC-5c

Harvest Sector

Dock scenes at night
preparing for crab
season opening



KC-5d

Harvest Sector

Vessels from other communities moored in King Cove



in King Cove does not want it for whatever reason. Salmon delivery patterns have changed over the years, as fishermen report in the past it was not uncommon to deliver to buyers on the grounds or to other cash buyers near the community. According to local fishermen, however, these buyers “got tired of being used as a wedge” to get higher prices when the bulk of deliveries still went to the Peter Pan shoreplant. One fisherman noted that by not making sure that the case buyers had a sufficient volume of salmon, the fishermen themselves cut out other potentially competitive outlets for selling their catch. The fact that local fishermen basically have a single outlet for sales makes for some level of discomfort due to the effective degree of dependency of the fleet (and the community, for that matter) on a single company. According to at least some fishermen, the price set for some species influences the price given for other species, a situation that is markedly unfavorable to fishermen focusing on the species feeling the downward price influence. There is also some frustration among some fishermen in the community that Peter Pan directs fishing in a way that is not always favorable to local fleet interests. It is not surprising that a lack of competition would be troubling to local fishermen, and that the relationship between a fishing-dependent community and the local processor could become strained at times. Often seemingly cooperative behaviors can have a double-edged sword quality to them. For example, while the processor has in the past helped boats out financially during lean times, this has had the impact of creating greater indebtedness to the processor, which is then a cause for resentment. It is also reported that during the especially lean times in the past year or two, local vessel owners have made charges to the boat for groceries and supplies that were needed for their households, increasing the debt load to the processor. This type of co-mingling of business and household economies is, of course, one of the potential drawbacks of small family-owned businesses, and it makes the relationship to the processor even more pervasive. The fact that the processor is foreign owned is also cause for speculation amongst fishermen regarding pricing and delivery policies.

Most delivering to Peter Pan are indeed relatively small in size and relatively local to King Cove. While focused primarily on salmon, most of these boats may also deliver other fish, such as cod and halibut. Examples of the smallest boats in the local fleet may be seen in Plate KC-5e. Salmon markets had been especially poor for local fishermen recently, before rebounding in 2003 and 2004. Price disputes are not uncommon in this context; in a recent year, a price was not negotiated with area processors until a month into the season, so that fishermen and processors missed the peak of the run. Both the processors and the harvesters claim to have lost money on the price paid for salmon that year. (With seemingly chronically depressed salmon prices in general, local fishermen have noted with some irony that disaster relief funding was made available to opilio fishermen in short order following a couple of very bad years.) Local plant personnel estimate that 20 to 25 percent of the cod delivered to the plant comes from Lower 48 boats, with the balance coming from King Cove and Sand Point vessels.

Boats that deliver BSAI pollock in King Cove are all non-local, either from Kodiak or the Pacific Northwest (mainly Seattle). According to senior plant staff, in the not-too-distant past, virtually all of the Gulf of Alaska pollock delivered at the plant was from King Cove or Sand Point vessels; however, more recently, vessels from outside the immediate region have made up nearly half of local Gulf pollock deliveries.

With one exception, BSAI crab boats that deliver to the local plant are from outside the community, typically from Kodiak or the Pacific Northwest (although according to at least some interviews four or five of the non-local boats have at least some measure of local ownership; other interviews with

knowledgeable individuals suggested local ownership interests in outside boats involved only two individuals). Some of these Pacific Northwest crab boats are moored in King Cove or other Alaskan ports, and there is interest in the expansion of local harbor facilities and moorage in a number of local communities (Northern Economics 1995, 1997; USACE 1997). King Cove recently expanded and improved its large boat harbor, with the dedication of the new facility taking place in September 2002, while work still continues on portions of the harbor. (For example, as of 2004, the City of King Cove is still working on extending water and power to the large boat side of the harbor.) Some of these crab boats will participate in other fisheries (fishing for cod and halibut, tendering for salmon and herring), although most fish only crab for Peter Pan and tender in other fisheries as their primary revenue sources. Some will fish crab for Peter Pan and then go fish for brown crab. Peter Pan representatives estimate that about 30 crab boats have delivered to them in the past few years, but earlier years saw more crabbers delivering to the community. Because of low quotas, most, if not all, BSAI crab fisheries have recently been “one trip” fisheries, with only time enough for each crab boat to fill up once, but crab rationalization, due to be implemented in 2005, will likely change fishing and delivery dynamics in a number of different ways. The Peter Pan crab fleet is composed mostly of independent catcher vessels, with a mixture of sizes and with owners from a variety of communities. Local (King Cove and Sand Point) crab boats tend to cluster at the lower end of the size range of this fleet; whereas, Kodiak and Pacific Northwest crab boats are larger. With one exception, no local boats participate in the Dutch Harbor crab fisheries but rather concentrate on more local (Gulf of Alaska) and Pribilof area crab fisheries. The King Cove plant does take deliveries from vessels fishing in the North Region rationalization area, but, according to plant management, for vessels to make that long of a run the processor needs to give incentives to do so. It only makes economic sense to offer these types of incentives to the larger vessels.

Harvest value and volume figures for crab vessels specifically owned by residents of King Cove cannot be discussed because the vessels are too few in number to meet confidentiality requirements. Those from Sand Point are similarly too few to discuss by community, but combining data from the two communities resolves this problem, and the two fleets do share many characteristics. For the period 1991 through 2000 (the most recent and longest time series information available), the number of vessels fishing from these two communities averaged seven vessels for Bristol Bay red king crab, five vessels for opilio crab, six vessels for tanner crab, nine vessels for Pribilof red or blue king crab, and less than one vessel for Dutch Harbor brown crab. Much of this crab would probably have been delivered to the Peter Pan processing plant in King Cove, although for some of the more distant fisheries, deliveries would be made to other plants (shore or floating) that may or may not be operated by Peter Pan. For the 1991 through 2000 period, 30 different vessels owned by residents of the two communities participated in the BSAI crab fisheries, and most (17, with 2 unknown) were 58 feet or less in length. These are multi-fishery/salmon boats and are limited in the BSAI crab fisheries by weather and sea conditions. Still, for these vessels BSAI crab contributed 68 percent of the value of their catch, with opilio as the most significant single fishery. For the combined fleet of those communities as a whole, BSAI crab contributes only 18 percent of the total value of the harvest. Larger vessels are clearly preferable for BSAI fisheries, however, as of the seven vessels from these communities active in the fisheries in 2000, five were over 58 feet in length. Many of the smaller vessels have dropped out of the BSAI fisheries, and most if not all more recent entrants are over 58 feet in length.

KC-5e

Harvest Sector

Local skiffs



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4.3.2 Processing

Community Processor Quantitative Description

The following two tables provide information on processors operating in King Cove during the period 1995 through 2002. Table 4-22 provides a count of active shore processors by year based on the number of processors that submitted fish tickets indicating that delivery was made in the community. As shown, only one shore processor has been active in King Cove during this period.

Table 4-22. Number of Active Processors in King Cove, 1995-2002

1995	1996	1997	1998	1999	2000	2001	2002	Unique Count over All Years
1	1	1	1	1	1	1	1	1

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Table 4-23 summarizes Commercial Operators Annual Report (COAR) processing data by year for the period 1995 through 2002 by major species of pounds purchased by processors in the community, along with the ex-vessel and wholesale value associated with those purchases. This information may be used to gauge community processing sector relative engagement in and dependency on particular fisheries. Note that for King Cove none of these volume or value data are reportable due to confidentiality restrictions.¹

Table 4-23. Processing Summary for King Cove, 1995-2002

Species	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Number of Processors								
cod, Pacific (gray)	1	1	1	1	1	2	2	2
crab, Tanner, bairdi	1	1	-	-	-	-	1	-
halibut, Pacific	1	1	1	1	1	1	1	1
herring, Pacific	-	-	-	-	1	-	1	1
king crab, all species	1	1	1	1	1	1	1	1
other species	1	1	1	1	1	2	1	1
pollock, walleye	1	1	1	1	1	1	1	1
sablefish (blackcod)	1	1	1	1	1	1	1	1
salmon, chinook	1	1	1	1	1	2	2	1
salmon, chum	1	1	1	1	1	2	2	1
salmon, coho	1	1	1	1	1	2	1	1
salmon, pink	1	1	1	1	1	2	2	1
salmon, sockeye	1	1	1	1	1	2	2	1

¹ The data used to construct this table are from a different source than the previous table. The appearance of a second “local” processor in this table is likely attributable to a transient or floating processor.

Species	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Pounds Purchased								
cod, Pacific (gray)	x	x	x	x	x	x	x	x
crab, Tanner, bairdi	x	x	-	-	-	-	x	-
halibut, Pacific	x	x	x	x	x	x	x	x
herring, Pacific	-	-	-	-	x	-	x	x
king crab, all species	x	x	x	x	x	x	x	x
other species	x	x	x	x	x	x	x	x
pollock, walleye	x	x	x	x	x	x	x	x
sablefish (blackcod)	x	x	x	x	x	x	x	x
salmon, chinook	x	x	x	x	x	x	x	x
salmon, chum	x	x	x	x	x	x	x	x
salmon, coho	x	x	x	x	x	x	x	x
salmon, pink	x	x	x	x	x	x	x	x
salmon, sockeye	x	x	x	x	x	x	x	x
Ex-Vessel Value								
cod, Pacific (gray)	x	x	x	x	x	x	x	x
crab, Tanner, bairdi	x	x	-	-	-	-	x	-
halibut, Pacific	x	x	x	x	x	x	x	x
herring, Pacific	-	-	-	-	x	-	x	x
king crab, all species	x	x	x	x	x	x	x	x
other species	x	x	x	x	x	x	x	x
pollock, walleye	x	x	x	x	x	x	x	x
sablefish (blackcod)	x	x	x	x	x	x	x	x
salmon, chinook	x	x	x	x	x	x	x	x
salmon, chum	x	x	x	x	x	x	x	x
salmon, coho	x	x	x	x	x	x	x	x
salmon, pink	x	x	x	x	x	x	x	x
salmon, sockeye	x	x	x	x	x	x	x	x
Wholesale Value								
cod, Pacific (gray)	x	x	x	x	x	x	x	x
crab, Tanner, bairdi	x	x	-	-	-	-	x	-
halibut, Pacific	x	x	x	x	x	x	x	x
herring, Pacific	-	-	-	-	-	-	x	x
king crab, all species	x	x	x	x	x	x	x	x
other species	x	x	x	x	x	x	x	x
pollock, walleye	x	x	x	x	x	x	x	x
sablefish (blackcod)	x	x	x	x	x	x	x	x
salmon, chinook	x	x	x	x	x	x	x	x
salmon, chum	x	x	x	x	x	x	x	x
salmon, coho	x	x	x	x	x	x	x	x
salmon, pink	x	x	x	x	x	x	x	x
salmon, sockeye	x	x	x	x	x	x	x	x

Source: ADFG Commercial Operator Annual Report Summary, provided to Northern Economics, Inc. in September 2004 by ADFG.

Note: An "x" indicates the data are confidential and cannot be released.

Community Processor Characterization

The King Cove plant was built around the local salmon fisheries, and like the common name in the community suggests, the plant was and still is a “cannery.” In recent years, however, canned salmon has declined in importance as a product for a variety of reasons including, according to plant staff, changes in markets, such as consolidation of grocery chains resulting in less buyers, and changes in economics that have resulted in a decline in margin on the product. Despite this decline, however, the King Cove plant still produces a substantial volume of canned product. In addition to canned salmon, the facility produces a variety of fresh and frozen salmon products. The King Cove plant also processes a good amount of crab and has developed groundfish processing capability, with Pacific cod and pollock as the predominant species. Substantial amounts of cod are supplied from both the Gulf of Alaska and the BSAI regions. Pollock products have been expanded in the past few years to include block as well as surimi, mince, and shatter pack fillets. The Peter Pan plant also processes halibut on a regular basis, and herring and other species less often. Photos of the plant may be seen on Plate KC-6.

Through time, the King Cove plant has maintained a diversity of processing, with interspecies dynamics being somewhat fluid. Over the years the distribution and peak of employment effort at the plant have changed with both stock changes and management changes, such as the effects of the American Fisheries Act (AFA). Detailed production figures, however, cannot be disclosed because of confidentiality restrictions. In general, it can be stated that King Cove is somewhat unique among the four key regional groundfish ports of Unalaska, Akutan, King Cove, and Sand Point as it is relatively more dependent upon Pacific cod than pollock, among the various groundfish species landed. The relative dependence of the plants on different species has varied over time and with stock fluctuations. For instance, 1993 was clearly a very good year for salmon, while 1996 and 1997 were both poor salmon years. While changes from 1999 to 2000 cannot be definitively stated to be other than statistical fluctuations, it is interesting to note that for King Cove the poundage processed and percentage of total plant dollars for crab decreased, while groundfish increased somewhat. Crab stocks (and quotas) have been declining. Gulf of Alaska pollock is obtained from the local small boat fleet as well as from a small number of outside boats, but BSAI pollock is obtained exclusively from larger-capacity non-resident boats.

Historically, the Peter Pan plant was founded as a salmon plant and added crab as a strong secondary species, then halibut, and cod and pollock. Of these species, only cod and pollock have strong markets at present for the King Cove Peter Pan plant. Halibut was cited as an example of the dislocations that can result from a rationalization program. Peter Pan was only one of several processors that claim the institution of halibut IFQs reduced their profit margin on halibut to such a degree that they currently process very little halibut. This is the stated condition for King Cove in particular.

The current (as of 2004) annual cycle of the plant begins with the fixed gear opening on January 1, with the first deliveries of pot cod arriving in the community between January 5 and 10. Crab related activity starts somewhere around January 6, as vessels that have been in the community gear up while those that have been moored outside begin to arrive, and people come to town to meet up with vessels. January 13 is usually a busy day with tank inspections, then the vessels leave for the January 15 opilio opening. Local deliveries are seen around January 21, and with the short seasons,

vessels may make only one or two deliveries total. If the fishing is “scratchy,” the season extends to 3 weeks or so. Following the crab season, individuals and vessels tend to leave the community quickly, unless they fish IFQs. Around January 20, trawl seasons open up for Bering Sea pollock and cod, as well as for Western Gulf of Alaska cod and pollock. The King Cove plant tends to “hold off” deliveries of Bering Sea pollock until the Gulf fisheries can be serviced, something that co-op conditions facilitate, to allow the plant to optimize their work on the other fisheries. Depending on season particulars, early season deliveries of Bering Sea cod may be taken, even if pollock is not, but boats may wait for fish to school up at the end of January. Western Gulf pollock activity may only last about a week, while Bering Sea pollock may last through the end of February. Pollock is a relatively new species for the plant and, as a result, the plant has relatively little pollock activity compared to large plants in, for example, Akutan and Unalaska (due to lack of qualifying history when the management of that fishery changed under the AFA). After trawl season in the Gulf, there is a 1-week stand-down, followed by the state cod fixed gear fishery, with most local activity related to that fishery lasting about 3 weeks to the end of March or so. The 15 percent hold-back for jig gear in this fishery, if scratchy, may last until the first week of May. There are reportedly few halibut IFQ landings (or sablefish IFQ landings either) reportedly due to lack of ability to pay the prices given at ports more accessible to the road system and better capabilities to quickly move fresh product. Some flatfish are also processed at the plant, but there are apparently challenges in that market as well.

Summer activity at the plant begins early in June with the Bering Sea AFA inshore pollock B season and the beginning of salmon season. July is relatively slow for salmon, but August typically picks up again with the pink salmon runs, and August is also the time of C season in the Gulf of Alaska. Scheduling flexibility brought about by AFA co-op conditions also allows the plant to maintain at least some activity to help tide over the slow times in mid-summer. The summer also sees Peter Pan tendering salmon out of Kodiak and other areas, and balancing operations and adjusting supply to capacity in King Cove and Valdez. In some years, including 2004, there has been local activity related to the July 15 herring food/bait opening, with local effort directed toward bait. On September 1, the last 40 percent of cod is released, but there has been little activity in King Cove related to this as it has been scratchy as of late. Crab activity resumes in the community around October 6 or 7 in anticipation of the October 15 Bristol Bay red king crab opening. This has lately been a one-delivery fishing season for King Cove, with the season lasting from 3 to 5 days. Adak red king crab activities take place around the 2- to 3-day fishery that starts October 25, but this keeps very few processors active. IFQ activity lasts through mid-November, and then from mid-November to January 1, activity at the plant is confined to maintenance operations.

Employment levels at the plant vary considerably by season. According to information obtained from the plant, over the 5-year period from 1998 through 2002, employment peaks were seen from late January through March, with most weeks at or near 500 total employees on-site. Secondary peaks of approximately 400 or somewhat more employees were common from mid-June through mid-August, but this was more variable, with some weeks in some years hitting 500 or more, and some weeks in other years being considerably less than 400 during this same period. On-site employee counts drop to about 30 persons during the end of year maintenance work. Employee counts between the winter and summer busy seasons vary considerably from week to week and year to year, from the mid-100s up to near peak levels, depending on the variability of activity associated with particular species fisheries in any given year. According to an interview with senior plant management, this pattern has remained consistent through 2004.

KC-6

Processing Sector

Views of Peter Pan Seafoods
processing plant



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Individual worker earnings have been down in recent years with the decline of crab stocks and the poor conditions in a number of other fisheries. According to plant personnel, the number of workers has not changed appreciably, because “you still have to bulk up” for the busy seasons, but workers are not getting the type of overtime hours that were common only a few years ago. In addition to direct processing employees and physical plant staff, the core management and administrative staff at the plant include desk/clerical, fisherman’s accounting, payroll, office manager, plant manager, production manager, housing, and chief engineer positions.

Peter Pan also has a “support station” in Sand Point, consisting of a dock, a bunkhouse, and accounting support for fishermen. Services provided at this site include facilitating deckhand payments, stock room services, pot storage, and tendering. Peter Pan also provides fuel sales in False Pass but in 2004 no longer had a support station similar to the one in Sand Point in that community as was the case in previous years.

Peter Pan owns most of the land in and around its immediate complex in King Cove, and housing is provided for workers on-site. Peter Pan also leases an adjacent apartment building from the King Cove Corporation (the King Cove village Native Corporation), and at peak times rents space in the King Cove Corporation hotel some distance away from the worksite. The vast majority of workers at the plant are transient with respect to establishing a true residence in King Cove, but according to senior plant staff two or three families have established roots in the community. In general, however, it is reportedly hard to establish a family in the community or move a family to the community on processing wages (except for quite senior positions).

In terms of integration with the community economic and social context at large, the plant at King Cove is quite different from those in Unalaska/Dutch Harbor. As noted, compared to King Cove, the growth of commercial seafood processing in Unalaska/Dutch Harbor is a relatively recent development (at least in terms of continuity of operations at specific facilities). The King Cove processor has longstanding relationships with the local catcher fleet, which, in turn, is the source of most employment in the community (among permanent residents). This is a sharp contrast to Unalaska. Unalaska is the site of multiple shoreplants and has a much more “industrial” fishery than does King Cove. This is not a consistent pattern, however, as the Bering Sea pollock delivered to King Cove is not fished by the local small boat fleet, and Bering Sea crab delivered locally is largely delivered by outside boats (but with significant local involvement, as outlined previously). Despite the long-term stable relationship between the community of King Cove and its single processor, however, the direct ties to the wider social context of the community are less evident in King Cove than in Unalaska where, for example, senior processor personnel serve on the city council and numerous other boards and community committees. Certainly the fact that there is but a single processor in the community influences processor, local fleet, and community relations, but exactly how this serves to structure or shape relationships is a complex matter.

Changes associated with the recent restructuring of the groundfish fishery under AFA have been felt in King Cove. The processor in King Cove is qualified as an AFA (BSAI pollock) processor and benefits from a Co-op Processor Endorsement, as five catcher vessels did deliver at least 80 percent of their inshore pollock to the King Cove plant during the AFA-qualifying period (while delivering most of their pollock offshore to a mothership affiliated with the same company as the shoreplant – a very different situation than most other qualifying entities). The King Cove plant is relatively

well located to process BSAI pollock and is somewhat on the periphery of Gulf of Alaska pollock. Pollock product mix varies somewhat from other AFA plants, with surimi being a relatively recent addition and primarily confined under present market conditions, according to senior plant staff, to utilization of pollock that would otherwise produce less than optimum fillets.

Crab deliveries and processing were much reduced in recent years, due primarily to a reduction in quotas related to reduced stocks. AFA sideboard caps on BSAI crab have also limited the amount of such crab that can be processed by the King Cove plant. This has required that the processor charter an uncapped floater (otherwise employed during crabbing in the Pribilofs) to process additional crab while moored near King Cove. Otherwise, production in King Cove would be essentially limited to the amount processed in the past (as adjusted for other allocations). Peter Pan representatives report that this in fact represents a production level lower than in the past and would require that they limit the number of boats from which they buy crab. To service these boats and maintain market share, Peter Pan has thus taken the step of chartering the Steller Sea (owned by an affiliated entity) as a crab processor. Given the present low crab stocks and associated low GHs, Peter Pan representatives report that they could physically process all the crab they currently harvest in the King Cove shoreplant, but that this would not be equitable to the Pribilofs (and may not be possible under the AFA crab caps). Certainly the use of the Steller Sea in the Pribilofs helps maintain/increase Peter Pan's market share in the crab fisheries in that area.

According to local plant management, the Steller Sea typically comes to the King Cove area to "help clean up" at the end of crab season. When the Steller Sea processes locally, it sometimes does so outside of the city limits of King Cove. By processing outside the city limits, revenues from local fish taxes do not accrue to the City of King Cove but borough taxes are still paid to the AEB (and, of course, the State of Alaska). According to plant personnel, this is important to stay competitive in price with Unalaska/Dutch Harbor (which has only a local 2 percent fish tax and no borough tax), and Kodiak (which has no local fish tax [although the local 1.5 percent severance tax is essentially a functional equivalent]), as fish taxes show up as deductions from the price paid to fishermen. Processing location, however, also depends on weather and logistics, which according to plant management has meant that some processing in recent years has taken place within the city limits. While other floating processors used to come into King Cove itself, apparently none have done so for quite a number of years. When not on crab in the Pribilofs or King Cove, the Steller Sea is out on the fishing grounds following the fleet in a variety of fisheries, including salmon in Bristol Bay, Sand Point, and Squaw Harbor, among others, and ranging from the Ketchikan area in Southeast Alaska to Dutch Harbor to the west along the Aleutian Chain.

4.3.3 Support Services

When viewed from one perspective, King Cove has little in the way of a fisheries support service sector, and in this manner the community, though a major processing port, differs markedly from Unalaska or Kodiak. For example, in King Cove, the lone shoreplant has historically provided a variety of fleet support services that the plants in Unalaska no longer have to provide with the development of a support sector. From another perspective, however, outside of public works, tribal, and school employment, there is arguably little in the way of local employment that is not directly linked back to supporting the fishing sector of the economy.

Beyond scale issues, the King Cove support services economic sector is also quite different from that of Unalaska as it does not have enterprises related to the groundfish offshore sector (nor does the community otherwise derive direct revenues from the offshore sector). The level of transportation services to the community is clearly fishery linked. Despite relative hard times in the different fishery subsectors, barge services to the community still continue on a regular basis. With a general decline in fisheries related trade, however, connecting jet service through Cold Bay has been reduced, meaning that freight is more commonly bumped in favor of passengers than in the past.

Direct fishery support services that do exist in King Cove include marine fuel sales, crab pot hauling, crab pot storage, mechanical services, welding, taxi services, vessel supply, vessel watch, bar and restaurant trade, and a range of services provided by the King Cove Corporation. Additionally, the local tribal entity, the Agdaagux Tribe, provides a range of services to the community and is involved in infrastructure projects. Photos of various local support services may be found on Plate KC-7a, Plate KC-7b, and Plate KC-7c.

Marine fuel services in the community are provided by Peter Pan Seafoods. Peter Pan is also the only supplier for everyday vehicle fuel needs in the community. The City of King Cove is presently (2004) in the process of building a marine fuel delivery capability in the harbor, with construction underway of a pipeline to access a newly built fuel tank farm recently constructed on city-owned uplands near the harbor. This business will be run as an enterprise fund within King Cove, but according to the mayor, the City may partner with industry to run the business. There is also a one-person private fuel delivery service business in the community that supplies residences and buildings by truck. This service purchases the fuel locally and charges a mark-up per gallon to cover the cost of service and delivery. While this business itself is less directly linked to supporting the fishing sector of the economy than some others, like a number of the other support type of businesses in the community, the owner of this business also commercially fishes and in this way fishing directly ties back into the household economy of the owners of even seemingly stand-alone business enterprises.

Crab pot hauling in King Cove is provided by a family business (Mack Trucking). Although there were some others competing in the market in the early years of the business, it has been the only such business in the community for many years. Originally a single-person operation, this enterprise is run by the son of the founder. Different equipment configurations have been tried over the years, including a boom and truck system that could handle two pots per haul, to the present system where bobcats shift the pots and a flatbed with a four-pot capacity makes the hauls. With the present configuration, about 500 pots per day can be handled by a single operator and upwards of 1,100 pots per day with additional help from one or two persons, which usually occurs in the 3 days or so before crab season openings. This business did experience an initial decline when pot storage opportunities opened up in False Pass and St. Paul, but reportedly business has subsequently returned to normal for a number of reasons, including being more convenient than St. Paul due to occasional inability to access stored gear there in some conditions. One person affiliated with the business estimated that there are approximately 10,000 crab/cod pots in the community to be moved and stored over the course of a year, with some pots being used for multiple seasons. When pots are going out at the start of a crab season the load can be handled by one employee, as vessel crews are working on the pots as they arrive at the dock and so have a limitation on how fast they can be loaded on board. At the end of the season, however, a couple of extra drivers are needed to handle the flow from vessels going into storage all at once. Pots are also hauled for cod fishing seasons by

the business, but with a 60-pot limit per vessel and only 20 or so vessels fishing locally, this fishery involves roughly 1,200 pots total. In addition to pot hauling, the business also hauls seine gear, and provides truck and skiff rental services.

Crab and cod pots are stored on lands owned by King Cove Corporation, City of King Cove, and Peter Pan. The King Cove Corporation estimates that it has about 50 percent of the local lands used for pot storage. The City of King Cove has a modest pot storage area, with the balance of storage taking place on Peter Pan-owned land. Peter Pan provides storage space primarily as a service to vessels that deliver to the plant, while the Corporation and the City specifically use pot storage as a directed revenue source, charging 25 cents per pot per month storage fees. As two private sector entities, the Corporation has an incentive relationship with Mack Trucking that is somewhat different from the relationship between the City and the company, but one common service provided by Mack Trucking is that they keep storage records for both the Corporation and the City and handle all of the invoicing for the two entities. All pots move across city-owned "T" and ferry docks (even those from Peter Pan-affiliated vessels that are going to be stored on Peter Pan property), and the City charges a \$1.50 per pot fee for every pot that crosses the dock (in either direction).

Marine mechanical services are provided in King Cove by a one-man operation (J&L Marine Repair), supplemented with temporary local hires for larger jobs. Housing for this individual is supplied through Peter Pan, and at present repairs are made either at the Peter Pan facilities or aboard vessels themselves, with tools stored at Peter Pan or in a company vehicle, as there is no shop facility in the community. During the peak of crab season, this person reportedly essentially works "24/7," and is otherwise typically present in the community except for the month of December. This individual is a generalist, and in addition to handling mechanical repairs, he also does some hydraulic work (as do Peter Pan engineers/mechanics) as well as some electrical work. Peter Pan typically has one electrician on-site, but outside of these individuals, there are no vessel systems support personnel in King Cove. Some speciality personnel, such as radar technicians, come through the community on a very infrequent basis. A related support business in the community is marine filter sales, a business that is a sort of partnership between the marine mechanic and another business person in the community. While this was originally part of the mechanic's business per se, it became too large a volume of sales to adequately handle along with the main mechanical business. This business sells oil, fuel, and air filters to the vessels, along with a few other products of secondary importance, such as engine cleaner. At present (2004), the business does not have a permanent building but is in the process of building a shop near the harbor that would house both the mechanic's operation and the filter/support business. This would potentially allow for some expansion of the business through having predictable hours in a known location (at present customers call for service over the radio). The managing partner of the filter business estimates that crab vessels account for about 75 percent of filter sales, while the remaining 25 percent goes to the local fleet. Whereas crab vessels tend to order filters in case lots (for their main and auxiliary engines and generators), local small vessel owners tend to pick up individual filters from stock on hand.

There are two one-man welding businesses in the community that do marine work as well. One of these is run as a part-time/secondary business by a fisherman, while the other is a full-time business run by a former commercial fisherman. Both businesses derive work from the fishing fleet, including outside vessels that spend a portion of the year in the community.

KC-7a

Support Services

Clockwise from upper left:
Alaska Commercial Compa-
ny store, Rams General Store,
Corporation hotel and bar,
and skiff fabrication



KC-7b

Support Services

Crab pot hauling and storage



KC-7c

Support Services

Local welding business



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Taxi services are another type of business that derives benefit from local fisheries activity. While there was only one active taxi service at the time of fieldwork for this project (October 2004), there are reportedly at least a couple of other individuals who have taxi licenses and run their services during the higher-demand periods associated with seasonal fishing activities.

Vessel supply related business is a significant part of the local support service economy. At present (2004), there are four stores in the community. Two of these are larger, more general purpose stores and two are specialty operations. Of the two smaller stores, one is run by Peter Pan on its premises and, while it is open to the public, it essentially functions as a convenience store for its employees, stocking a variety of food items as well as a limited selection of clothing, plus boots, rain gear, and other processing work related items. The other small store, Ram's General Store, is open evenings and weekends and essentially functions as a convenience store for the two residential neighborhoods built some distance away from the main portion of the community in the early 1980s. The two large stores, Gould's and Alaska Commercial, carry a range of goods and derive a substantial portion of their business from fishing, though they reportedly vary in the nature and level of engagement with the fishery.

Gould's store is a family-owned business that was started in King Cove in 1939, moved into its present building in 1993, and is currently (2004) run by a son of the founder. In addition to functioning as a general store to the community, Gould's also derives business from grocery sales to fishing vessels (and includes delivery to the vessel as a free service) as well as the sales of various supplies. Gould's also has the community's sole "package liquor" store and sells a range of household furnishings and appliances. The owner of the store estimates that between 20 and 30 percent of the overall business is attributable to sales to commercial fishing vessels, with the balance being made up of sales to the local community as a whole. Of the overall vessel sales, an estimated 30 to 35 percent is attributable to crab vessels in particular. Crab vessel sales are typically fresh items, such as fresh produce, eggs, and milk (whereas cod, halibut, and sablefish vessels tend to buy more groceries, stay in the community longer, and buy more locally in general). When crab vessels spend more time in the community with tank inspections or even in the event of a strike, the upturn in business is seen over a longer period of time.

Gould's store is located near the Peter Pan Seafoods processing plant, and processing workers do constitute a portion of the business on a daily basis, with popular items reported as ethnic foods, soups, videos, CDs, tapes, and local souvenir clothing, along with personal care items. According to store management, with a tough local economic climate, residents are even more likely than normal to spend money outside of the community and ship goods in, with the impact that tough times bring an even more significant loss in store business than may otherwise be expected as there are both absolute and market share business declines. Employment at the store is currently at 8 or 9 employees, including 3 part-time positions, down from a total of 14 to 15 employees in earlier years. When things get busier during peak fishing seasons, the store strategy is to attempt to use management and administrative staff to help with sales rather than to try to hire and train temporary staff. According to the store owner, the business climate in King Cove is a challenging one, and quite a few businesses have opened and closed in the community over the years. When fishing seasons are good, the store receives larger fishing related orders, but during leaner seasons proportionally more palletized goods reportedly come in from Seattle for delivery to the vessels. The store also reports that during lean times there are greater problems collecting accounts receivable from the community

as outside bills that are perceived to have a greater impact on credit ratings tend to be paid more quickly. Goods typically come in by barge, with Western Pioneer and Coastal Transportation each serving the community once per week during the summer. (Peter Pan also moves cargo in and out of the community but typically does not provide shipping services to other businesses.)

The Alaska Commercial Company (commonly called the “AC” store) is a relatively new entrant into the community, having taken over the lease on a King Cove Corporation building previously used as a ship supply type of store by Western Pioneer. Prior to transition to the AC store, Western Pioneer did transition from a more strictly supply store toward selling case lot groceries (which required rezoning from industrial to commercial). Perhaps because of its location closer to the harbor, this store is reported to derive a larger proportion of their business from outside vessels. In terms of the relative importance of commercial fishing to the business base of operation, the manager of this store stated that outside vessels, primarily crab vessels, accounted for roughly 40 percent of the overall business of the store. Things have changed with shorter crab seasons, however, as it is reportedly easier to resupply out of Seattle for very short seasons than it is for longer ones. Crew on these vessels also apparently purchase more “nice to have” and not just “need to have” items during good seasons, and less turnover of crews means a lesser volume of sales as well. Shorter and less lucrative seasons also reportedly translate into a lower volume of sales related to sprucing up vessels, as all but the most essential investments are deferred (meaning drop in sales is greater than the linear drop in activity). There has been some increase in non-crab transient vessels “prospecting” local fisheries during difficult times, but this has reportedly resulted in little extra business. Local commercial fishing accounts for another large segment of the business, but it is not possible to differentiate this part of the business from the general residential community trade, due to the family nature of most local catcher vessel operations. Unlike some communities, processing personnel in King Cove are reported to constitute a significant portion of local store sales, accounting for roughly 40 percent of non-food sales, with music sales comprising a marked proportion of these sales, but items such as rugs to personalize company living quarters, and hot plates and other small appliances being important as well. Some items, such as sportfishing gear, reportedly would not be stocked if not for processing personnel. Sales of goods to processing workers for shipment to families overseas, such as hardware, clothing, and money orders, are also reported to be common. With processing personnel seasonal movements, this is a constant source of new business.

In terms of an annual cycle, the AC store manager reports that the January crab openings represent a “big push” for the store and provide a bit of an operating cushion for much of the rest of the year, which has become all the more important in the face of other fishery declines. After crab season there is a low, with another pickup seen related to cod activity in March and April. Salmon related business brings a number of peaks and valleys during the summer months, but fall fishing related business has been very slow in recent years until the crabbers come again in October for a couple of weeks. Following crab, business remains slow for the balance of the year. Employment at the store has fluctuated between five and six individuals, with five typically used during slow periods. With salmon season being very slow, the typical additional summer hires have not been made in recent years, and whatever peak demands have occurred have been covered by individuals working longer hours rather than employing additional help. This has remained true even with a rebound of the salmon fishery over the last couple of years. The store manager reports that fluctuations in the fisheries can be seen not only in the volume of business at the store, but also in the number of customers using welfare benefits for purchases. During the particularly low period for the salmon

fisheries in 2002, the manager estimated that there were between 30 and 40 cases of use of benefits whereas there has only been a single case 5 years prior to that. As of the fall of 2004, given the upswing in the fisheries, the current manager reported that there were only about five families currently using benefits for purchases at the store.

Peter Pan Seafoods also acts as a vessel support business through their “storeroom” marine hardware facility. Open to the public, not just those who have other business with the cannery, this represents the only source of a range of marine hardware in the community.

There is also some employment related to vessel watch services, which in turn ties back to moorage capacity in the community. Boat owners from outside the community who moor their vessels in the harbor will hire local individuals to act as watchmen and to handle any emergencies that may arise. Fees for this service are reported to be in the \$35 per day range as of 2004. For crab vessels, it is more common for outside vessels to be moored in the community in the relatively short interval between the fall and winter seasons than the much longer stretch between the winter and fall seasons. A couple of knowledgeable individuals estimated a typical level of local employment to be three boat watchmen who were responsible for five or six boats each.

There are very few other miscellaneous income sources in the community related to vessel services. An example of this very small-scale type of service is the individual in the community who on occasion provides diving services to vessels to check out hulls and clear props or the like. Some vessel owners also derive some income chartering their vessels for runs to Cold Bay or other locations to move crew or parts when weather closes down air transportation or other logistical arrangements are simply less efficient.

There are two bars in the community, and each derives a substantial portion of its business from fishing related patronage, but they vary in the nature of their engagement with that sector. Under previous ownership, the bar near the harbor (MC’s) opened only during crab season and derived its yearly income from crab season related activity. Still characterized as being somewhat of a “fisherman’s bar” this business is attempting to change that characterization and informally offers rides from the processor to the bar to help attract Peter Pan employees as clientele. This bar still sees marked crab season related activity peaks during the October/November and January/February periods (the latter also overlaps with strong cod and pollock activity) and the owner estimates that at present crab fishing related sales make up roughly 30 percent of the overall yearly sales. November (after crab) and December are slow months due to little fishing activity but, paradoxically, May through July at the peak of salmon season is also very slow, due to the fact that this is primarily a local fishery, and locals are out on the fishing grounds rather than in the community. Employment ranges between two and three positions during the year. Like some of the other support businesses in the community (particularly the stores), MC’s does even more business when the crab fleet stay in the community is extended by a strike. During one recent strike year there were an estimated 90+ vessels in the harbor for a 2-week period. Like a number of other owners of businesses in the community that are dependent to a substantial degree on the crab fishery, however, the owner of MC’s has other direct employment in the community, along with interest in another fishing related business. Though fishing related business is a mainstay, the vagaries of commercial fishing conditions in recent years do not make for a necessarily solid or exclusive base for many household economies.

The second bar in the community is run by the King Cove Corporation and is located in the Corporation building that also houses the hotel, Corporation offices, and a restaurant. The Corporation bar has not been as closely associated with any particular harvest activity as the other bar but apparently draws more clientele from the nearby processing plant, and it too benefits from increased activity related to the various annual peaks in harvest activities that bring an influx of personnel (and money) to the community. Crab-related business does bring marked pulses of business to the bar for at least “a couple of nights” around the seasons, but this can extend if vessels have to wait in the community to unload at the processor.

There are also a limited number of restaurants in the community. At the time of fieldwork (October 2004), a Chinese restaurant was open in the King Cove Corporation building, but others were not. At other times, there is a pizza and subs restaurant in the community (Uptown Pizza), and a bakery/burger/ice cream shop (A&E’s) some distance out of town on the road to the airport. A&E’s is a seasonal business that caters more to local residents with access to vehicles than to processing workers or outside fishermen on foot, while Uptown Pizza operates intermittently.

Beyond the bar and restaurant trade, the King Cove Corporation is also involved in a range of enterprises that act as fishery support services. These include such things as land leases to Peter Pan, crab pot storage, and involvement with the new marine fuel business as mentioned previously, along with running a 12-room hotel that accommodates processor personnel in peak/overflow situations and other fisheries related guests. According to Corporation officials, rooms are often in demand during salmon, pollock, and cod seasons, and this demand can account for rentals of from 6 to 9 or 10 of the total of a dozen rooms in the facility for significant periods of time. (Other major block demands of the hotel include school and AEB government related activities.) The Corporation built and is leasing out the building occupied by the AC store, and the community Post Office building. The Corporation also owns the Russell Creek hatchery facilities, although this is inactive at present. A sand and gravel lease is another local activity, and the land that has been utilized under this lease also provides some of the Corporation’s crab pot storage capacity. The Corporation provides employment for 8 or 9 local residents.

The Agdaagux Tribe provides six full-time and two part-time employment positions in King Cove on an ongoing basis and is involved in providing a variety of social services to the community through the administration of a variety of Bureau of Indian Affairs (BIA) and other programs, encompassing such diverse areas as child and elderly welfare programs, general and energy assistance, and alcohol and domestic violence programs. Tribal staff report that with a decline in the economic vitality of local commercial fishing, there has been a marked increase in demand for a range of their social services. The tribe (and others in the region) is also involved in community clinic ownership and service provision. While many of these services are utilized primarily by long-term residents of the community, the clinic also sees service demand from the outside commercial fishing fleet. The tribe is also involved in building community infrastructure through the administration of BIA road building funds and is in the process of improving and paving the road system out to the airport, which will better support local transportation needs (that will service fishing and other local economic activities, as well as serve general residential transportation needs). A reported advantage of running the road funding through the BIA rather than other entities is that the agency has more effective local hire provisions than other entities, and this has resulted in

employment for about a dozen local residents at its peak, with about half that number employed as the project was winding down at the time of fieldwork in 2004.

Between the fishing harvest and processing sector employment noted in earlier sections, and the support service sector employment noted in this section, there were no other private sector type of jobs in the community listed by multiple community contacts from all sectors. The King Cove private sector economy is very limited (and public sector jobs, though still a mainstay of local employment, have reportedly declined overall in recent years). While the local economy is, in part, constrained by relative isolation on the transportation system, a number of individuals in the community ventured the opinion that the transportation project that would link King Cove to Cold Bay offers hope of new economic opportunities. Construction was underway at the time of fieldwork in 2004, and it is currently conceived of as a combination road and hovercraft link, but it could eventually become an all-road system. Approximately 15 local individuals were working on this project in the fall of 2004. In either configuration, it would eliminate the transportation bottleneck caused by the not-infrequent closure of King Cove's airport due to adverse flying conditions, a circumstance that can last for several days at a time, several times per year. A surface transportation link to the Cold Bay airport, one of the state's major airport facilities and far less subject to closure due to adverse weather conditions, would provide a much more reliable means of getting vessel crews in and out of the community (maximizing the utility of the newly constructed harbor) as well as processing crews, and it could also potentially provide a viable avenue for the transportation of fresh product from the community (but this may be limited in actuality by project impact mitigation measures that could restrict such commerce). Further, local sources report that public safety would be improved through a greater ability to access timely medical evacuation flights.

While not a support business, the City of King Cove has recently converted the old clinic building (a city-owned structure on Peter Pan land) to a community resource facility that houses a workout area (furnished largely with donated equipment), a resource room with internet connections, an artist's store, a second-hand store, and an elder's resource room that is intended to house local historical resources. This facility functions both as a community related and fishery related transient population resource. In recent years, there has reportedly been less community interaction with outside fishery and processing workers in city-sponsored recreational sports events than in years past, but 3-on-3 basketball competitions still draw participants from all sectors of the community.

The community clinic also sees peak service demand periods that coincide with fishing seasons. No summary statistics are available, but demand for services peaks in response to every fishing season. According to clinic staff, in the days leading up to openings, the clinic sees walk-ins from outside the community who have forgotten their medications and need refills before going out fishing. Once the season starts, there are a number of injuries that could be characterized as being akin to sports injuries, where individuals who have not been performing hard physical labor go out without proper preparation and end up with strains and sprains. These types of injuries are reportedly seen for all of the fishing seasons, as are "repetitive motion" types of injuries. Processing worker injuries also increase at peak times and may carry the added challenge for clinic workers of dealing with individuals of different cultures who may speak very little English. Other types of injuries are associated with the "live hard" ethic shown by people headed out for the more intense fisheries, such as the Bering Sea crab fisheries, where this burst of objectively dangerous activity may be

accompanied by binge drinking while in port. Quality of care also feels the impact of fishing seasons, especially when patients need to be transported to Anchorage. During peak times when the transportation system is at maximum capacity, a patient may have to wait 5 to 7 days to get an available seat on a commercial plane out of the community, or alternately spend \$25,000 or more on a medivac. As much demand as commercial fishing related services place on clinic staff and resources, however, the provision of services to transient fishermen and locally based processing workers is economically important to the operation. Whereas local residents are typically covered by Indian Health Service benefits, which provide a minimal level of revenue to the clinic, others are typically not beneficiaries of this system and pay for services directly or through private sector insurance companies. Locally based clinic staff include a nurse practitioner, a masters level social worker, a substance abuse counselor, three community health aides, and three support staff. This local staff is in turn supported by a doctor, a second nurse practitioner, a psychiatric nurse, and a second substance abuse counselor who come to the community on an intermittent basis.

4.4 LOCAL GOVERNANCE AND REVENUES

As discussed in the introduction, revenues derived from commercial fisheries landings in King Cove are integral to the overall economy of the AEB. In this section, community rather than borough revenues are presented. King Cove municipal revenues for 1999 through 2003 as summarized on the DCED website are shown in Table 4-24. Because the community has only one processor, detailed information on local fish taxes obtained from the community is not presented here due to confidentiality concerns.² Local taxes in King Cove consist of a 3 percent general tax on sales, and a 2 percent city raw fish tax (in addition to the 2 percent borough raw fish tax; combined with the 1 percent Alaska seafood marketing institute tax, fish landed in King Cove are taxed at combined, local, borough, and state total rate of 5 percent). According to the City Manager, for the last decade or so about 60 to 70 percent of the City's general fund budget has come from sales taxes on an annual basis. Of the sales tax totals, in a typical year roughly two-thirds derive from fish taxes, and one-third derives from general sales taxes. Until recently, fish taxes split out approximately one-third from salmon, one-third from crab, and one-third from groundfish, but in the last few years, the proportion attributable to salmon has declined somewhat, while the portion associated with groundfish has increased. As shown in the table, local operating revenues from taxes rebounded sharply in 2003 following a sharp decline over the years 2000 through 2002.

There are no local property taxes on the seafood processing facilities or any other properties within the community. The City recently instituted a fisheries business impact tax, with 2004 being the first full year of its implementation. As originally conceived, the first 10 million pounds of processed product would be tax free and beyond that, the first 60 million pounds would be taxed at a rate to yield revenue of \$200,000 at the upper volume, with an annual revenue cap kicking in at that point. As instituted, however, this is currently a \$100,000 flat tax and applies only to Peter Pan Seafoods. Institution of this revenue source represents a marked departure from the way revenue is currently derived from local processing.

² Detailed fish tax revenue information for the community was presented in written form by the City during public testimony on crab rationalization issue before the NPFMC at the October 2002 meetings.

Table 4-24. King Cove Municipal Revenues, 1999 -2003

Revenue Source	1999	2000	2001	2002	2003
Local Operating Revenues					
Taxes	\$1,011,597	\$1,165,613	\$806,691	\$649,373	\$926,188
License/Permits	\$2,558	\$400	\$0	\$1,650	\$850
Service Charges	\$353,608	\$352,848	\$70,268	\$133,064	\$303,212
Enterprise	\$882,537	\$934,065	\$1,208,444	\$1,318,137	\$1,225,156
Other Local Revenue	\$73,020	\$124,881	\$130,987	\$180,680	\$34,079
Total Local Operating Revenues	\$2,323,320	\$2,577,807	\$2,216,390	\$2,282,904	\$2,489,485
Outside Operating Revenues					
Federal Operating	\$12,685	\$14,518	\$40,730	\$238,456	\$31,729
State Revenue Sharing	\$29,546	\$26,857	\$25,885	\$25,881	\$26,020
State Municipal Assistance	\$23,209	\$14,034	\$12,305	\$12,715	\$14,910
State Fish Tax Sharing	\$257,555	\$313,467	\$465,413	\$341,627	\$460,245
Other State Revenue	\$112,536	\$10,686	\$11,643	\$12,143	\$12,146
Other Intergovernmental	\$0	\$0	\$0	\$0	\$0
State/Federal Education Funds	\$0	\$0	\$0	\$0	\$0
Total Outside Revenues	\$435,541	\$379,562	\$555,976	\$630,822	\$545,050
Total Operating Revenues	\$2,758,851	\$2,957,369	\$2,772,366	\$2,913,726	\$3,034,535
Operating Revenue Per Capita	\$3,993	\$4,407	\$3,500	\$3,670	\$4,117
State/Fed Capital Project Revenues	\$1,017,254	\$662,967	\$1,134,262	\$718,406	\$294,907
TOTAL ALL REVENUES	\$3,776,105	\$3,620,336	\$3,906,628	\$3,632,132	\$3,329,442

Source: DCED Website, 2001, 2002, personal communication 2004.

Beyond sales and fish taxes, the community derives revenue from a number of different fisheries related sources. Local taxes on fuel transfers or sales, a strong source of revenues in some communities, have only recently begun to be assessed in King Cove. Peter Pan, the only marine fuel sales outlet in the community, began paying tax on fuel sales in 2002. In 2003, the City of King Cove moved from flat rate to volume-related water charges for Peter Pan, which uses approximately 80 percent of the system load. The water rates were set at 90 cents per thousand gallons and are resulting in approximately \$185,000 in revenue to the City per year for a 225-million gallon service requirement. The City also provides sewer services to the plant at a flat rate of \$2,060 per month. Solid waste service revenues from the Peter Pan facility vary by the volume of waste generated, but city staff reports monthly revenues from this source have varied between approximately \$3,000 and \$8,000 per month in recent years. At present, Peter Pan generates all of its own power independently, as does the City, but both parties are reportedly interested in configuring the system to allow for the purchases of surplus power in either direction in the future. The City also generates fishing-related revenue through harbor or moorage fees, as well as through a per pot charge for crab pots moving across city docks (in either direction) that was recently increased from \$1 to \$1.50 per pot and pot storage fees on City-owned lands of 25 cents per pot per month. A number of local community services and institutions may be seen on Plate KC-8a and Plate KC-8b.

During the late 1990s, King Cove saw a growth spurt and undertook the building of a new clinic, water and hydroelectric system improvements, and harbor construction, but more recently there has been a substantial downturn in revenues. Data supplied by the City Manager indicates an overall decline in revenue of 24 percent from FY 2000 to FY 2002 (moving from approximately

\$1.7 million to about \$1.3 million). According to city staff, the City of King Cove was significantly short of budget during that period, and made payroll cuts, including cutting one police officer and one harbor employee. The City deficit funded the general fund from savings as an emergency measure and, along with local residents, the City has been the beneficiary of Steller sea lion protection-related relief funds that have helped fill the gap in revenue. In 2002, the City Manager states that even with \$175,000 worth of budget reductions, the City was still \$250,000 short and would have been over \$300,000 short were it not for the Steller sea lion relief funds. Since that time, however, revenues have rebounded and cut positions have been restored, with city employment, according to the mayor, standing at 26 in 2004. Recent capital improvements have led to an accumulated debt services of \$3 million per year over the next 30 years, but the City's special revenue funds (often termed enterprise funds in other communities) have consistently remained "all in the black" except for the harbor and port fund. For that fund, the expenditure side has been put in place, and while the revenue side has been set, it will take some time to be fully realized. Future projects include a new high school, with construction scheduled to begin in 2005, and a new power plant.

KC-8a

Community Services/

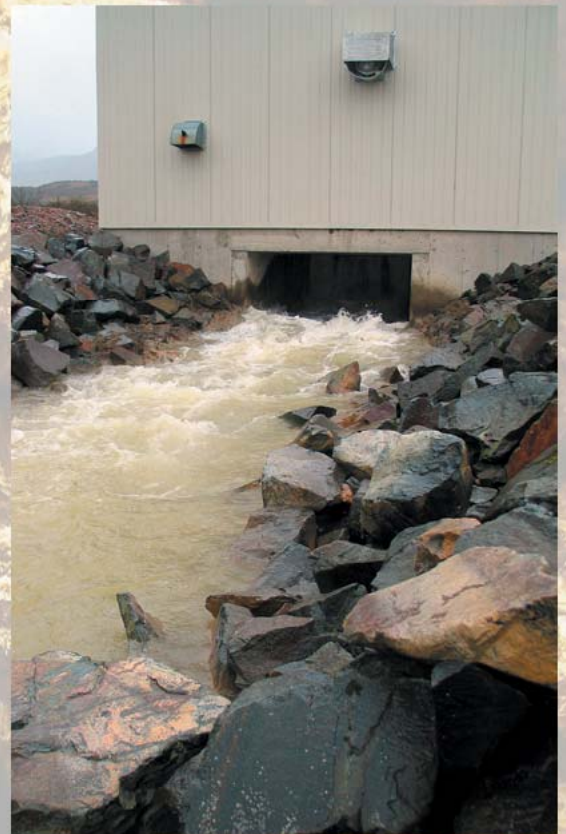
Facilities

Clockwise from upper left:
City offices, tribal office,
King Cove school, and police
department



KC-8b
Community
Services/Facilities

Hydro and water
treatment plants



KODIAK



CHAPTER 5.0

KODIAK

The community of Kodiak, located near the northeastern end of Kodiak Island in the Gulf of Alaska, is the largest island in Alaska and second in size within the United States only to the island of Hawaii. It is 252 air miles southwest of Anchorage, a 45-minute flight. The city of Kodiak, incorporated as a Home Rule City in 1940 and encompassing 3.5 square miles of land and 1.4 square miles of water, is part of the Kodiak Island Borough (KIB). Kodiak National Wildlife Refuge encompasses nearly 1.9 million acres on Kodiak and Afognak islands, and the Alaska Maritime National Wildlife Refuge, which includes the Barren Islands in the northernmost portion of the KIB as well as some tidelands and submerged lands in and around the city of Kodiak itself,¹ also has a significant presence in the Kodiak region.

The climate of Kodiak Island has a strong marine influence with moderate precipitation, occasional high winds, and frequent cloud cover and fog. Severe storms may occur year-round and are most common from December through February. Annual rainfall is 67 inches, and snowfall averages 78 inches. January temperatures range from 14 to 46°F, with July temperatures varying from 39 to 76°F. Plate KOD-1 illustrates the physical setting of the community and Plate KOD-2 portrays some aspects of the physical/spatial layout of the community.

5.1 OVERVIEW

Kodiak's identity is that of a fishing community. Through time, both its fishermen and processors have developed an engagement in and dependency upon many different fisheries. That is, while some fishermen and plants do specialize, many participants display a wide diversification in their fishery operations.

Commercial fish processing in the Kodiak region began on the Karluk spit in 1882. Not long after that, canneries² were established in the community of Kodiak. While the quantity and form of shore processing plants in Kodiak have changed, this sector remains an influential component of the fishing industry that is, in turn, fundamental to the community and its economy.

Shore processing facilities or canneries in the Kodiak region concentrated primarily on salmon and herring prior to 1950, although there was also a cold storage facility at Port Williams where halibut was frequently landed. As their common name suggests, the product produced was most often canned fish. Cannery operations expanded in the 1950s to accommodate king crab processing. Thirty-two canneries processed 90 million pounds of crab in 1966. In the following years, there was some growth within the sector; for example, one new shoreplant was built in Kodiak in 1968.

¹ Precise federal ownership/management of tidelands in and around the Kodiak is matter of contention. This includes lands currently utilized for seafood processing.

² The term "cannery" is still commonly used in Kodiak to refer to shore-based seafood processors, regardless of product form actually produced. This term appears to be more commonly used in Kodiak than in some of the other communities profiled.

Declining harvest levels, however, prompted several shoreplants to move their operations during the late 1960s and early 1970s to Unalaska/Dutch Harbor in the Aleutian Islands, closer to the larger supply of Bering Sea-Aleutian Island (BSAI) king crab. This move also diverted some of the crab that had previously been taken to Kodiak for processing, and the number of shoreplants in Kodiak declined by more than half. When king crab stocks started to crash in the late 1960s, some of the Kodiak plants sought to diversify. At least one plant added facilities to separate the previously dominant crab line and the main plant was then converted into a shrimp plant. Other plants report they “evolved into shrimp” to augment their crab production. Kodiak shrimp landings peaked in 1971, and stocks crashed in the late 1970s. The reason, while not definitive, may have been related to predation by large stocks of cod and pollock. Between 1978 and 1981, several Kodiak processing plants stopped shrimp production.

A temporary resurgence in the Kodiak red king crab stocks in the mid-to-late 1970s instigated expansion of existing plants once again and fostered the building of two new plants in Kodiak. Larger freezing capacity was a notable addition to most of the shoreplants. This allowed flexibility in storing larger volumes and processing more species into more diversified products. Larger docks also became important to the processors so that they could unload more boats in a given amount of time. With a larger overall capacity to process fish, competition by the plants for the fish resource increased, and the rate of return for individual shoreplants declined. Diminishing crab stocks as the fishery entered the 1980s compounded this problem. After a record catch in 1980, the Kodiak king crab stocks crashed. Several factors, including overharvesting and natural conditions, have been cited by fishermen and scientific sources as contributors to this collapse. There has not been a red king crab opening in the Gulf of Alaska since the early 1980s. Waters around Kodiak still produce tanner and Dungeness crab fisheries, and Kodiak shoreplants process these species in addition to deliveries of crab they receive from boats returning from the Bering Sea fishery.

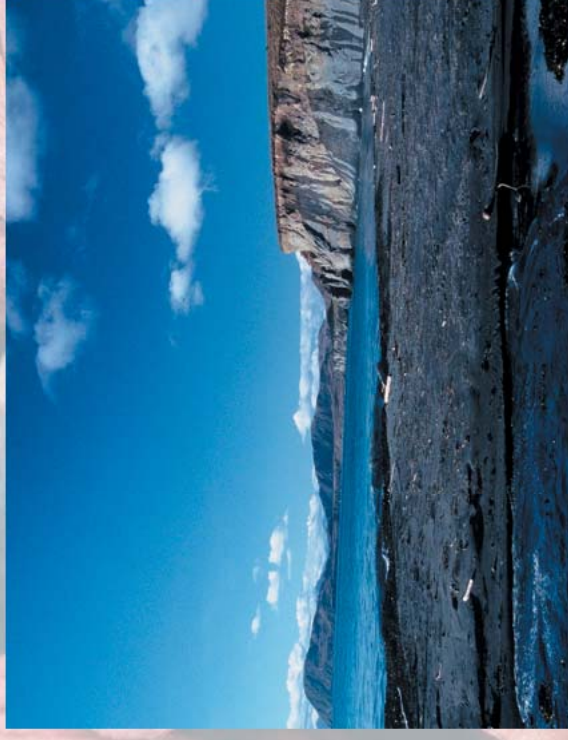
Efforts to fish Dungeness crab along the Kodiak coastline were slower to intensify, and landings peaked in 1981. At about the time when the Kodiak shoreplants started processing shrimp, the bairdi tanner crab fishery “started to become a reality,” but the tanner crab seasons, like the seasons of other crab species, soon became shorter and less productive. Many of the plants maintained halibut production lines while they were processing crab, shrimp, and salmon. At that time, halibut processing was not the intense activity it was to become under the derby-type open access system. The season was open most of the year and there were relatively few boats fishing it. As the crab and shrimp faded as viable resources to maintain shoreplant production, salmon became much more important to the processing companies in Kodiak, as they continued looking for products to fill the gaps in their production.

The provisions of the Magnuson Act of 1976 gradually expelled the foreign fleets capitalizing on the groundfish fishery within the Gulf of Alaska Exclusive Economic Zone, while American boats and processors entered the fishery. By the late 1970s a few Kodiak shoreplants, according to one plant manager, started experimenting with groundfish resources “because there wasn’t much crab to do.” However, the majority of the groundfish caught prior to 1988 was processed aboard foreign vessels, first by wholly foreign operations, and then by joint ventures where American boats delivered to floating foreign processors. One interviewee described the late 1970s and 1980s as years of “forced” diversification:

KOD-1

Physical Setting

Clockwise from upper left:
View from Kodiak, Fossil
Beach, Pasagshak, and
downtown Kodiak



KOD-2

Physical/Spatial Relationship

Clockwise from upper left:
Downtown Kodiak, bridge
to Near Island, Kodiak at
sunset, and fuel storage tanks
and Russian Orthodox church



In that same time period [late 70s-early 80s] we started playing around with halibut and black cod, and very early playing around with other groundfish, and then in the mid-80s we got a lot more serious, and then in 1988 we built the new factory for surimi. It's pretty easy to see that we were kind of just forced into it. I mean, if you wanted to stay in the fish business you got into groundfish because that is all there was. And of course during that whole period, we continued to process salmon and herring and other products that were available to us.

Plant and dock expansions fostered their ability to further utilize groundfish resources. The first surimi production in Alaska took place in Kodiak in 1985 with the aid of an Alaska Fisheries Development Foundation Saltonstall-Kennedy grant. Also in the mid-1980s, "the State of Alaska came out with their tax credit program for getting into the groundfish, and so we fully utilized that," according to one plant operator, and his was not the only plant to do so. In 1987, a single plant processed about one-third of all the pollock that was taken out of the Gulf, but tax credits and other incentives contributed to additional effort and capitalization in the processing sector. This had limiting effects on large volumes being received by any one plant. The growth of the shore-based groundfish fishery in the Gulf of Alaska provided most Kodiak processors with products needed to keep their plants running nearly year-round. Large capital investments made the capacity to process groundfish resources greater than the total amount delivered, but a number of factors have converged to change operations significantly. Changing seasons have forestalled the opportunity to run plant operations year-round or at maximum capacity for extended periods of time, and competition for the "race for fish" stimulated overcapitalization in both the harvesting and processing sectors. Inshore/Offshore-1 management measures provided protection to Gulf of Alaska onshore processors and the harvesters who deliver to them from preemption by the offshore sector. However, even with license limitation, the Gulf of Alaska fishery is still characterized by overcapitalization. The derby-style fishing tactics and, in particular, the large volumes of pollock that can be caught in a short amount of time with contemporary equipment and technology can effectively "plug" the shoreplants relative to their normal operating capacity. If plants increase their capacity to handle these peak demands, they are essentially "capitalizing for inefficiency" as much of this capacity will be idle for most of the year. After the implementation of the American Fisheries Act of 1998 (AFA) in the Bering Sea, some Kodiak processors also cite the "race for history" in Gulf of Alaska fisheries (and especially pollock) as an additional pressure towards inefficiency in local groundfish fisheries, in anticipation of eventual groundfish rationalization in some form in the Gulf of Alaska.

According to the City of Kodiak, Kodiak is home port to 770 commercial fishing vessels, making it the state's "largest fishing port" (NMFS 2002) as measured by local fleet size. The development or evolution of the Kodiak harvesting fleet has essentially paralleled that of the processors to which they deliver (along with the development of a fleet component that in part or in whole participates in BSAI fisheries). The details and dynamics are somewhat complex but have resulted in a fleet of multi-species, multi-gear boats (although trawlers may be somewhat more specialized, they can also switch gear or work as tenders). This versatility is especially important to harvesters as seasons have become more compressed and competition to harvest the resources has increased, although management restrictions such as license limitations or Individual Fishing Quotas (IFQs) have increased the cost and perhaps reduced the possibility for such versatility. Kodiak fishermen greatly value having options and making their own decisions. Thus, both the potential benefits (generally increased stability of access and amount harvested for those who can fish) and the potential costs

(increased cost for entry into fisheries and reduced flexibility) of any or the recent proposed management alternatives directed toward rationalizing various fisheries are generally quite clear to them.

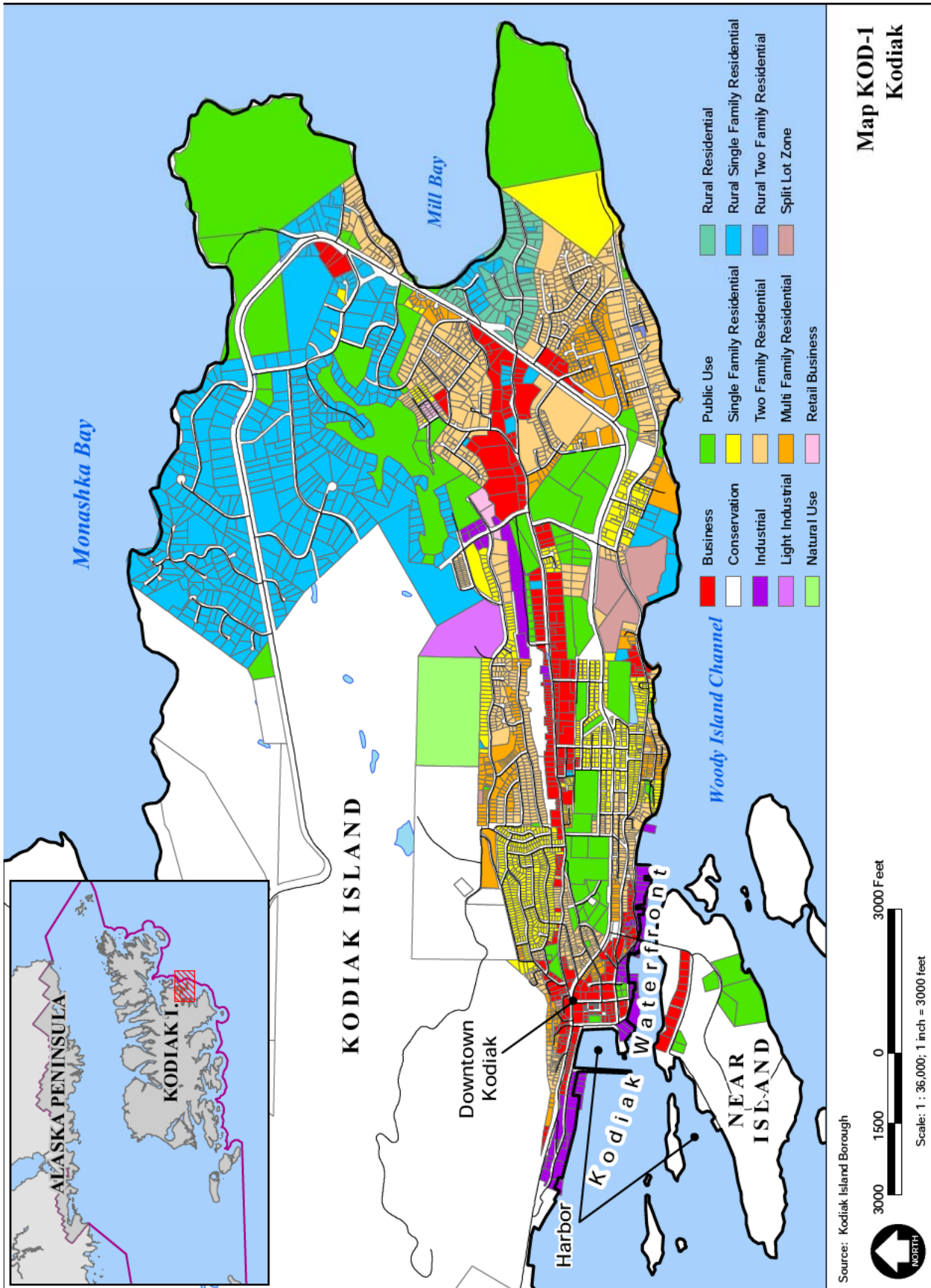
Kodiak's economy has become increasingly diversified. The local United States Coast Guard (USCG) installation is the largest in the United States, and although relatively self-sufficient in some respects, it also contributes a great deal to the local economy in many ways, with approximately 1,300 uniformed and civilian employees, along with 1,700 dependents. Housing has been relatively scarce since the 1980s and new house construction has been constant since that time, both to meet this demand as well as in response to increased population and more USCG personnel living off-base. The housing market is, however, currently softer than it has been in the collective memory of most Kodiak residents, due at least in part to a general downturn in the fishing industry. In the decade from 1987 through 1996, wholesale value of seafood processed in Kodiak ranged from roughly \$200 million and up on an annual basis; from 1997 to 2003 this value only reached \$100 million for 1 year. The service sector, and especially the retail sector, has continued to grow and has become increasingly important. Fishing support services have been affected by the downturn in the fishing industry. The local timber industry is at a relative low point currently but has been significant in the past. Education is an important economic and social component of the community, represented by the facilities of Kodiak College and The Fishery Industrial Technology Center. The aerospace industry has the potential, through a local rocket launch facility and associated activities, to contribute to the economy both directly as well as more indirectly through support services and facilities provided to outside specialists who work at the launches.

Map KOD-1 shows the layout of the community and land use types around the city of Kodiak. Plate KOD-3a, Plate KOD-3b, and Plate KOD-3c display some of the attributes of the community.

5.2 COMMUNITY DEMOGRAPHICS

Kodiak is a large community by Alaska standards and is the seventh largest community in the state in terms of population.³ Accompanying this size is a relatively diversified economy compared to other fishing communities in the southwestern part of the state. In terms of direct employment in the fishery being the overriding factor in residency decisions, the population of Kodiak could be viewed as less directly tied to the fishing economy than, for example, is the case for Unalaska, Akutan, or King Cove. Much of the economic diversity seen in Kodiak, however, links back to commercial fisheries in one way or another, with commercial fishing underpinning much of the apparent diversity, generating secondary and indirect employment, and otherwise driving a wide range of related activities. For example, there is a considerable U.S. Coast Guard presence in the community. While not a direct fisheries activity, the base would not exist in Kodiak if it were not driven by commercial fishing related demands.

³ The six largest communities in Alaska, in order, are Anchorage, Juneau, Fairbanks, Sitka, Ketchikan, and Kenai. There are two different basic types of local governance in these communities: Anchorage, Juneau, and Sitka are unified Home Rule Municipalities (i.e., unified city/boroughs), while Fairbanks, Ketchikan, and Kenai, like Kodiak, are Home Rule Cities (Kodiak Chamber of Commerce 20 04).



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KOD-3a

Community Attributes

Downtown Kodiak scenes



KOD-3b

Community Attributes

Clockwise from upper left:
Kodiak Middle School,
Chiniak School, Alutiiq
Center, and Baranov House
Museum



KOD-3c

Community Attributes

Clockwise from upper left: Russian Orthodox church, Kodiak Community church, and Assembly of God church



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5.2.1 Total Population

Table 5-1 provides information on Kodiak’s total population by decade since 1880. The city of Kodiak did not attain the status of the largest community on the island until about 1920 or so and has grown steadily since then. The KIB was formed much later, and numbers for the borough are not available until 1960 when 7,174 people were enumerated. Named places within the KIB only totaled 3,320 people at that time, however, and most were in the city of Kodiak. Based on present conditions, it can be assumed that most of the difference (whatever its “true” value) represented people living in the area of, but outside of the city limits of, Kodiak (Linda Freed, personal communication 2001⁴). This would account for a good deal of the sharp increase between 1950 and 1960 of the population of the “Greater City of Kodiak” (Table 5-1).

Table 5-1. Kodiak City and Area Population 1880-2000

Year	City of Kodiak	Greater City of Kodiak ¹	Total Hinterland ²	Kodiak Island Borough
1880	0	0	694	NA
1890	495	495	1,334	NA
1900	341	341	623	NA
1910	438	438	655	NA
1920	374	374	343	NA
1930	442	442	444	NA
1940	864	864	589	NA
1950	1,710	1,710	567	NA
1960	2,628	6,482	692	7,174
1970	3,798	8,410	999	9,409
1980	4,756	8,842	1,097	9,939
1990	6,365	11,610	1,699	13,309
2000	6,334	12,211	1,702	13,913

¹ “Greater City of Kodiak” encompasses the city of Kodiak, Kodiak Station, and the derived unincorporated population – see text.

² “Total Hinterland” is the total population of all named places on Kodiak Island, other than the city of Kodiak and Kodiak Station.

Source: DCED for named places; “Greater City of Kodiak” and “Total Hinterland” are derived values - see text.

The 2000 “unincorporated population” is 4,037 and is generally believed to approximate the population that could be considered part of the “greater Kodiak city” area but not within its incorporated city limits. This “unincorporated” population is thus equal to about 64 percent of the city’s 2000 incorporated population of 6,334. A reported trend in recent years is an increase in the “unincorporated” population and a simultaneous, if slight, decrease in population for the city of Kodiak proper, as the city is considered essentially built-out. An additional 1,840 people live on the USCG base, which most people also consider as part of the “greater city of Kodiak” area. Together these three populations include 12,211 individuals, or about 86 percent of the KIB’s total 2000

⁴ Freed, Linda, Director of Community Development, Kodiak Island Borough, June 2001.

population of 13,913. This three population “greater city of Kodiak” figure does not include the residents of Chiniak or Womens Bay (which together comprise about 5 percent of the KIB’s population), although from a number of perspectives it would be logically consistent to include them as well, based on the closeness of social, employment, and economic ties. The calculated “greater city of Kodiak” percentage of the total borough population has varied from 84 to 90 percent since the formation of the KIB. Table 5-2 provides 2003 population estimates for communities and named places within the KIB. While specific relationships vary by community, in general, Kodiak acts as a transportation, administrative, and economic hub for the borough.

**Table 5-2. Kodiak Island Borough
Population Estimates, 2003**

Community or Area	Estimated Population
City of Kodiak	6,138
Akhiok	51
Chiniak	49
Larsen Bay	96
Old Harbor	211
Ouzinkie	170
Port Lions	233
Karluk	24
Womens Bay	667
USCG Base	2,192
Other Areas	3,980
Total Borough	13,811

Source: Kodiak Chamber of Commerce Kodiak Community Profile and Economic Indicators, 2004 (based on Alaska Department of Labor data).

Kodiak, like other fishing communities, experiences seasonal population fluctuations that correspond to peak harvest and processing periods. In Kodiak, this has historically been most evident in summer (primarily July and August). With the development and growing importance of groundfish processing, however, Kodiak processors have increasingly tried to operate year-round (or nearly year-round) and have done so in recent years with a predominantly or exclusively local labor force, for a number of reasons. The strong national economy has also decreased the number of people willing to come to Kodiak to work seasonally, while at the same time the costs of transporting, housing, feeding, and training temporary employees have increased. These trends have had the effect of minimizing seasonal population fluctuations tied to fishing per se, and the growth of the non-fishing portion of the economy has also tended to smooth out overall population peaks and valleys. These dynamics are discussed below in terms of the processing and harvesting labor force.

5.2.2 Ethnicity

Kodiak is a complex community in terms of the ethnic composition of its population. Sugpiaqs (Koniags) were the original inhabitants of the area, but in the late 1700s contact with Russians, their

diseases, and their sea otter hunting and trading operations had devastating effects on the Native population and culture. (Alutiiq has survived as the present-day Native language, however, and a number of developments in the late 20th century, such as the Alaska Native Claims Settlement Act of 1971 and the Alaska National Interest Lands Conservation Act of 1980, among others, have fostered more economic and political autonomy for Alaska Natives in the region and elsewhere in the state.) Alaska, including Kodiak, became a U.S. Territory in 1867, and a cannery opened on Karluk spit 15 years later. This marked the start of the development of commercial fishing on Kodiak Island, and Karluk remained the largest community on the island until about 1920. Commercial fishing and the military buildup associated with World War II brought many non-Natives to Kodiak, primarily Caucasians, but the population influx also included a substantial number of persons of other minorities, most of whom were at least initially associated with fish processing employment.

Table 5-3 presents time series information on ethnicity for the city of Kodiak and Table 5-4 presents comparative information for the KIB. While the information is not all directly comparable due to changing definitions and different sources, certain conclusions are fairly clear. The population of the greater city of Kodiak area is quite different from that of the borough as a whole, and a good portion of this difference is related to the economic development in the city in general and fisheries development in particular. For example, most residents of Filipino or Asian and Pacific Islander descent live in or near the city of Kodiak. With initial in-migration of these groups associated with fish processing employment, they are the segment of the KIB population that is most rapidly increasing, from an unknown population in 1970 (but no more than 3 percent) to 6 percent in 1980 to 11 percent in 1990 to 17 percent in 2000. This is consistent with the common community perception, and plant manager reports, that fish processing workers are more of a resident workforce with intact family units than in the past and, further, that fish processing jobs are being used as an entry-level means of moving to Kodiak before individuals then take employment in other sectors of the local economy. The Alaska Native population has stayed at approximately the same percentage through time but is clearly a smaller percentage of the city of Kodiak population than it is of the KIB as a whole. The white or Euroamerican population has declined in terms of percentage over time. Overall, there has thus been a gradual, long-term shift in ethnic composition, with Asian and Pacific Islanders increasing in percentage and Euroamericans declining in percentage. Native Americans and African Americans have shown relatively little change. Census data also show that the “Hispanic Origin” portion of the population has also grown over time, and this is consistent with plant managers’ observations about the changing composition of processing workforces, along with anecdotal information that the Hispanic population is increasing, and located primarily in the city of Kodiak (KIB website).

Table 5-3. Ethnic Composition of Population Kodiak City: 1970, 1980, 1990, and 2000

Race/Ethnicity	1970		1980		1990		2000	
	N	%	N	%	N	%	N	%
White	3,094	81.7%	3,337	71.2%	4,028	63.3%	2,939	46.4%
African American	44	1.2%	26	0.5%	47	0.7%	44	0.7%
Native Amer/Alaskan	479	12.6%	573	12.2%	629	9.9%	663	10.5%
Asian/Pacific Islands*	NA	-	554	11.8%	1,282	20.1%	2,069	32.6%
Other**	116	3.1%	-	-	379	5.9%	619	9.8%
Total	3,798	100%	4,686	100%	6,365	100%	6,334	100%
Hispanic***	NA	-	196	4.2%	403	6.3%	541	8.5%

Source: U.S. Bureau of Census.

* In the 2000 census, this was split into Native Hawaii and Other Pacific Islander (pop 59) and Asian (pop 2,010)

** In the 2000 census, this category was Some Other Race (pop 276) and Two or more races (pop 343).

*** "Hispanic" is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

Table 5-4. Ethnic Composition of Population Kodiak Island Borough: 1980, 1990, and 2000

Race/Ethnicity	1980		1990		2000	
	N	%	N	%	N	%
White	7,046	70.9%	9,289	69.8%	8,304	59.7%
African American	72	0.7%	135	1.0%	134	1%
Native American/Alaskan	1,710	17.2%	1,723	12.9%	2,028	14.6%
Asian/Pacific Islands*	624	6.3%	1,492	11.2%	2,342	16.8%
Other**	283	2.8%	670	5.0%	1,105	8%
Total	9,939	100%	13,309	100%	13,913	100%
Hispanic***	204	2.0%	669	5.0%	848	6.1%

Source: U.S. Bureau of Census.

* In the 2000 census, this was split into Native Hawaii and Other Pacific Islander (pop 110) and Asian (pop 2,232).

** In the 2000 census, this category was Some Other Race (pop 387) and Two or more races (pop 718).

*** "Hispanic" is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

As noted earlier, the greater city of Kodiak area acts in many ways as a hub community for other communities within the borough. Most of the outlying communities within the borough have predominately Alaska Native populations, as shown in Table 5-5. As may be seen in the table, in 2000 the city of Kodiak and Womens Bay (about 8 miles from the city of Kodiak, and close to the Kodiak Station USCG base) had populations around 12 to 13 percent Alaska Native. Chiniak (road connected to the city of Kodiak, and arguably closely linked to that community in a number of ways) and the Kodiak Station USCG base (again, closely associated with the greater city of Kodiak itself) were around 3 to 4 percent Alaska Native. All other communities in the borough are outlying villages without road connections and, with one exception, were predominantly (between 64 and 96 percent) Alaska Native (and five of these six communities were about 80 percent or greater Alaska Native).

Table 5-5. Kodiak Island Borough Population and Alaska Native Percentage of Population by Place, 2000

Community or Area	Population	Percent Alaska Native
City of Kodiak	6,334	13%
Womens Bay	690	12%
Chiniak	50	4%
Kodiak Station (USCG)	1,840	3%
Aleneva	68	2%
Akhiok	80	94%
Karluk	27	96%
Larsen Bay	115	79%
Old Harbor	237	86%
Ouzinkie	225	88%
Port Lions	256	64%
Other Areas	3,991	16%
Total Borough	13,913	17%

Source: Alaska Dept of Commerce, Community and Economic Development, 2004.

The single exception to this pattern (predominantly non-Native population named places being confined to the road connected to the greater city of Kodiak area and predominantly Alaska Native communities being the non-road connected outlying communities) is the unincorporated community of Aleneva. This is one of Alaska’s “Russian Old Believer” (*Starovery*) communities, whose population traces their ancestry through descendants of Orthodox Russians who refused to accept church reforms of the mid-seventeenth century and who first came to the New World seeking religious freedom following the Bolshevik Revolution of 1917. Aleneva is located on the coast of Afognak Island in the Raspberry Strait, north of Kodiak. The oldest (dating from the late 1960s) and best known of Alaska’s Russian Old Believer communities are on the Kenai peninsula, but Aleneva has also proven to be a favored location for the degree of voluntary social isolation often sought by this group. (This group is relevant for characterization of commercial fishing in Kodiak as Old Believers in Alaska in general are often commercial fishermen and builders of commercial fishing boats. Aleneva fishermen primarily longline for cod and halibut with 50-foot [and under] vessels and sell their catch to processors in Kodiak.)

5.2.3 Age and Sex

The city of Kodiak shows a greater proportion of males than females in its population and has been relatively stable in this regard for the period 1970-2000 (Table 5-6). The KIB as a whole shows an analogous imbalance over the 1990 through 2000 period (Table 5-7). This is a common characteristic of communities where at least one major economic sector disproportionately employs single members of one sex. In Kodiak, the fishing industry has historically employed many single males, both as harvesters and processors, and this has involved a substantial amount of labor migration to the community. Although this population has apparently become more resident and less transient than in the past, evidently this has not greatly affected the overall population’s male-to-female ratio. Population data suggest that single males still disproportionately migrate to Kodiak for at least some period of time, and/or perhaps that females may tend to migrate out more than do

males. The NPFMC community profile developed in the early 1990s (IAI 1991) indicates that the male/female ratio for the Native population was approximately equal, as would be expected from a resident population. The male-to-female ratio for Euroamericans was somewhat skewed (54 percent male, 46 percent female), and for Filipinos was even more skewed. This was interpreted as evidence for a relatively resident Native population, with a predominately resident Euroamerican population somewhat more prone to movement in and out, and a much more mobile “other minority” population disproportionately comprised of single male workers and a smaller percentage of family units with children. More recent data suggest that this pattern has been changing over the intervening years, however, as the processing workforce has become more residential and less transient through time, and as individuals who initially came to Kodiak for processing work are moving into employment in other economic sectors and raising families in the community.

Table 5-6. Population by Age and Sex, Kodiak City: 1970, 1980, 1990, and 2000

	1970		1980		1990		2000	
	N	%	N	%	N	%	N	%
Male	2,055	54%	2,498	53%	3,496	55%	3379	53%
Female	1,743	46%	2,188	47%	2,869	45%	2955	47%
Total	3,798	100%	4,686	100%	6,363	100%	6334	100%
Median Age	NA		NA		NA		33.5 years	

Source: U.S. Bureau of the Census.

Table 5-7. Population by Age and Sex, Kodiak Island Borough: 1990 and 2000

	1990		2000	
	N	%	N	%
Male	7,395	56%	7,362	53%
Female	5,914	44%	6,551	47%
Total	13,309	100%	13,913	100%
Median Age	NA		31.6 years	

Source: U.S. Bureau of the Census.

One way of looking at changes in population dynamics by age is through school enrollment figures. Table 5-8 provides information on enrollments in schools in the greater city of Kodiak area from 1997 through 2003. (Other borough schools are found in six operational rural areas and two logging camps, one of which has recently closed.) As shown, total enrollments have fluctuated on a year-to-year basis but have increased somewhat over this period of time. In contrast to the town schools, overall KIB School District enrollments are down in recent years, which district personnel attribute to a combination of smaller families and the growth in the number of religious-affiliated private schools on the island.

Table 5-8. Kodiak Town School Student Enrollments, by School Year, 1997-1998 through 2002-2003

School	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003
East Elementary	429	432	467	467	451	463
Main Elementary	267	258	253	257	262	264
North Star Elementary	266	272	313	325	327	297
Peterson Elementary	358	328	381	334	299	273
Kodiak Middle School	435	408	357	369	425	413
Kodiak High School	672	703	689	736	766	785
Total	2,427	2,401	2,460	2,488	2,530	2,495

Note: "Town" schools include those in and around the city of Kodiak, but not the outlying villages within the Kodiak Island Borough School District. Peterson Elementary School is located on the U.S. Coast Guard base.
 Source: Derived from Kodiak Island Borough School District annual "Ethnic Enrollment by School" spreadsheets.

Table 5-9 provide information on school enrollments by student ethnicity for the 2002-2003 school year. As shown, Caucasian students accounted for fully half of the total student population of all schools combined, with the next two largest groups being comprised of Asian/Pacific Islanders (25 percent) and Alaska Natives (15 percent). As Asian/Pacific Islanders population in general was originally associated with commercial fishing/processing opportunities in the community, the school enrollment data reinforce the noted trend of movement out of processing and settling in to become more fully engaged in the community, raise families, and participate in various other sectors of the community economy. This is one area where large-scale population change may be traced directly back to commercial fishing activities. The same may be said for Kodiak's Caucasian population, but with a longer time line and many more intervening variables, this is not as directly apparent as is the case with the Asian/Pacific Islander population.

Table 5-9. Ethnic Enrollment by School, Kodiak Town Schools, 2002-2003 School Year

School	Alaska Native	American Indian	Asian/Pacific Islander	Black	Caucasian	Hispanic	Mixed	Total
East Elementary	112	4	98	0	210	31	8	463
Main Elementary	15	3	159	0	28	53	6	264
North Star Elementary	61	9	44	3	163	13	4	297
Peterson Elementary	14	3	14	7	220	11	4	273
Kodiak Middle School	63	8	112	4	198	23	5	413
Kodiak High School	116	17	186	12	423	28	3	785
Total Enrollment	381	44	613	26	1,242	159	30	2,495
Percent of Total Enrollment	15.27%	1.76%	24.57%	1.04%	49.78%	6.37%	1.20%	100.00%

Note: "Town" schools include those in and around the City of Kodiak, but not the outlying villages within the Kodiak Island Borough School District. Peterson Elementary School is located on the U.S. Coast Guard base.
 Source: Derived from Kodiak Island Borough School District annual "Ethnic Enrollment by School" spreadsheets.

The ethnic make-up of the school has reportedly changed over the years. In the late 1970s, according to district personnel, there were numerous Korean and Japanese students, but their numbers declined in subsequent years as the Filipino student population grew. The school provides bilingual education and carries out the federal Migrant Education Title I-C Program, a program that supports educational instruction for families who must move to follow short-term or temporary employment opportunities. Under the Migrant Education Program, the district receives federal funds to provide instruction to children of families that fish for long periods of time off-site, to children living with parents in logging camps, and to subsistence hunters. This program has little impact in the city of Kodiak itself, however, as processing plant employees are not included in this program and, as most fishermen do not travel with their children, rarely are fishing families the beneficiaries of this program.

The schools in Kodiak have, however, felt the impact of processing worker related migration in other ways. One way includes processing workers being sent to plants outside Kodiak during peak seasons. Another is when workers would leave for a month (typically December) when the plants slowed down or closed, often taking advantage of the chance to visit family in their home countries. According to district personnel, it was not unusual for 2 or 3 students in a classroom of 22 to 25 total students to be gone for long periods of time, disrupting their education and those of the other students. More recently, the district has taken a more strict interpretation of enforcing state requirements that mandate dropping from enrollment those students who are gone for more than 10 days. As a result, according to district personnel, at present if the primary bread-winner in the family must go to another plant for 2 months, or otherwise leaves for a long period of time, children do not accompany the parent and remain in school.

5.2.4 Housing Types and Population Segments

Historically, group housing in Kodiak was largely associated with the processing workforce, but this is no longer common, and certainly not to the nearly exclusive degree seen in major Southwest Alaska processing communities,. This is due both to changes in labor migration patterns as well as to the greater complexity of the institutional base and range of housing types in Kodiak. As shown in Table 5-10, only 6 percent of the population lived in group housing in 1990, and this figure dropped to 2 percent in 2000. This is a much lower percentage of population residing in group quarters than in Unalaska, Akutan, and King Cove (as well as Sand Point) and is consistent with a processing workforce more heavily drawn from the local labor pool than is the case in these other communities. Plate KOD-4 portrays some of the housing types in the downtown Kodiak area.

Table 5-10. Group Quarters Housing Information, Kodiak, 1990 and 2000

Year	Total Population	Group Quarters Population		Non-Group Quarters Population	
		Number	Percent of Total Population	Number	Percent of Total Population
1990	6,365	356	5.59%	6,009	94.41%
2000	6,334	146	2.30%	6,188	97.97%

Source: U.S. Bureau of the Census 1990 STF2, Census 2000 Summary File 1.

KOD-4

Housing Types

Housing in downtown
Kodiak



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Table 5-11 provides information on group housing and ethnicity for Kodiak for 1990, and similar information for 2000 is presented in Table 5-12. In 1990, while there was a significant difference between the group quarter and non-group quarter demographics (with the group quarter population being a higher minority group than the community population as a whole), the differences are not as sharp in general or for particular groups as seen in the Aleutian region communities. A similar pattern is seen in the 2000 data; however, the small numbers of persons involved make any conclusions about the proportionality or trends of change between groups tenuous.

Table 5-11. Ethnicity and Group Quarters Housing Information, Kodiak, 1990

Race/Ethnicity	Total Population		Group Quarters Population		Non-Group Quarters Population	
	Number	Percent	Number	Percent	Number	Percent
White	4,028	63.28%	192	53.93%	3,836	63.84%
Black	29	0.46%	3	0.84%	26	0.43%
American Indian, Eskimo, Aleut	811	12.74%	21	5.90%	790	13.15%
Asian or Pacific Islander	1,282	20.14%	118	33.15%	1,164	19.37%
Other race	197	3.10%	22	6.18%	175	2.91%
Total Population	6,365	100.00%	356	100.00%	6,009	100.00%
Hispanic origin, any race	407	6.39%	42	11.80%	365	6.07%
Total Minority Population	2,429	38.16%	181	50.84%	2,248	37.41%
Total Non-Minority Population (White Non-Hispanic)	3,936	61.84%	175	49.16%	3,761	62.59%

Source: U.S. Bureau of the Census 1990 STF2.

Table 5-12. Ethnicity and Group Quarters Housing Information, Kodiak, 2000

Race/Ethnicity	Total Population		Group Quarters Population**		Non-Group Quarters Population	
	Number	Percent	Number	Percent	Number	Percent
White	2,939	46.40%	78	53.42%	2,861	46.23%
Black or African American	44	0.69%	4	2.74%	40	0.65%
Alaska Native/Native American	663	10.47%	19	13.01%	644	10.41%
Native Hawaiian/Other Pacific Islander	59	0.93%	4	2.74%	55	0.89%
Asian	2,010	31.73%	28	19.18%	1,982	32.03%
Some Other Race	276	4.36%	8	5.48%	268	4.33%
Two Or More Races	343	5.42%	5	3.42%	338	5.46%
Unknown	0	0%	0	0%	0	0%
Total	6,334	100.00%	146	100.00%	6,188	100.00%
Hispanic*	541	8.54%	17	11.64%	526	8.50%
Total Minority Population	3,565	56.28%	76	52.05%	3,489	56.38%
Total Non-Minority Population (White Alone, Not Hispanic or Latino)	2,769	43.72%	70	47.95%	2,699	43.62%

Source: U.S. Census, 2000.

* "Hispanic" is an ethnic category and may include individuals of any race (and therefore is not included in the total as this would result in double counting).

** Unlike the other fishing community profiles in this document, not all persons in group quarters in Kodiak fall into the "noninstitutionalized population/other noninstitutionalized group quarters" census category. A total of 19 persons in group quarters in Kodiak are considered to be part of an "institutionalized population." In this case all are listed as residents of nursing homes.

Apart from group and non-group housing distinctions, household type in Kodiak varies by population segment, although systematic information of these patterns is not available. In general, however, in the 1980s housing was in very short supply, and it was not unusual for complete strangers to be more than willing to share space in a marginal housing unit to take advantage of very strong employment opportunities. Sales of houses and the rental of apartments were almost totally through word of mouth and almost instantaneous. This has changed to the point where houses are now on the market for a period of time more typical of other larger Alaskan communities before selling, although apartment vacancy rates are still lower than are private housing vacancies. Average rent for apartments is higher or equal to rent in typical Alaskan urban communities, although the vacancy rate for units is higher than in places such as Anchorage, Juneau, and the Matanuska-Susitna Borough (AHFC 2001). Construction of new housing to meet the local demand has continued through the present, although it may have slowed somewhat in the recent past, and contractors are reportedly building few or no new houses on speculation. There are incentives that have encouraged the building of new housing outside of Kodiak city limits, however, such as the state subsidizing the mortgage rate one full percentage point for housing outside of the city of Kodiak.⁵ Further, undeveloped land within the current city limits is somewhat scarce as the city builds out.

Information from interviews would suggest that fish processors tend to live in smaller structures and/or with more household members, than do people with other employment. There are sections of town or developments where particular ethnic groups or persons with overall income levels associated with the seafood processing employment are concentrated, but there are also members of these same groups scattered throughout Kodiak.

One housing dynamic that had been operating until the recent past, noted earlier, has been that of the development of a more resident processing force. Kodiak processors had been able to close down bunkhouses as those attracted to Kodiak by fairly steady processing work preferred private housing in the community to company-owned group housing. With the more recent contraction of fishing seasons and a decrease in processor operating days, much of the processing labor force, while still locally based, is on-call, working long shifts during the busy periods and slowing down to a smaller “core” group of employees during the slower seasons. While some plants still maintain bunkhouses for a seasonal influx of transient workers, this is less common than in the past. While one processor’s workforce is unionized, the workforce at the other plants run the gamut from those that are steady, receive benefit packages, and are maintained throughout the year, to those that are much less predictably provided on-call hourly wages. There are numerous local people who work in the processing plants on a part-time basis, but the pay scale associated with most processing work requires a relatively large number of hours to support a local resident compared to other types of employment.

Other than for peak processing periods, virtually all labor is local in the sense of having local housing arrangements, if not a long-term commitment to the community. Systematic information is lacking, but anecdotally the same mechanism by which people are recruited to Kodiak to work

⁵According to KIB staff, the incentive to build outside of the city itself is because the State of Alaska’s home loan program tends to favor areas that are defined as rural. Unincorporated borough lands meet this definition; therefore, residents can obtain longer-term, low-interest loans than if they live inside Kodiak city boundaries. According to City staff, the state will further subsidize the mortgage rate another full percentage point for newly constructed energy-efficient homes.

in fish processing also allows them to find a place to live. Many such workers come because they have a relative or friend who is already working in Kodiak. This person then becomes a resource to locate housing. This is also one reason that household size and household structure tend to be different for different ethnic groups in Kodiak and are especially fluid for fish processor workers.

The USCG base also affects the local housing supply in that it is “home” to close to 2,000 people. The base is reported to have been built in the 1930s as a temporary facility and so had a large supply of substandard housing. Much of this has since been dismantled, with a substantial but not equivalent amount of new and better housing being erected on-base. Most USCG personnel have the option of living off-base if they prefer, so this has increased the local demand for housing.

Table 5-13 displays basic information on community housing, households, families, and median household and family income in 2000. As shown, the city of Kodiak is above the borough income averages. For example, median family income in Kodiak itself is about 3 percent higher than the borough as a whole. Compared to all communities in the region, the city of Kodiak places at the upper end of the range. In 2000, the highest median family income in the region was in the community of Chiniak, with a figure of \$75,067, while the lowest figure was \$19,167 for Karluk.

Table 5-13. Selected Household Information, Selected Kodiak Region Communities, 2000

Community	Total Housing Units	Vacant Housing Units	Total Households	Average Persons per Household	Median Household Income	Family Households	Average Family Size	Median Family Income
Kodiak	2,255	259	1,996	3.1	\$55,142	1,362	3.64	\$60,484
Kodiak Island Borough	5,159	735	4,424	3.07	\$54,636	3,257	3.52	\$58,834

Source: U.S. Bureau of the Census.

5.3 LOCAL ECONOMY AND LINKS TO COMMERCIAL FISHERIES

Despite the relative diversification of Kodiak’s economy, direct fishery related employment is still a very large component of total local employment. Excluding the USCG, 4 of the top 10 employers in Kodiak in 2003 were fish processors, and 3 more were listed in the top 20 employers (Table 5-14). It should be further noted that while Kodiak’s economy is apparently far more diversified than those of the other fishing communities profiled in this document (Unalaska, Akutan, and King Cove), much of the non-direct economic activity in Kodiak relies to a greater or lesser degree on fishing activity as a base. The education, service and retail, and government sectors, including the USCG, are all very important for Kodiak. In this regard, interviews with some support providers who in the past have been primarily direct fisheries-oriented indicate that more recently customers from other sectors, including USCG, tourism, government, and education, have become significant in terms of the sale of outboard motors, boats, and similar marine-oriented items than in the past. As one such provider remarked, one-third of the USCG base turns over every year, which equates to a constant stream of new customers for him. Realtors have also noted that large homes are less likely to be purchased by fishermen and more likely to be purchased by “Coasties” (USCG

personnel) or other Kodiak residents than in the past. Again, however, with the exception of the tourism industry, a large reason the other sectors are as well developed as they are is related back to servicing, supplying, or otherwise directly or indirectly supporting the fishing industry. As previously noted, this includes the local USCG presence, with their primary local focus on fisheries activities.

Table 5-14. Top 20 Kodiak Employers, 2003*

Rank	Employer	Employment
1	Kodiak Island Borough School District	435
2	North Pacific Processors (APS)	264
3	Trident Seafood Group	200
4	Providence Kodiak Island Medical Center	190
5	City of Kodiak	159**
6	Wal-Mart Associates	147
7	Kodiak Area Native Association	132
7	Ocean Beauty Seafoods	132
9	Western Alaska Fisheries	125
10	Homeland Security	123
11	Safeway Inc.	119
12	University of Alaska Anchorage	84
13	Kodiak Inn	82
14	Alaska Department of Fish & Game	77
15	Brechan Enterprises	74
15	Global Seafoods	74
15	International Seafoods	74
18	Ki Enterprises (McDonald's)	72
19	Kodiak Electric Association	47
19	Alaska Fresh Seafood Inc.	47
19	Ben A. Thomas Inc. Alaska Division	47
20	Kodiak Island Housing Authority	43

* USCG and commercial fishermen are not included in this table.

** The City of Kodiak figure provided is apparently no longer accurate. According to the City Manager (personal communication 3/2/05), the city has "approximately 115 (non-seasonal) FTE's."

Source: Kodiak Chamber of Commerce, "Kodiak Community Profile and Economic Indicators," 1st Quarter 2005 revision.

Kodiak's economy does follow annual cycles, which is attributable, in part, to the continuing importance of the commercial fishing industry. The fishing industry, in turn, responds to openings and closings of commercial seasons (and, of course, harvest levels and price). The locally important fishing seasons for Kodiak are well summarized on an annual "Kodiak Fisherman's Calendar" poster that is published by the Kodiak Daily Mirror newspaper and is commonly found in the community. Information from this poster has been adapted for use in Table 5-15.

Table 5-15. Kodiak Fisherman’s Calendar, 2004

January 1	Cod “A” season in GOA and BSAI for fixed gear opens
January 1	Black rockfish — jig fishing Kodiak, Chignik and South Peninsula
January 15	Kodiak Tanner crab season opens
January 15	Bering Sea Snow crab (opilio) opens
January 15	Pollock “A” season opens
January 20	Cod “A” season for trawl gear opens (Fixed gear Jan. 1)
February 15	2003-2004 scallop fishery closes
February 15	South Peninsula state-waters Pacific cod fishery opens 7 days after the Western GOA federal fishery closes
February 15	Kodiak state-waters Pacific cod fishery opens 7 days after the Central GOA fishery closes
February 29	Halibut and sablefish IFQ fisheries open
March 1	Chignik state Pacific cod opens
March 10	Pollock “B” season opens
March 18	ComFish Alaska opens
April 15	Kodiak sac roe herring fishery opens
May 1	Dungeness crab Westward region, except south end of Kodiak, opens
To be announced	Copper River sockeye opens
Emergency order	Chignik district shrimp opens
To be announced	Kodiak salmon season opens
June 15	Dungeness crab for Kodiak south end opens
June 15	Kodiak district shrimp opens
June 22	Kodiak early run traditionally peaks
June 30	Kodiak sac roe herring officially closes
July 1	Kodiak, Yakutat, PWS and Bering Sea scallop season opens
July 4	Bristol Bay sockeye season traditionally peaks
July 5	Rockfish in the BSAI and the GOA opens
July 6	Kodiak pink salmon fishery opens
July 15	Aleutian Islands bait herring opens
August 15	Aleutian Islands brown king crab opens
August 15	Scallop fishing in Kamishak District opens
August 25	Pollock “C” season opens
August 21	Kodiak late run traditionally peaks
September 1	Cod “B” season for fixed gear and trawl gear opens
October 1	Kodiak and Peninsula sea urchin, sea cucumber dive fisheries open
October 1	Kodiak food and bait herring season opens
October 1	Pollock “D” season opens
October 15	Bristol Bay red king crab opens
October 31	Kodiak salmon season officially closes
November 15	Halibut and sablefish IFQ fisheries close
November 11-13	FishExpo in Seattle opens
December 31	State pot and jig cod fishery officially closes
December 31	Lingcod officially closes

Note: All dates are subject to change pending fisheries management regulations.

Source: Adapted from Kodiak Daily Mirror flyer.

Table 5-16 displays the total volume of fish landed at Kodiak for 1984 through 2003. Kodiak has consistently ranked in the top four U.S. ports in terms of value of fish landings and in the top seven in terms of volume of landings. As shown, there is considerable variability in absolute figures from year to year as, for example, the value of landings in Kodiak declined by over one-third between 1999 and 2002. Additional information in the form of a detailed overview of the fishing industry in Kodiak is available in a recent analysis of the economic impacts from fishing restrictions on the KIB economy, prepared by the McDowell Group (2002). The McDowell report lists a number of reasons behind the recent overall decline in the value of Kodiak's fisheries, including quota not harvested from areas traditionally fished by Kodiak vessels, due to Steller sea lion protection closure areas, as well as a decline in salmon prices, among others. The report also notes steep processing declines of pollock since 1998 and cod since 1999, as well as a drop in halibut landings due to increases in landings in Homer and Seward. These changes have been accompanied by declines in harvester income, processing employment and payments to labor, an increase in processor closures, and a shift toward more marked seasonal fluctuations in processing.

Table 5-16. Volume and Value of Fish Landed at Kodiak, 1984-2003

Year	Volume (millions of lbs)	U.S. Ranking for Volume	Value (millions of \$)	U.S. Ranking for Value
1984	69.9	7	113.6	2
1985	65.8	6	96.1	3
1986	141.2	7	89.8	3
1987	204.1	3	132.1	2
1988	304.6	3	166.3	1
1989	213.2	6	100.2	3
1990	272.5	3	101.7	3
1991	287.3	4	96.9	3
1992	274.0	3	90.0	3
1993	374.2	2	81.5	3
1994	307.7	2	107.6	2
1995	362.4	2	105.4	2
1996	202.7	5	82.3	3
1997	267.5	6	88.6	3
1998	357.6	5	78.7	3
1999	331.6	6	100.8	3
2000	289.6	6	94.7	3
2001	285.5	6	74.4	3
2002	250.4	4	63.3	4
2003	262.9	5	81.5	3

Source: Personal communication from the National Marine Fisheries Service, Fisheries Statistics and Economics Division, Silver Spring, MD (accessed through NMFS Website), 2004.

Table 5-17 lists detailed information on total volume and value of fish landings for Kodiak for 2003 by species or species group. It is important to note that individual fisheries fluctuate from year to year, and no single year should be taken as representative of other years. Nevertheless, the 2003 data represent information from the most recent full year for which data are available. Clearly, the

value of landings in Kodiak are dominated by halibut, salmon, and Pacific cod, which together accounted for 68 percent of the total value of all species landed. These three species (or species groups) accounted for between 20 and 27 percent of total value each, while no other species accounted for more than about 10 percent of the total. Sablefish, pollock, and Bristol Bay red king crab, the next three most important species after halibut, salmon, and Pacific cod, accounted for 10 percent, 8 percent, and 6 percent of the overall total, respectively. No other species accounts for more than about 2 percent of the total. Salmon, pollock, and Pacific cod accounted for greatest volume of fish landed, with these three high volume species (or species complex) comprising over three-quarters of all landings by weight. As shown, several other groundfish species are relatively high-volume species locally, but account for a relatively small proportion of the total value landed, due to relatively low values per pound.

Table 5-17. Volume and Value of Fish Landed at the Port of Kodiak, by Species, 2003

Species	Volume Landed (Pounds) ¹	% of Total Volume	Ex-vessel Value (dollars)	% of Total Value
Halibut ²	7,891,904	2.88%	\$22,407,370	27.03%
Salmon	83,646,938	30.49%	\$17,890,468	21.58%
Pacific Cod	52,935,977	19.29%	\$16,410,153	19.79%
Sablefish	2,405,403	0.88%	\$8,034,046	9.69%
Pollock	73,136,066	26.66%	\$6,582,246	7.94%
Bristol Bay Red King Crab	879,269	0.32%	\$4,712,882	5.68%
Other Crab	540,173	0.20%	\$1,299,915	1.57%
Rock Sole	8,123,946	2.96%	\$1,137,352	1.37%
Herring	4,361,882	1.59%	\$1,086,270	1.31%
Flatfish ³	14,264,333	5.20%	\$747,899	0.90%
Dungeness Crab	472,573	0.17%	\$704,134	0.85%
Rockfish ⁴	10,982,826	4.00%	\$700,627	0.85%
Pacific Ocean Perch	11,507,301	4.19%	\$575,365	0.69%
Flathead Sole	2,798,544	1.02%	\$251,869	0.30%
Sea Cucumbers	153,903	0.06%	\$210,847	0.25%
Black Rockfish	83,854	0.03%	\$31,865	0.04%
Octopus	64,875	0.02%	\$27,896	0.03%
Weathervane Scallops	NA	--	NA	--
Bering Sea Snow Crab	NA	--	NA	--
Miscellaneous/other/unspecified (inc. shrimp and sea urchins) ⁵	118,493	0.04%	\$99,747	0.12%
Total	274,368,260	100.00%	\$82,910,951	100.00%

¹ Represents pounds of product landed at the Port of Kodiak, including harvests from outside of the Kodiak management area (from Fish Ticket data).

² Halibut volume from NMFS Website and includes all landings in Kodiak regardless of where fish were harvested.

³ Includes butter sole, yellowfin sole, starry flounder, Alaska plaice, and Greenland turbot.

⁴ Includes northern, thornyhead, yelloweye, rougheye, shortraker, and dusky rockfish.

⁵ Figures in this row provided to make totals for known and unspecified species sum to reported port totals and are adjusted to account for rounding errors and species that are not reported individually due to confidentiality restrictions. Values should be taken as approximations and should not be used for comparative purposes.

Source: Adapted from Kodiak Chamber of Commerce, 2004 (from Alaska Department of Fish and Game).

The portion of Kodiak’s economy tied to the fisheries shows distinct variation by season. The more-or-less regular or cyclical annual variation endemic to Kodiak’s fishing economy also spills over into other local economic sectors; other sectors, such as tourism related businesses, have their own seasonal fluctuations. An estimated 76 percent of all visitors arrive during the summer months and visitor spending in FY 2001 was estimated at \$19.6 million (Kodiak Island Convention and Visitors Bureau 2004). In FY 2003, the City of Kodiak’s “bed tax” provided \$117,000 to the city, and the KIB also assesses a “bed tax.” Kodiak Chamber of Commerce data as compiled by the City of Kodiak Finance Department for total sale receipts, cannery receipts, boat harbor revenues, charter boat revenues, and retail sales all show pronounced seasonal fluctuations over time. The local timber industry is still a part of the overall regional economy, but it has declined substantially in recent years. The borough timber severance taxes declined by over half between 1997 and 2000 and dropped by about half again between 2000 and 2003. There are a number of different niche sectors on the island, with one of the more unusual being the commercial space port/rocket launch facility run by the Alaska Aerospace Development Corporation, which has been operational since 1998.

According to the Kodiak Chamber of Commerce, the state estimated the KIB’s average monthly employment to be 5,240, excluding fish harvesting and the USCG. Other Chamber of Commerce figures put the USCG and other government entities as providing 36 percent of local employment, the seafood industry (including harvesting and processing) at about 25 percent, and retail trade/transportation/utilities at around 12 percent. No other sector accounted for more than 7 percent of local employment. Monthly unemployment ranged from 4.4 percent to 15.1 percent, with an average annual unemployment rate of 8.3 percent for the KIB as a whole in 2003 (Kodiak Chamber of Commerce 2004).

Table 5-18 displays data on employment and poverty for the city of Kodiak and the KIB from census data for 2000. As shown, there was very little unemployment in these jurisdictions, presumably due in part to the presence of fishery related employment opportunities, and also the fact that the Kodiak economy is relatively diversified by rural Alaska standards (and particularly in comparison to the Aleutian region fishing communities, such as Unalaska, Akutan, and King Cove). The city of Kodiak has the second-lowest unemployment of any civilian community in the KIB region (3.6 percent compared to 2.1 percent in Port Lions); whereas, the village of Old Harbor has the highest unemployment in the region at 12.5 percent. Proportions of the population considered to be below the poverty threshold vary between the communities, but taken in isolation this is somewhat misleading. For example, Ouzinkie had the lowest poverty rate of any community in the region in 2000 at 6.0 percent, but at the same time 48 percent of the adults in the community are not working. Old Harbor has the highest poverty rate in the region at 29.5 percent.

Table 5-18. Employment and Poverty Information, City of Kodiak and Kodiak Island Borough, 2000

Community	Total Persons Employed	Unemployed	Percent Unemployment	Percent Adults not Working	Not Seeking Employment	Percent Poverty
Kodiak	3,053	160	3.6	29.62	1,170	7.4
Kodiak Island Borough	6,131	335	3.4	29.27	2,532	6.6

Source: U.S. Bureau of the Census.

The following discussion of the fishing industry is divided into a section on fishery related organizations, followed by separate sections on the harvesting and processing sectors, as each is extremely important for the Kodiak economy and community. A fourth section provides some general contextual information on fishery industry support services.

5.3.1 Fishery Related Organizations

An indicator of the central social, economic, and political importance of commercial fishing and fishing related activities in the community of Kodiak is the number of local and locally based statewide organizations that represent a range of fishery industry interests including the harvesting, processing, and marketing sectors within the industry. Kodiak is also the base for various special interest community and environmental groups attentive to fishing issues. Some of these are long-standing, well-organized groups; others come together on an ad-hoc basis to address particular legislative or operational issues; while still others are loose-knit, grassroots affiliations organized to respond to particular issues facing a sector within the industry. These groups may be seen as falling into three basic categories: (1) organizations that promote marketing of a fishery product; (2) organizations focused on particular target fisheries (salmon, halibut, groundfish), gear types (longline, dragger, etc.), or industry sectors (processing); and (3) grassroots organizations formed to respond to a specific issue(s) facing a sector or sectors in the industry. While there are a number of emergent organizations, the degree of organizational complexity is not seen in any of the other major fishing communities in the southwest portion of the state (such as Unalaska, Akutan, or King Cove) and is indicative of Kodiak's large fleet, processing capacity, and diversity of interests. The following is a general list of organizations, by type, within the Kodiak region.

Kodiak-based organizations that promote marketing include the United Salmon Association (USA), representing salmon fishermen, and the United Fishermen's Marketing Association (UFMA), which represents the non-trawl fleet. Both are multiple-layered organizations that are involved with marketing efforts, research, and providing formal representation on legislative affairs on behalf of their respective industries. USA is an organization of salmon fishermen concerned with issues of pricing, product quality, and long-term economic viability of the fishery. It is a fishermen's marketing association and consults with Alaska state legislators to draft legislation to maintain and compete in the salmon market. The association, as a whole, has worked toward creating organic labeling standards for wild salmon, obtained funding to provide the labeling to American seafood producers, and tracks resources available to fishermen under a variety of legislative programs. USA, in partnership with the "Kodiak Branding and Marketing Committee," a sub-committee of the Kodiak Chamber of Commerce, has established an extensive marketing campaign to promote wild Alaska salmon in response to the growth of farmed salmon and its impact on the Alaska salmon market. While its headquarters are based in Kodiak, USA's membership includes salmon fishermen in Kodiak, Prince William Sound, Southeast, and Western Alaska. UFMA has existed since the 1930s as a cooperative, negotiating salmon prices and, later, tanner crab prices. UFMA represents non-trawl commercial seafood producers to government agencies on legislative and regulatory matters. They are also involved with advanced and applied fisheries research on a variety of levels. UFMA's core members are salmon fishermen but include Bering Sea and Gulf of Alaska crab vessels, as well as halibut, sablefish, and cod pot fishermen. While it does not represent processors, UFMA does work closely with both shoreplant and at-sea processors on issues of mutual interest.

UFMA has been heavily involved with the recent BSAI crab rationalization management efforts and is tracking groundfish rationalization issues in the Gulf of Alaska.

Kodiak-based organizations representing particular fishery sectors include the Kodiak Long Line Vessel Owners Association (LLVOA) and the Alaska Draggers Association (ADA), and the Alaska Groundfish Databank (AGDB) among others. LLVOA is a relatively small organization with few members, but those members reportedly include the top 10 percent of the producers in the fleet, with five member vessels alone, according to LLVOA staff, accounting for over 50 percent of all longline harvest in Kodiak. ADA was formed in 1972 and represents trawl fishermen and vessel owners. It was originally known as the Kodiak Shrimp Trawlers; the organization subsequently became the Alaska Shrimp Trawlers, later changing its name to ADA. ADA provides formal representation on behalf of the trawl fishermen to government agencies, including national and international commissions on issues that affect the trawl fleet. The organization has a membership of 50 trawlers, though some of these have other gear types on their vessels as well. Of the 50 ADA members, 65 percent are Alaska vessel owners, while 30 percent are Washington or Oregon based. Approximately 75 percent of the vessels in membership have crew members that are Alaska based. ADA staff has been active on the Council's Advisory Panel for over 20 years, and lobbies the Council on regulatory policy issues. ADA, as an organization, includes trawl, longline and pot fishermen. Most of the members live and work in Kodiak, all fish in the Gulf of Alaska, while some also fish in the Bering Sea. AGDB is a consulting, lobbying, and public relations firm representing trawl fishermen and groundfish processors at the state and federal level on issues concerning fisheries, policy, and related issues. It is a private for-profit firm with two branches that include an "information services" and a "membership" branch. Any individual or entity can join as an informational client; full membership is determined on a client-by-client basis and includes most Kodiak-based processors. AGDB works with the fishing industry and National Marine Fisheries Service (NMFS) to facilitate the management of federal fishery openings and closures through provision of catch and processing information. AGDB provides weekly updates for BSAI and Gulf of Alaska fisheries and assists clients in developing fishing and processing business plans. Two other Kodiak-based organizations that may be seen as part of this category are the Kodiak Seiners Association and the Kodiak Set Net Association. These were both organizations formed in response to the Exxon Valdez oil spill, and both continue to be involved with legislative issues on an ad-hoc basis.

There are also a number of small, loose-knit organizations representing specific harvesting sectors within commercial fisheries in Kodiak. These are typically grassroots groups that do not maintain a professional staff but are active on what are perceived as key issues as they arise. A number of these organizations have been established to represent vessel skippers and crew in regulatory change, IFQ, and rationalization processes because, in the words of one representative, "the guys on deck are the last to know" about the impacts of potential management changes. Issues of recent concern to these groups have included absentee vessel ownership, share distribution, formation of co-ops with processor linkages, and state and federal fishery harmonization. Though available time did not permit follow-up and interviews with each group, the following are a few that represent the variety of organizations active in Kodiak: the Alaska Jiggers Association, representing small jig boats; the Fish Heads, representing skippers and crew; the Old Harbor Fishermen's Association, representing small communities and their interest in obtaining quota shares for communities outside the city of Kodiak; and the Kodiak Fishermen's Wives Association, a group supporting local fishermen.

5.3.2 Harvesting

Community Harvester Quantitative Description

Table 5-19 provides information on the characteristics of vessels owned by Kodiak residents for the period 1995 to 2002. This information is collected by the Commercial Fisheries Entry Commission (CFEC) when vessel owners renew their registration. Kodiak residents own a very large number of vessels compared to other major fishing communities in the southwestern part of the state, such as Unalaska, Akutan, or King Cove. As shown, however, the total number of vessels has decreased in recent years from over 700 to less than 600, with less than 300 vessels actively fishing in 2002. As shown in this same table, the Kodiak fleet is diverse with respect to size and type of construction.

Table 5-19. Vessel Characteristics of Vessels Owned by Residents of Kodiak/Chiniak, 1995-2002

Characteristics	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Total Number of Vessels	739	718	735	689	694	705	648	592
Number of Vessels Fishing	377	371	382	336	347	342	319	283
Number of Vessels by Size								
0-26 feet length overall	315	321	333	299	308	314	278	254
27-32 feet length overall	79	67	71	72	72	76	68	63
33-49 feet length overall	198	171	166	154	157	163	154	148
50-59 feet length overall	55	70	77	73	73	71	68	65
60-124 feet length overall	79	81	81	83	76	73	71	57
125+ feet length overall	13	8	7	8	8	8	9	5
Average Age of Vessels (years)	16	16	16	17	17	18	19	19
Number of Vessels by Hull Type								
Aluminum	279	267	277	263	273	285	256	242
Wood	63	51	50	37	38	39	35	32
Fiberglass	261	267	274	246	247	257	240	213
Steel	133	124	122	125	119	110	105	92
Number of Vessels with Refrigeration	139	146	158	158	158	156	153	139
Number of Vessels Using Diesel	452	434	439	420	422	426	401	368

Source: CFEC Vessel Registration Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Note: CFEC analysts provided vessel registration data of all resident vessel owners by community and year. Vessel registration data are available on the internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm. The data were summarized by Northern Economics, Inc.

In addition to vessel ownership information, data on permit holders for Kodiak provide a perspective on local harvester engagement in various fisheries. Table 5-20 shows the number of persons in the community who own permits in one, two, three, or all four of the major fishery groups in Alaska, by year, for the period 1995 through 2002. Table 5-21 shows the percentages of all permit holders who own permits in the different combinations listed. (Additional information on permit holders by community may be found in Appendix A.) As shown, nearly half of all permit holders have permits for two or more of the major fisheries, another indication of the diversity of Kodiak's harvest sector.

Table 5-20. Distribution of Permit Holders across Fisheries for Kodiak, 1995-2002

Fishery	1995	1996	1997	1998	1999	2000	2001	2002
Persons with Permit in only One Major Fishery Group								
Salmon (SM)	184	179	181	198	193	191	201	202
Groundfish (GF)	65	77	99	104	98	122	69	64
Halibut and Sablefish (HS)	76	54	52	59	66	60	72	64
Crab /all other species (CO)	60	56	47	33	40	31	57	74
Persons with Permits in Two Major Fishery Groups								
SM, GF	6	10	15	23	29	42	22	16
SM, HS	55	41	23	25	31	28	20	24
SM, CO	26	42	34	22	21	18	28	41
GF, HS	50	47	50	51	54	63	41	32
GF, CO	29	33	52	50	56	48	50	45
HS, CO	13	11	11	10	3	5	6	11
Persons with Permits in Three Major Fishery Groups								
SM, GF, HS	24	25	25	26	25	31	13	8
SM, GF, CO	6	9	25	19	21	23	28	23
SM, HS, CO	38	38	20	14	13	15	22	23
GF, HS, CO	50	43	46	44	47	45	55	48
Persons with Permits in All Four Major Fishery Groups								
SM, GF, HS, CO	39	33	52	53	50	49	58	54
Total of All Permit Holders								
All Fisheries	721	698	732	731	747	771	742	729

Source: CFEC Permit Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Note: CFEC analysts provided permit ownership of residents of each community by year, although these data are available on the internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm.

Table 5-21. Percentage Distribution of Permit Holders across Fisheries for Kodiak, 1995-2002

Fishery	1995	1996	1997	1998	1999	2000	2001	2002
Percent of all Community Permit Holders with Permit in only One Major Fishery Group								
Salmon (SM)	26%	26%	25%	27%	26%	25%	27%	28%
(Groundfish (GF)	9%	11%	14%	14%	13%	16%	9%	9%
Halibut and Sablefish (HS)	11%	8%	7%	8%	9%	8%	10%	9%
Crab /l other species (CO)	8%	8%	6%	5%	5%	4%	8%	10%
<i>Subtotal, One Fishery Group</i>	<i>53%</i>	<i>52%</i>	<i>52%</i>	<i>54%</i>	<i>53%</i>	<i>52%</i>	<i>54%</i>	<i>55%</i>
Percent of all Community Permit Holders with Permits in Two Major Fishery Groups								
SM, GF	1%	1%	2%	3%	4%	5%	3%	2%
SM, HS	8%	6%	3%	3%	4%	4%	3%	3%
SM, CO	4%	6%	5%	3%	3%	2%	4%	6%
GF, HS	7%	7%	7%	7%	7%	8%	6%	4%
GF, CO	4%	5%	7%	7%	7%	6%	7%	6%
HS, CO	2%	2%	2%	1%	0%	1%	1%	2%
<i>Subtotal, Two Fishery Groups</i>	<i>25%</i>	<i>26%</i>	<i>25%</i>	<i>25%</i>	<i>26%</i>	<i>26%</i>	<i>23%</i>	<i>23%</i>

Fishery	1995	1996	1997	1998	1999	2000	2001	2002
Percent of all Community Permit Holders with Permits in Three Major Fishery Groups								
SM, GF, HS	3%	4%	3%	4%	3%	4%	2%	1%
SM, GF, CO	1%	1%	3%	3%	3%	3%	4%	3%
SM, HS, CO	5%	5%	3%	2%	2%	2%	3%	3%
GF, HS, CO	7%	6%	6%	6%	6%	6%	7%	7%
<i>Subtotal, Three Fishery Groups</i>	<i>16%</i>	<i>16%</i>	<i>16%</i>	<i>14%</i>	<i>14%</i>	<i>15%</i>	<i>16%</i>	<i>14%</i>
Percent of all Community Permit Holders with Permits in All Four Major Fishery Groups								
SM, GF, HS, CO	5%	5%	7%	7%	7%	6%	8%	7%

Source: CFEC Permit Data, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Note: CFEC analysts provided permit ownership of residents of each community by year, although these data are available on the internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm.

Summary catch and earnings estimates for the community may be made by using the annual CFEC data report called "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City." Table 5-22 aggregates and summarizes estimated landings and gross revenue data for Kodiak into 14 gear and species groups. (Note that this table, unlike the previous table, displays the number of permits held, not the number of permit holders.) Where the number of permits in any group is less than that required to permit disclosure of actual data, an algorithm was used to produce "reasonable estimates" of total catch and earnings. (A more detailed explanation of the algorithm methodology is provided in Appendix A.) As shown, estimated landings and revenues varied considerably through the time period shown, with total estimated gross revenues varying between \$64 million and \$111 million. More recent years have generally lower revenues than previous years, with a decline of about 40 percent between 1999 and 2002.

Table 5-22. Summary Catch and Earnings Estimates for Kodiak Permit Holders by Species Group, 1995-2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
Fishery	Permits Held							
Halibut	307	262	258	261	280	285	270	241
IFQ Sablefish	64	61	64	61	57	58	54	52
Salmon Seine	175	176	182	184	180	189	183	180
Salmon Drift Net	39	38	40	40	41	44	47	46
Salmon Set Net	107	103	99	104	104	96	103	98
Salmon Other Gear	22	21	21	20	19	19	19	21
Herring	178	227	222	179	157	152	136	134
Groundfish Longline	76	79	69	75	77	93	86	71
Groundfish Jig	29	16	130	154	173	207	162	137
Groundfish Pot	115	109	121	118	143	148	93	76
Groundfish Trawl	51	56	59	53	46	40	39	38
Tanner Crab	51	53	52	45	45	39	185	214
King Crab	59	77	80	81	52	47	42	46
All Other Fish/ Shellfish	138	140	194	158	164	152	136	105
Total All Permits	1,411	1,418	1,591	1,533	1,538	1,569	1,555	1,459

Year	1995	1996	1997	1998	1999	2000	2001	2002
Fishery	Permits Fished							
Halibut	208	189	196	183	231	236	205	213
IFQ Sablefish	46	50	46	46	37	40	42	44
Salmon Seine	139	125	127	118	118	119	99	77
Salmon Drift Net	37	37	37	35	35	39	32	22
Salmon Set Net	100	90	92	92	95	87	94	60
Salmon Other Gear	8	5	3	2	3	2	-	1
Herring	102	128	114	51	32	37	33	35
Groundfish Longline	32	36	35	32	29	50	37	23
Groundfish Jig	16	4	53	60	75	84	58	49
Groundfish Pot	91	74	69	70	97	103	53	50
Groundfish Trawl	47	52	50	46	40	33	35	34
Tanner Crab	38	45	39	34	40	36	140	177
King Crab	41	68	72	76	35	35	34	40
All Other Fish/ Shellfish	50	54	63	49	55	47	32	35
Total All Permits Fished	955	957	996	894	922	948	894	860
Fishery	Estimated Landings (pounds)							
Halibut	6,011,436	6,338,955	10,419,250	9,878,311	10,932,511	10,698,604	10,243,294	10,849,487
IFQ Sablefish	2,463,982	2,671,652	2,239,565	2,372,791	1,660,349	1,953,006	1,977,567	2,018,516
Salmon Seine	67,172,781	17,459,131	22,718,401	47,518,525	33,566,230	26,267,973	44,141,660	38,265,888
Salmon Drift Net	3,527,673	2,928,775	1,698,793	1,020,601	2,042,952	1,976,201	1,591,237	913,609
Salmon Set Net	15,133,190	7,049,399	6,105,328	10,163,888	7,439,474	5,870,081	6,998,111	7,861,604
Salmon Other Gear	555,108	17,401	113,250	-	26,105	-	-	24,450
Herring	8,134,349	9,865,845	11,317,603	10,266,950	8,896,430	7,958,668	6,851,832	7,058,545
Groundfish Longline	9,207,586	3,549,582	3,902,739	4,328,678	4,051,629	4,869,985	3,422,679	2,776,081
Groundfish Jig	241,139	90,788	1,483,433	1,590,574	1,343,461	1,339,382	1,719,370	1,603,393
Groundfish Pot	27,785,294	31,870,135	27,801,179	29,059,871	33,555,376	22,715,764	14,235,448	19,506,307
Groundfish Trawl	156,723,731	140,762,725	128,671,797	124,348,466	119,160,550	119,665,075	121,697,675	119,094,276
Tanner Crab	8,026,352	6,398,009	14,888,653	26,198,466	23,109,192	4,158,218	2,390,027	3,231,826
King Crab	1,325,247	1,992,570	2,152,326	2,289,500	1,368,421	873,187	916,693	1,240,103
All Other Fish/ Shellfish	724,769	1,687,770	783,040	512,505	714,111	414,964	240,226	335,742
Total (All Species)	307,032,637	232,682,737	234,295,357	269,549,125	247,866,791	208,761,107	216,425,818	214,779,829
Fishery	Estimated Gross Revenue (dollars)							
Halibut	\$11,350,249	\$13,591,306	\$20,896,578	\$12,048,875	\$21,906,973	\$26,382,430	\$19,964,767	\$23,074,404
IFQ Sablefish	\$4,868,003	\$5,328,881	\$4,980,757	\$3,635,063	\$3,025,629	\$4,187,211	\$3,677,974	\$3,848,203
Salmon Seine	\$18,058,186	\$8,776,145	\$7,178,748	\$13,040,680	\$13,513,675	\$8,907,932	\$9,009,964	\$4,896,203
Salmon Drift Net	\$2,900,703	\$2,413,785	\$1,561,727	\$1,142,016	\$1,862,893	\$1,414,350	\$734,205	\$453,004
Salmon Set Net	\$6,392,823	\$4,697,379	\$3,287,235	\$4,724,679	\$5,550,333	\$3,111,031	\$2,712,739	\$1,517,924
Salmon Other Gear	\$114,013	\$14,769	\$25,256	-	\$22,025	-	-	\$16,280
Herring	\$4,321,320	\$5,368,437	\$1,575,332	\$1,733,106	\$1,875,031	\$1,049,536	\$953,892	\$751,749
Groundfish Longline	\$3,717,841	\$780,337	\$1,053,261	\$896,426	\$1,218,570	\$1,918,804	\$1,078,883	\$795,113
Groundfish Jig	\$79,281	\$29,445	\$349,108	\$363,369	\$495,848	\$531,573	\$500,750	\$429,640
Groundfish Pot	\$6,236,590	\$6,252,725	\$5,954,157	\$5,848,474	\$9,995,703	\$7,901,140	\$3,817,880	\$4,938,840
Groundfish Trawl	\$27,980,228	\$26,177,813	\$28,072,721	\$11,262,928	\$16,383,214	\$16,283,866	\$14,864,572	\$10,549,802
Tanner Crab	\$19,244,401	\$9,176,810	\$11,730,828	\$14,802,134	\$22,716,336	\$7,773,381	\$3,991,086	\$4,642,355
King Crab	\$3,773,310	\$6,776,469	\$6,201,360	\$5,679,089	\$8,574,526	\$4,218,663	\$4,260,967	\$7,580,406
All Other Fish/ Shellfish	\$1,486,576	\$2,499,804	\$1,751,177	\$892,353	\$1,053,805	\$635,514	\$563,074	\$664,458
Total (All Species)	\$110,523,525	\$91,884,104	\$94,618,245	\$76,069,192	\$108,194,561	\$84,315,431	\$66,130,754	\$64,158,380

Source: Commercial Fishing Entry Commission "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City" from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

Table 5-23 provides estimates of the percentage of non-confidential gross revenue for Kodiak permit holders by species group by year for the period 1995 through 2002. This provides one type of fundamental measure of “dependency” of community harvesters on particular fisheries. As shown, relative dependency has fluctuated between species and gear groups, but for most years halibut and trawl groundfish are particularly important, with several especially strong years seen for salmon seine and tanner crab as well.

Table 5-23. Percentage of Gross Revenue Estimates for Kodiak Permit Holders by Species Group, 1995-2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
Fishery	Estimated Gross Revenue							
Halibut	11,350,249	13,591,306	20,896,578	12,048,875	21,906,973	26,382,430	19,964,767	23,074,404
IFQ Sablefish	4,868,003	5,328,881	4,980,757	3,635,063	3,025,629	4,187,211	3,677,974	3,848,203
Salmon Seine	18,058,186	8,776,145	7,178,748	13,040,680	13,513,675	8,907,932	9,009,964	4,896,203
Salmon Drift Net	2,900,703	2,413,785	1,561,727	1,142,016	1,862,893	1,414,350	734,205	453,004
Salmon Set Net	6,392,823	4,697,379	3,287,235	4,724,679	5,550,333	3,111,031	2,712,739	1,517,924
Salmon Other Gear	114,013	14,769	25,256	-	22,025	-	-	16,280
Herring	4,321,320	5,368,437	1,575,332	1,733,106	1,875,031	1,049,536	953,892	751,749
Groundfish Longline	3,717,841	780,337	1,053,261	896,426	1,218,570	1,918,804	1,078,883	795,113
Groundfish Jig	79,281	29,445	349,108	363,369	495,848	531,573	500,750	429,640
Groundfish Pot	6,236,590	6,252,725	5,954,157	5,848,474	9,995,703	7,901,140	3,817,880	4,938,840
Groundfish Trawl	27,980,228	26,177,813	28,072,721	11,262,928	16,383,214	16,283,866	14,864,572	10,549,802
Tanner Crab	19,244,401	9,176,810	11,730,828	14,802,134	22,716,336	7,773,381	3,991,086	4,642,355
King Crab	3,773,310	6,776,469	6,201,360	5,679,089	8,574,526	4,218,663	4,260,967	7,580,406
All Other Fish/ Shellfish	1,486,576	2,499,804	1,751,177	892,353	1,053,805	635,514	563,074	664,458
Total (All Species)	110,523,525	91,884,104	94,618,245	76,069,192	108,194,561	84,315,431	66,130,754	64,158,380
Fishery	Percentage of Estimated Gross Revenue							
Halibut	10.27%	14.79%	22.09%	15.84%	20.25%	31.29%	30.19%	35.96%
IFQ Sablefish	4.40%	5.80%	5.26%	4.78%	2.80%	4.97%	5.56%	6.00%
Salmon Seine	16.34%	9.55%	7.59%	17.14%	12.49%	10.57%	13.62%	7.63%
Salmon Drift Net	2.62%	2.63%	1.65%	1.50%	1.72%	1.68%	1.11%	0.71%
Salmon Set Net	5.78%	5.11%	3.47%	6.21%	5.13%	3.69%	4.10%	2.37%
Salmon Other Gear	0.10%	0.02%	0.03%	-	0.02%	-	-	0.03%
Herring	3.91%	5.84%	1.66%	2.28%	1.73%	1.24%	1.44%	1.17%
Groundfish Longline	3.36%	0.85%	1.11%	1.18%	1.13%	2.28%	1.63%	1.24%
Groundfish Jig	0.07%	0.03%	0.37%	0.48%	0.46%	0.63%	0.76%	0.67%
Groundfish Pot	5.64%	6.81%	6.29%	7.69%	9.24%	9.37%	5.77%	7.70%
Groundfish Trawl	25.32%	28.49%	29.67%	14.81%	15.14%	19.31%	22.48%	16.44%
Tanner Crab	17.41%	9.99%	12.40%	19.46%	21.00%	9.22%	6.04%	7.24%
King Crab	3.41%	7.38%	6.55%	7.47%	7.93%	5.00%	6.44%	11.82%
All Other Fish/ Shellfish	1.35%	2.72%	1.85%	1.17%	0.97%	0.75%	0.85%	1.04%
Total (All Species)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Commercial Fishing Entry Commission “Permit and Fishing Activity by Year, State, Census Division, or Alaskan City” from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

An important factor in characterizing the economic relationship of the local harvesters to the larger economy of the community is the pattern of landings associated with local vessels and permits. When a vessel owner or permit holder delivers catch to processors inside their home community, revenues will accrue to that community in different ways than if local vessel or permit holders deliver to processors outside of their home community (that is, to processors located in other communities). This would include both tax revenue accruing to local jurisdictions as well private sector economic benefits deriving from activities related to the deliveries, such as processing, shipping, support service demand, and the like.

Table 5-24 provides data on volume and value of landings made inside and outside the community by Kodiak vessel owners for the years 1995 through 2002, and Table 5-25 provides similar information for local permit holders. As shown, in most years vessels owned by Kodiak residents delivered roughly twice as much catch, as measured by value or estimated gross earnings, outside of the community than they delivered in Kodiak itself. This is consistent with the characterization of the Kodiak fleet being relatively large and far-ranging. The difference between permit holder deliveries inside and outside of the community is not as large as the difference seen for vessel owners.

Table 5-24. Landings by Kodiak Vessel Owners—Summary, 1995-2002

Year	Landing Location	Pounds	Estimated Gross Earnings
1995	Landed in Community	144,118,995	\$35,758,426
	Landed Outside Community	151,627,067	\$64,188,753
	Total	295,746,062	\$99,947,179
1996	Landed in Community	110,055,617	\$32,674,578
	Landed Outside Community	169,925,071	\$59,865,881
	Total	279,980,688	\$92,540,459
1997	Landed in Community	140,464,757	\$30,032,692
	Landed Outside Community	155,015,314	\$64,270,235
	Total	295,480,071	\$94,302,928
1998	Landed in Community	164,121,231	\$30,395,125
	Landed Outside Community	135,938,653	\$52,748,603
	Total	300,059,884	\$83,143,729
1999	Landed in Community	132,151,299	\$37,128,608
	Landed Outside Community	133,731,590	\$81,389,280
	Total	265,882,889	\$118,517,888
2000	Landed in Community	122,888,784	\$34,265,354
	Landed Outside Community	82,215,684	\$55,194,729
	Total	205,104,468	\$89,460,083
2001	Landed in Community	105,122,892	\$24,544,628
	Landed Outside Community	99,920,917	\$49,313,359
	Total	205,043,809	\$73,857,987
2002	Landed in Community	102,445,160	\$20,174,939
	Landed Outside Community	96,708,422	\$50,837,428
	Total	199,153,582	\$71,012,367

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 5-25. Landings by Kodiak Permit Holders—Summary, 1995-2002

Year	Landing Location	Pounds	Estimated Gross Earnings
1995	Landed in Community	148,537,798	\$37,936,895
	Landed Outside Community	173,582,607	\$73,212,685
	Total	322,120,405	\$111,149,580
1996	Landed in Community	116,962,937	\$34,091,638
	Landed Outside Community	149,765,805	\$60,075,632
	Total	266,728,742	\$94,167,270
1997	Landed in Community	141,007,993	\$32,133,785
	Landed Outside Community	131,831,264	\$65,082,693
	Total	272,839,257	\$97,216,478
1998	Landed in Community	177,636,363	\$33,411,096
	Landed Outside Community	102,768,800	\$44,585,542
	Total	280,405,163	\$77,996,638
1999	Landed in Community	149,991,957	\$41,972,374
	Landed Outside Community	107,481,146	\$68,786,083
	Total	257,473,103	\$110,758,457
2000	Landed in Community	138,549,590	\$37,374,675
	Landed Outside Community	79,515,455	\$50,223,918
	Total	218,065,045	\$87,598,594
2001	Landed in Community	124,743,864	\$27,948,845
	Landed Outside Community	101,292,321	\$40,668,208
	Total	226,036,185	\$68,617,053
2002	Landed in Community	122,638,082	\$24,081,901
	Landed Outside Community	103,998,032	\$50,607,472
	Total	226,636,114	\$74,689,373

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 5-26 provides a detailed breakout by species group (to the extent possible given confidentiality restraints) by year for landings within the community by Kodiak vessel owners, and Table 5-27 provides parallel information for landings these vessel owners made to other communities outside of Kodiak. Table 5-28 displays detailed information by species group (again, to the extent possible given confidentiality restraints) by year for landings by permit holders within the community, and Table 5-29 provides parallel information for landings made outside the community. For all of these tables, aggregations vary by year, and totals do not necessarily match those provided in previously presented summary tables, due to confidentiality restrictions. This detail allows a characterization of differences in local and external landings. For example, among Kodiak halibut permit holders, this is a very important fishery in terms of percentage of estimated gross revenue, but hardly any of it was delivered locally (for example, in 2002 halibut landings in Kodiak generated approximately \$29,000 in gross revenue for Kodiak permit holders while halibut landings outside of Kodiak generated approximately \$25 million in gross revenue for Kodiak permit holders).

Table 5-26. Landings by Kodiak Vessel Owners—Detail of Landings in Community, 1995-2002

Permit Type	Species	Year							
		1995	1996	1997	1998	1999	2000	2001	2002
Landed in Community, Tons									
Groundfish-Jig	ALL	119	47	786	562	461	593	371	373
Groundfish-Longline	ALL	2,076	1,735	1,911	2,268	1,926	2,233	1,490	1,490
Groundfish-Pot	ALL	9,523	6,828	8,071	9,845	13,052	9,636	3,401	4,815
Groundfish-Trawl	Other	8,780	14,693	14,197	9,424	5,527	12,371	9,294	9,176
	Pacific Cod	9,476	7,336	10,197	8,321	8,029	4,714	4,781	3,725
	Pollock	15,731	12,331	22,804	30,059	21,995	19,138	11,589	10,070
Halibut	ALL	123	76	314	93	128	106	68	59
Herring (All Gears)	ALL	1,142	1,786	1,672	912	889	434	984	972
King Crab/Tanner Crab	ALL	445	350	181	150	231	845	604	508
Miscellaneous Shellfish and Other Species	ALL	530	519	377	362	283	124	142	203
Sablefish	ALL	882	1,047	747	760	635	562	560	399
Salmon-Seine	Chum Salmon	1,620	830	680	410	1,519	1,787	1,835	1,155
	Coho Salmon	373	395	703	771	454	554	701	1,144
	King Salmon	31	35	33	35	43	31	50	47
	Pink Salmon	18,094	2,625	5,785	15,539	7,094	5,753	14,720	15,362
	Sockeye Salmon	1,849	3,882	1,339	2,177	3,373	2,132	1,678	1,437
Salmon-Set Net or Troll	Chum Salmon	91	54	38	16	35	53	50	18
	Coho Salmon	22	14	17	13	21	18	19	8
	King Salmon	1	1	1	1	1	1	0	0
	Pink Salmon	885	89	244	243	114	158	128	182
	Sockeye Salmon	267	358	132	100	264	202	99	79
Total		72,059	55,028	70,232	82,061	66,076	61,444	52,561	51,223
Landed in Community, Estimated Gross Earnings (\$1000s)									
Groundfish-Jig	ALL	78	30	369	259	355	475	256	247
Groundfish-Longline	ALL	965	755	893	923	1,153	1,745	952	876
Groundfish-Pot	ALL	4,556	3,007	3,787	4,061	7,915	6,823	1,936	2,373
Groundfish-Trawl	Other	2,553	4,379	3,570	2,074	1,368	2,875	1,549	1,552
	Pacific Cod	3,658	2,378	3,943	2,663	4,517	2,918	2,501	1,470
	Pollock	3,106	2,185	4,304	4,023	4,164	4,390	2,861	1,945
Halibut	ALL	84	123	586	47	84	116	32	29
Herring (All Gears)	ALL	1,413	2,554	633	380	546	294	577	430
King Crab	ALL	2,347	2,066	1,180	775	2,848	4,713	3,685	3,257
Miscellaneous Shellfish and Other Species	ALL	1,337	2,402	1,614	2,018	1,012	245	338	1,117
Sablefish	ALL	3,393	4,161	3,356	2,374	2,338	2,408	2,190	1,523
Salmon-Seine	Chum Salmon	891	256	260	157	568	772	1,171	381
	Coho Salmon	304	337	805	573	365	533	338	404
	King Salmon	43	45	42	50	59	41	70	34
	Pink Salmon	6,188	388	1,793	4,631	2,000	1,657	3,503	2,704
	Sockeye Salmon	3,950	6,925	2,529	5,059	7,185	3,812	2,377	1,699
Salmon-Set Net or Troll	Chum Salmon	44	14	14	6	12	24	32	5
	Coho Salmon	16	11	18	9	18	18	9	3
	King Salmon	2	1	1	1	1	1	1	0
	Pink Salmon	285	12	78	76	32	44	31	27
	Sockeye Salmon	545	645	258	237	588	363	137	98
Total		35,758	32,675	30,033	30,395	37,129	34,265	24,545	20,175

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 5-27. Landings by Kodiak Vessel Owners—Detail of Landings Outside Community, 1995-2002

Permit Type	Species	Year							
		1995	1996	1997	1998	1999	2000	2001	2002
Landed Outside Community, Tons									
Groundfish-Jig	ALL	-	-	-	185	166	99	594	519
Groundfish-Longline	ALL	174	68	214	169	226	108	306	122
Groundfish-Pot	ALL	5,057	9,225	7,905	4,207	4,284	3,126	5,379	6,056
Groundfish-Trawl	Other	4,397	17,432	16,481	10,159	9,199	3,374	334	146
	Pacific Cod	2,811	6,186	5,626	3,435	2,743	469	67	354
	Pollock	24,626	26,985	14,035	13,620	18,134	16,646	25,705	27,199
Halibut	ALL	2,645	3,116	4,899	5,376	5,921	5,425	5,384	5,339
Herring (All Gears)	ALL	4,111	4,287	5,516	5,145	4,387	3,564	3,158	3,678
King Crab	ALL	1,010	1,230	1,560	1,895	1,310	1,113	1,205	1,100
Miscellaneous Shellfish and Other Species	ALL	10,084	9,314	8,661	747	164	209	349	127
Sablefish	ALL	195	352	380	399	389	476	634	579
Salmon Drift Net	Chum Salmon	67	84	47	41	48	43	47	32
	Coho Salmon	22	14	11	11	6	12	2	8
	King Salmon	6	4	5	3	4	5	3	6
	Pink Salmon	4	10	5	25	9	6	3	235
	Sockeye Salmon	1,524	1,039	774	391	1,004	809	545	429
Salmon-Seine	Chum Salmon	1,285	81	282	611	992	1,177	685	363
	Coho Salmon	285	63	194	137	157	164	151	2
	King Salmon	27	3	12	12	32	40	22	13
	Pink Salmon	11,265	336	1,934	4,264	3,121	1,684	3,167	446
	Sockeye Salmon	1,610	811	593	552	1,076	780	625	123
Salmon-Set Net or Troll	Chum Salmon	29	10	2	2	-	-	2	-
	Coho Salmon	9	6	3	4	-	-	-	-
	Pink Salmon	188	36	8	54	-	-	8	-
	Sockeye Salmon	175	155	39	59	-	47	32	-
Tanner Crab	ALL	4,206	4,114	8,322	16,463	13,494	1,730	1,552	1,481
Total		75,814	84,963	77,508	67,969	66,866	41,108	49,960	48,354
Landed Outside Community, Estimated Gross Earnings (\$1000s)									
Groundfish-Jig	ALL	-	-	-	79	105	75	307	237
Groundfish-Longline	ALL	68	32	248	90	133	72	163	60
Groundfish-Pot	ALL	2,294	3,796	3,267	1,445	2,671	1,808	2,521	2,687
Groundfish-Trawl	Other	2,820	6,305	6,397	810	2,185	569	53	0
	Pacific Cod	917	1,792	1,923	773	1,203	189	12	108
	Pollock	4,056	3,767	2,358	1,761	3,457	3,682	4,464	5,620
Halibut	ALL	10,251	13,521	19,686	13,190	24,152	26,762	20,951	23,148
Herring (All Gears)	ALL	3,843	4,061	1,494	1,636	1,776	693	885	899
King Crab	ALL	5,586	7,144	7,866	8,358	11,590	7,901	8,886	9,909
Miscellaneous Shellfish and Other Species	ALL	2,728	3,211	2,776	823	776	1,015	1,296	1,250
Sablefish	ALL	766	1,323	1,661	1,161	1,295	2,026	2,192	2,047
Salmon Drift Net	Chum Salmon	37	27	20	20	13	15	23	7
	Coho Salmon	22	12	10	9	5	11	2	3
	King Salmon	16	7	9	9	22	21	22	19
	Pink Salmon	1	1	1	6	3	1	1	37
	Sockeye Salmon	2,555	1,828	1,496	955	1,886	1,217	520	412

Permit Type	Species	Year							
		1995	1996	1997	1998	1999	2000	2001	2002
Salmon-Seine	Chum Salmon	689	20	99	219	378	618	460	128
	Coho Salmon	239	39	205	100	128	150	74	1
	King Salmon	38	3	15	16	35	56	28	8
	Pink Salmon	3,834	58	584	1,347	947	502	792	86
	Sockeye Salmon	3,446	1,399	1,113	1,313	2,297	1,396	874	174
Salmon-Set Net or Troll	Chum Salmon	14	2	1	1	-	-	1	-
	Coho Salmon	8	5	3	3	-	-	-	-
	Pink Salmon	61	5	3	17	-	-	1	-
	Sockeye Salmon	365	278	75	141	-	69	48	-
Tanner Crab	ALL	19,537	11,230	12,961	18,466	26,332	6,346	4,739	3,997
Total		64,189	59,866	64,270	52,749	81,389	55,195	49,313	50,837

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 5-28. Landings by Kodiak Permit Holders—Detail of Landings in Community, 1995-2002

Permit Type	Species	Year							
		1995	1996	1997	1998	1999	2000	2001	2002
Landed in Community, Tons									
Halibut	All	123	77	312	79	120	100	67	59
Sablefish	All	926	1,024	804	800	583	546	453	413
Herring (All Gears)	All	1,102	1,606	1,487	912	889	-	-	-
Herring (All Gears)/Groundfish (All Gears)	All	-	-	-	-	-	609	1,195	1,127
King Crab/Tanner Crab	All	320	237	186	141	203	663	454	558
Groundfish-Jig	All	113	47	834	616	494	600	345	292
Groundfish-Longline	All	1,689	1,735	1,911	2,130	2,057	2,391	1,483	1,498
Groundfish-Trawl	Other	8,521	15,246	13,477	9,724	7,618	15,496	11,935	13,358
	Pacific Cod	10,484	7,483	10,148	9,124	9,558	5,348	7,080	5,951
	Pollock	15,730	13,419	22,067	31,913	24,726	21,201	14,677	10,497
Groundfish-Pot	All	9,676	7,569	8,437	11,353	13,775	9,617	3,444	4,922
Salmon-Seine	Chum Salmon	1,425	767	618	412	1,340	1,825	1,806	1,061
	Coho Salmon	344	360	647	772	443	557	715	1,116
	King Salmon	27	33	30	38	45	31	50	47
	Pink Salmon	16,154	2,374	5,337	15,359	6,650	5,660	14,168	15,271
	Sockeye Salmon	1,711	3,600	1,230	2,128	3,255	2,077	1,614	1,451
Salmon-Set Net or Troll/Salmon-Drift Net	Chum Salmon	380	194	181	107	202	268	331	157
	Coho Salmon	80	62	90	111	96	84	119	118
	King Salmon	5	4	4	6	6	4	7	6
	Pink Salmon	3,652	451	1,283	1,913	876	1,027	1,245	2,394
	Sockeye Salmon	1,465	1,699	999	855	1,780	1,173	1,186	1,020
Miscellaneous Shellfish and Other Species	All	341	496	421	325	280	-	-	-
Total		74,269	58,481	70,504	88,818	74,996	69,275	62,372	61,319

Permit Type	Species	Year							
		1995	1996	1997	1998	1999	2000	2001	2002
Landed in Community, Estimated Gross Revenue (\$1000s)									
Halibut	All	82	123	582	39	79	114	31	29
Sablefish	All	3,559	4,051	3,603	2,492	2,142	2,340	1,767	1,572
Herring (All Gears)	All	1,356	2,175	566	380	546	-	-	-
Herring (All Gears)/Groundfish (All Gears)	All	-	-	-	-	-	942	1,201	1,493
King Crab/Tanner Crab	All	1,737	1,334	943	548	2,171	3,832	2,943	3,873
Groundfish-Jig	All	73	30	391	286	381	480	237	192
Groundfish-Longline	All	786	752	893	866	1,232	1,879	956	881
Groundfish-Trawl	Other	2,413	4,523	3,381	2,139	1,902	3,560	2,125	2,387
	Pacific Cod	4,087	2,443	3,928	2,943	5,395	3,287	3,646	2,307
	Pollock	3,111	2,383	4,184	4,292	4,670	4,824	3,626	2,023
Groundfish-Pot	All	4,628	3,344	3,956	4,679	8,352	6,809	1,962	2,426
Salmon-Seine	Chum Salmon	784	236	236	158	501	788	1,152	350
	Coho Salmon	280	307	742	575	356	536	344	394
	King Salmon	37	43	38	55	61	41	70	33
	Pink Salmon	5,525	351	1,654	4,577	1,875	1,630	3,372	2,688
	Sockeye Salmon	3,655	6,422	2,322	4,946	6,933	3,713	2,287	1,716
Salmon-Set Net or Troll	Chum Salmon	182	51	65	40	70	122	211	45
	Coho Salmon	58	51	92	79	80	83	56	39
	King Salmon	7	6	5	8	7	5	13	6
	Pink Salmon	1,159	61	412	606	249	286	301	354
	Sockeye Salmon	3,011	3,061	1,952	2,036	3,968	2,103	1,648	1,273
Miscellaneous Shellfish and Other Species	All	1,406	2,344	2,189	1,665	1,002	-	-	-
Total		37,937	34,092	32,134	33,411	41,972	37,375	27,949	24,082

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Table 5-29. Landings by Kodiak Permit Holders—Detail of Landings Outside Community, 1995-2002

Permit Type	Species	Year							
		1995	1996	1997	1998	1999	2000	2001	2002
Landed Outside Community, Tons									
Halibut	All	2,928	3,222	5,014	4,919	5,530	5,410	5,294	5,713
Sablefish	All	302	340	367	419	418	543	582	678
Herring (All Gears)	All	3,312	3,459	4,157	5,022	3,972	3,619	2,573	3,494
King Crab	All	687	979	960	1,093	520	265	346	580
Groundfish-Jig	All	2,979	73	216	205	201	99	578	537
Groundfish-Longline	All	-	-	-	141	58	143	306	141
Groundfish-Trawl	Other	153	5,743	13,568	2,707	2,405	2,364	376	179
	Pacific Cod	2,432	4,665	4,261	897	2,003	670	95	747
	Pollock	50,005	40,721	19,569	12,335	17,023	17,770	29,666	31,304
Groundfish-Pot	All	4,545	8,913	6,042	3,689	3,251	2,174	4,268	5,857
Salmon-Seine	Chum Salmon	1,096	71	260	514	875	1,042	682	-
	Coho Salmon	263	43	171	128	162	155	141	-
	King Salmon	-	2	12	10	32	40	22	-
	Pink Salmon	9,596	311	1,721	3,367	2,544	1,561	3,150	-
	Sockeye Salmon	1,327	581	523	436	1,016	698	588	840

Permit Type	Species	Year							
		1995	1996	1997	1998	1999	2000	2001	2002
Salmon Drift Net	Chum Salmon	59	47	43	42	46	44	63	31
	Coho Salmon	18	12	3	10	5	11	3	8
	King Salmon	6	3	5	3	4	5	3	4
	Pink Salmon	3	9	5	24	-	6	3	7
	Sockeye Salmon	1,595	1,257	791	413	962	908	607	391
Salmon-Set Net or Troll	Chum Salmon	68	41	30	30	22	11	14	-
	Coho Salmon	20	25	16	38	10	4	1	-
	King Salmon	2	1	2	3	1	1	1	-
	Pink Salmon	832	166	148	670	77	23	18	-
	Sockeye Salmon	708	747	406	510	459	289	193	71
Tanner Crab	All	3,815	3,392	7,552	13,708	12,105	1,822	1,079	1,423
Miscellaneous Shellfish and Other Species	All	47	68	82	58	46	88	-	-
Total		86,792	74,883	65,916	51,385	53,741	39,758	50,646	51,999
Landed Outside Community, Estimated Gross Revenue (\$1000s)									
Halibut	All	11,314	13,940	20,668	12,110	22,494	26,866	20,760	25,202
Sablefish	All	1,140	1,274	1,582	1,210	1,374	2,232	1,946	2,412
Herring (All Gears)	All	3,140	3,164	1,042	1,612	1,540	778	602	1,792
King Crab	All	3,760	6,236	5,298	5,364	6,490	2,434	3,002	6,722
Groundfish-Jig	All	2,944	34	248	88	132	74	294	252
Groundfish-Longline	All	-	-	-	74	36	100	162	72
Groundfish-Trawl	Other	4	1,246	4,944	282	600	408	54	-
	Pacific Cod	778	1,332	1,386	212	958	322	26	266
	Pollock	18,856	14,936	10,966	1,560	3,234	3,996	5,394	6,744
Groundfish-Pot	All	1,736	3,108	2,220	1,362	1,778	1,358	2,126	2,604
Salmon-Seine	Chum Salmon	588	16	90	182	334	552	458	-
	Coho Salmon	222	28	184	94	132	144	68	-
	King Salmon	-	2	14	12	34	56	28	-
	Pink Salmon	3,260	54	520	1,066	772	464	788	-
	Sockeye Salmon	2,818	1,002	984	1,036	2,168	1,246	822	242
Salmon Drift Net	Chum Salmon	34	10	18	20	12	14	30	8
	Coho Salmon	18	10	2	8	4	10	2	4
	King Salmon	16	4	10	8	22	20	22	16
	Pink Salmon	-	2	2	6	-	2	-	-
	Sockeye Salmon	2,674	2,164	1,520	1,008	1,784	1,348	566	376
Salmon-Set Net or Troll	Chum Salmon	32	10	10	10	8	4	8	-
	Coho Salmon	16	20	16	26	8	4	-	-
	King Salmon	2	2	2	4	-	-	-	-
	Pink Salmon	262	22	48	212	22	6	4	-
	Sockeye Salmon	1,420	1,332	786	1,216	944	486	224	72
Tanner Crab	All	17,798	9,376	11,652	15,386	23,622	6,680	3,282	3,824
Miscellaneous Shellfish and Other Species	All	380	752	868	408	286	616	-	-
Total		73,212	60,076	65,082	44,586	68,786	50,224	40,668	50,608

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, November 2004.

Communities also directly benefit from the harvest sector through participation of residents as crew members as well as through the engagement of vessel owners and permit holders. Beginning in 2000, CFEC has produced estimates of crew members by community, based on the number of permit holders in the community, plus the community residents who have applied for a Crew Member License with ADFG. (A more complete discussion of this methodology may be found in Appendix A.) Table 5-30 provides estimates of crew members for Kodiak for the years 2000 through 2003.

Table 5-30. Estimated Number of Permit Holders and Crew Members from Kodiak 2000-2003

Year	Permit Holders	Crew Members	Total
2000	656	1031	1687
2001	CFEC did not develop this report for 2001		
2002	617	772	1389
2003	600	752	1352

Note: Includes Chiniak.

Source: CFEC permit holder and crew member counts by census area and city of residence report, accessed via www.cfec.state.ak.us/Mnu_Summary_Info.htm.

Spatial Distribution of Harvester Effort

Figure KOD-1 provides information on the spatial distribution of groundfish catch for vessels owned by Kodiak residents for all gear types for the years 1995 through 2002. Figure KOD-2, Figure KOD-3, Figure KOD-4, and Figure KOD-5 show the spatial distribution of catch for groundfish in 2-year intervals for within this same overall time period. For some areas, catch could not be aggregated to 2 year intervals and maintain confidentiality, so Figure KOD-6 and Figure KOD-7 show this same type of information, but for those data that needed to be aggregated to 4-year intervals. These figures show a very wide distribution of effort, with marked concentration of effort around Kodiak Island, but with lower level efforts ranging to the Yakutat area in the east, to the central Aleutian Islands in the west, and to the Pribilof Islands in the north. Figure KOD-8, Figure KOD-9, Figure KOD-10, and Figure KOD-11 show breakouts of groundfish catch by gear type (to the extent possible given confidentiality restrictions) for the most recent 2-year interval (2001-2002). These figures show the different patterns of effort by the longline, trawl, pot, and other gear groups.

The next series of figures provides information on the spatial distribution of salmon catch for vessels owned by Kodiak residents. Figure KOD-12 shows the spatial distribution of salmon catch for vessels owned by Kodiak residents for all gear types for the years 1995 through 2002. Figure KOD-13, Figure KOD-14, Figure KOD-15, and Figure KOD-16 show the spatial distribution of catch for salmon in 2-year intervals for within this same overall time period. For some areas, catch could not be aggregated to 2-year intervals and maintain confidentiality, so Figure KOD-17 and Figure KOD-18 show this same type of information, but for those data that needed to be aggregated to 4-year intervals. Figure KOD-19 and Figure KOD-20 show breakouts of salmon catch by gear type (to the extent possible given confidentiality restrictions) for the most recent 2-year interval (2001-2002). These figures show the different patterns of effort by the seine and set net gear groups.

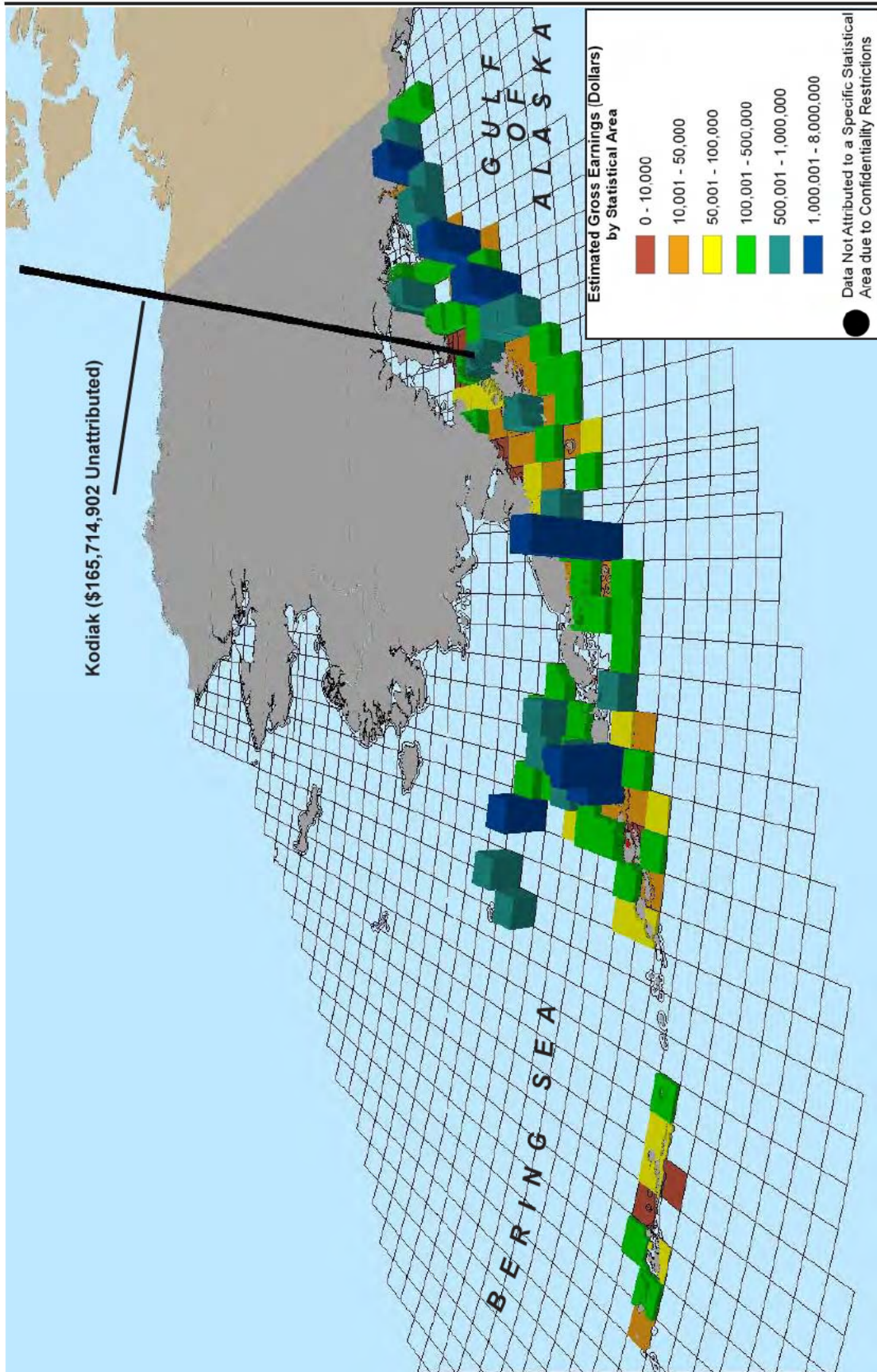
Community Harvester Characterization

The Kodiak fleet is primarily composed of multi-gear and multi-species boats. Vessels in this fleet usually have a handshake agreement with a shore processor for the delivery of fish. The vessel is said to “work for” the shoreplant and sometimes the plant operators refer to “their boats” meaning those with which working relationships exist. These vessels deliver to that plant on a regular basis. The size and composition of processor fleets vary, depending on the plant’s capacity and product mix, as noted in the processor discussion below. Most of the boats that deliver to Kodiak processors are multi-purpose vessels that can change fisheries to meet the current market and fishing circumstances. For example, some vessels will switch between crab, halibut, and cod or crab, halibut, and pollock. One vessel owner interviewed reported that he fished for in excess of 20 species with three different types of gear. The size of a processor’s fleet depends on what season it is and what they are targeting at the time. It is not uncommon, however, for a plant to have a fleet of 8 to 16 boats fishing groundfish and crab. Among plants that run pollock, there is a bimodal distribution of trawl fishing power. The larger plants typically have 8 to 10 trawlers working with them; whereas, the smaller plants typically have 4 or fewer trawlers in their pollock fleet. Most plants also have 6 to 10 fixed gear vessels in their fleet. Most of the fixed gear boats are pot boats fishing for Pacific cod and/or tanner crab. There is a small fleet that fishes for dungeness crab as well. Plate KOD-5a, Plate KOD-5b, and Plate KOD-5c provide images of individual vessels in the local harvest fleet and the fleet in harbor.

Fleet sizes are smaller now than they were when local shellfish was a larger part of production. Interview data suggest that prior to the implementation of the AFA in the Bering Sea, the Gulf of Alaska pollock (and flatfish) fleet tended to cooperate in an effort to balance deliveries to maintain high levels of production. This was a somewhat unique relationship to develop in an open access fishery, but it was a form of industry-developed “rationalization” to counter some of the inherent inefficiencies of a high volume/low value fishery with excess capacity. Ideally, the plants want just the right number of boats to keep production lines busy all of the time, but with a trawl fleet’s capacity to catch groundfish, harvest can easily exceed processor’s capacity. Since implementation of the AFA in the Bering Sea, Kodiak processors have reported that this arrangement is, in essence, no longer in effect. With the anticipation of eventual pollock (and other groundfish) rationalization in the Gulf of Alaska, a “race for history” in the Gulf has resulted, with at least one new processing entrant and inefficient practices that tend to accompany such “race” conditions (see processing discussion below).

A strategy of flexibility and adaptability in the fishing industry has caused boats to become very good at converting from one gear type to another, if they have the gear available. In the mid-1980s this did not happen frequently, but it is easier and more common now (subject to license limitation and other management measures). While boats may switch from one gear type to another, operators usually deliver to the same processor. If a new operator comes aboard, the vessel may or may not change delivery sites, depending on the established relationships of the vessel owner/operator to processor.

Conversions also take place within the trawl fleet. For example, there is a switch in nets for midwater or pelagic trawling to bottom trawling when going from pollock to cod, and according to field interviews, almost all local trawlers have both types of nets. Medium-sized and small trawlers



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KOD-1
Total Commercial Groundfish Catch
For Vessels Local to Kodiak
All Gear Types, 1995-2002

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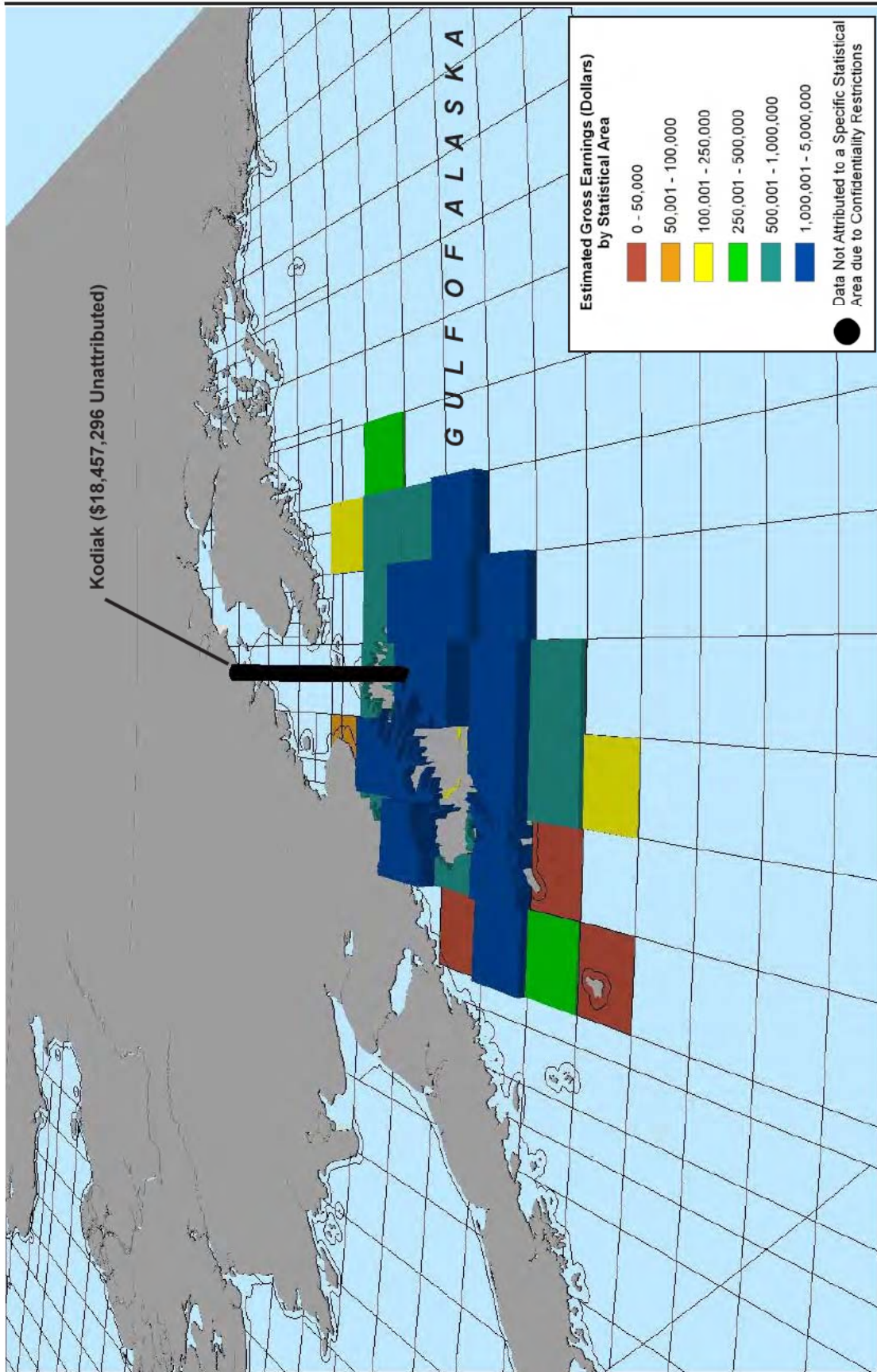


Figure KOD-2
Commercial Groundfish Catch
For Vessels Local to Kodiak
All Gear Types, 1995-1996

Source: Northern Economics, Alaska Department of Fish and Game, ESRI

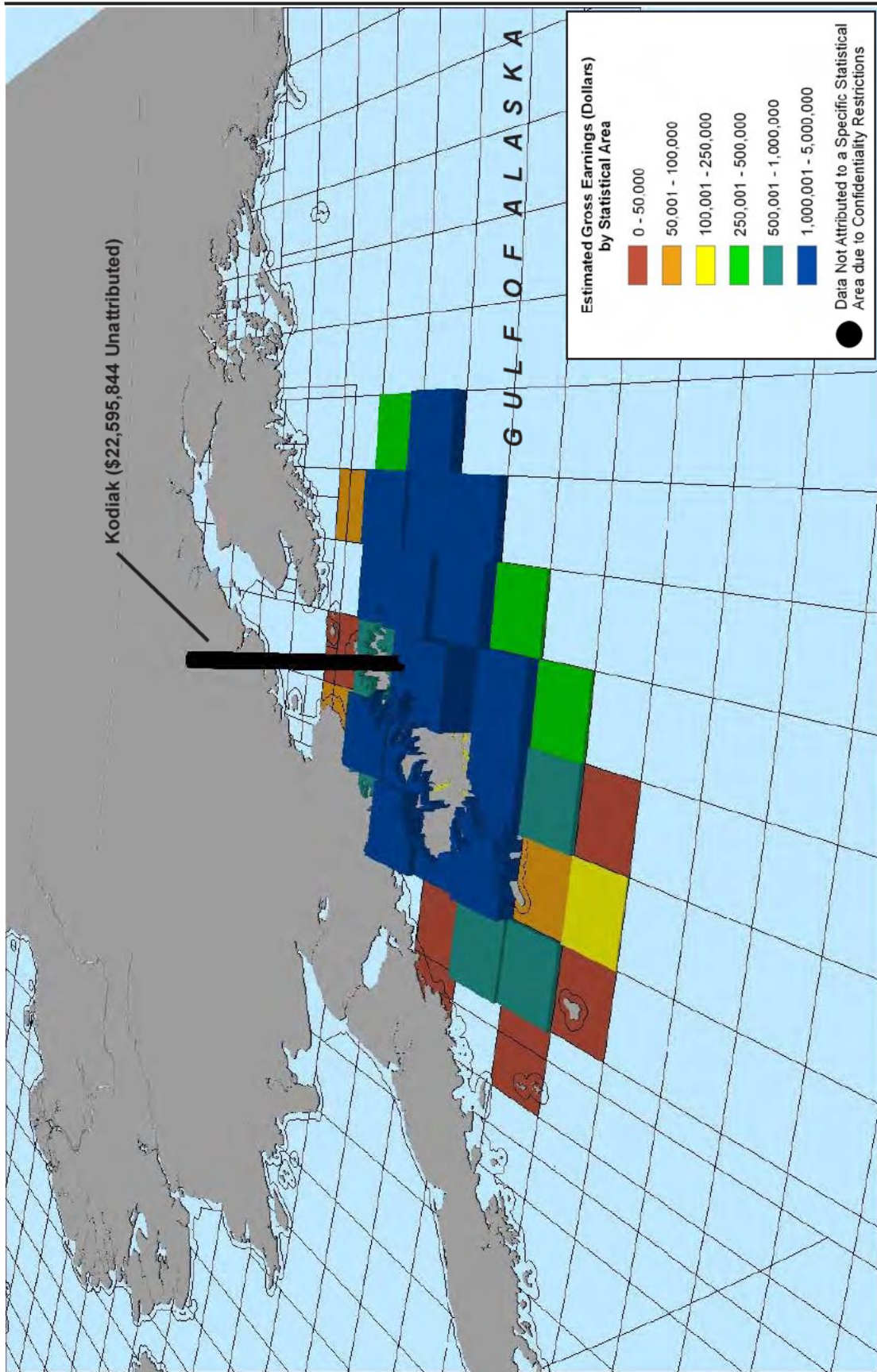
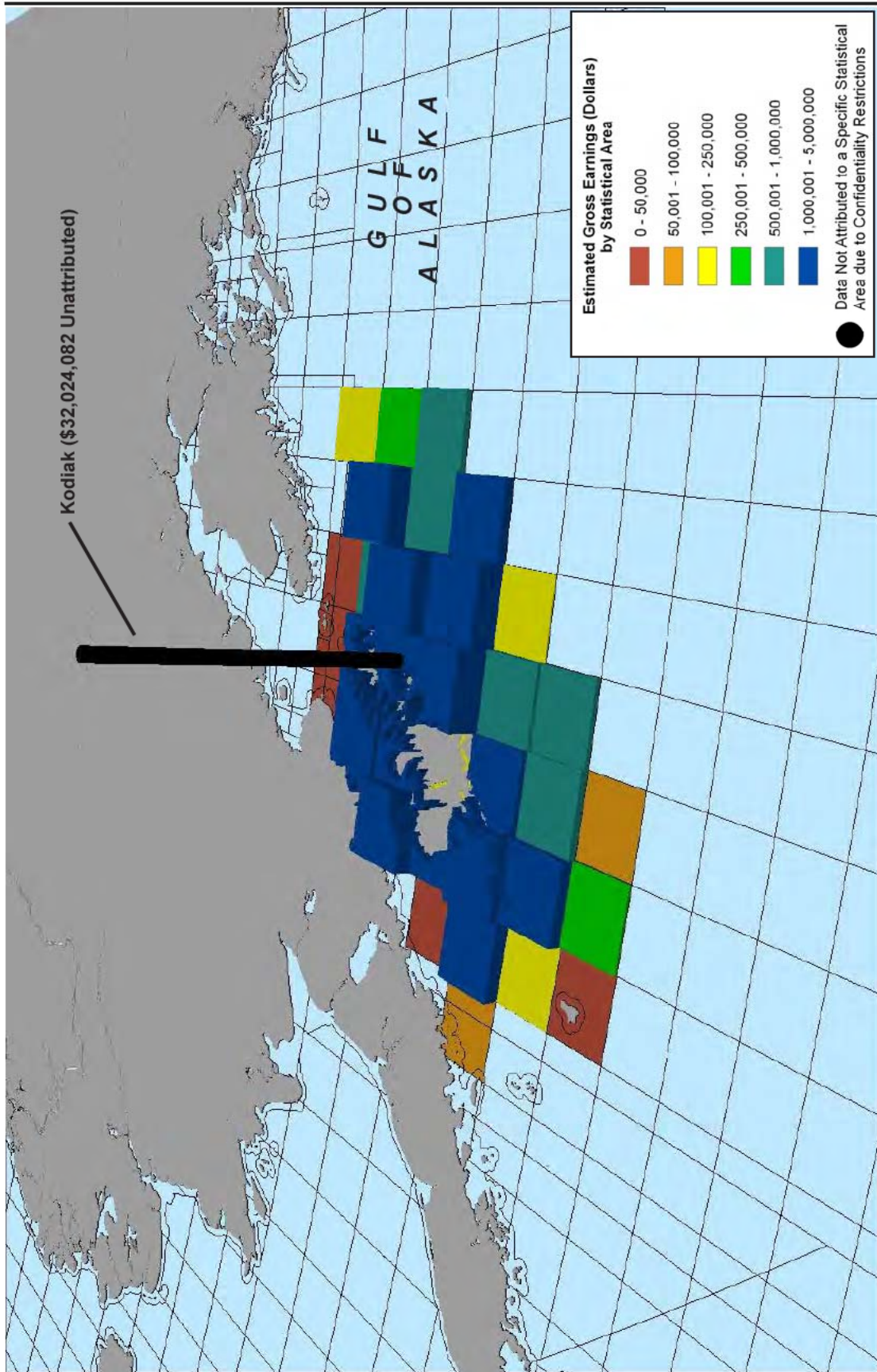


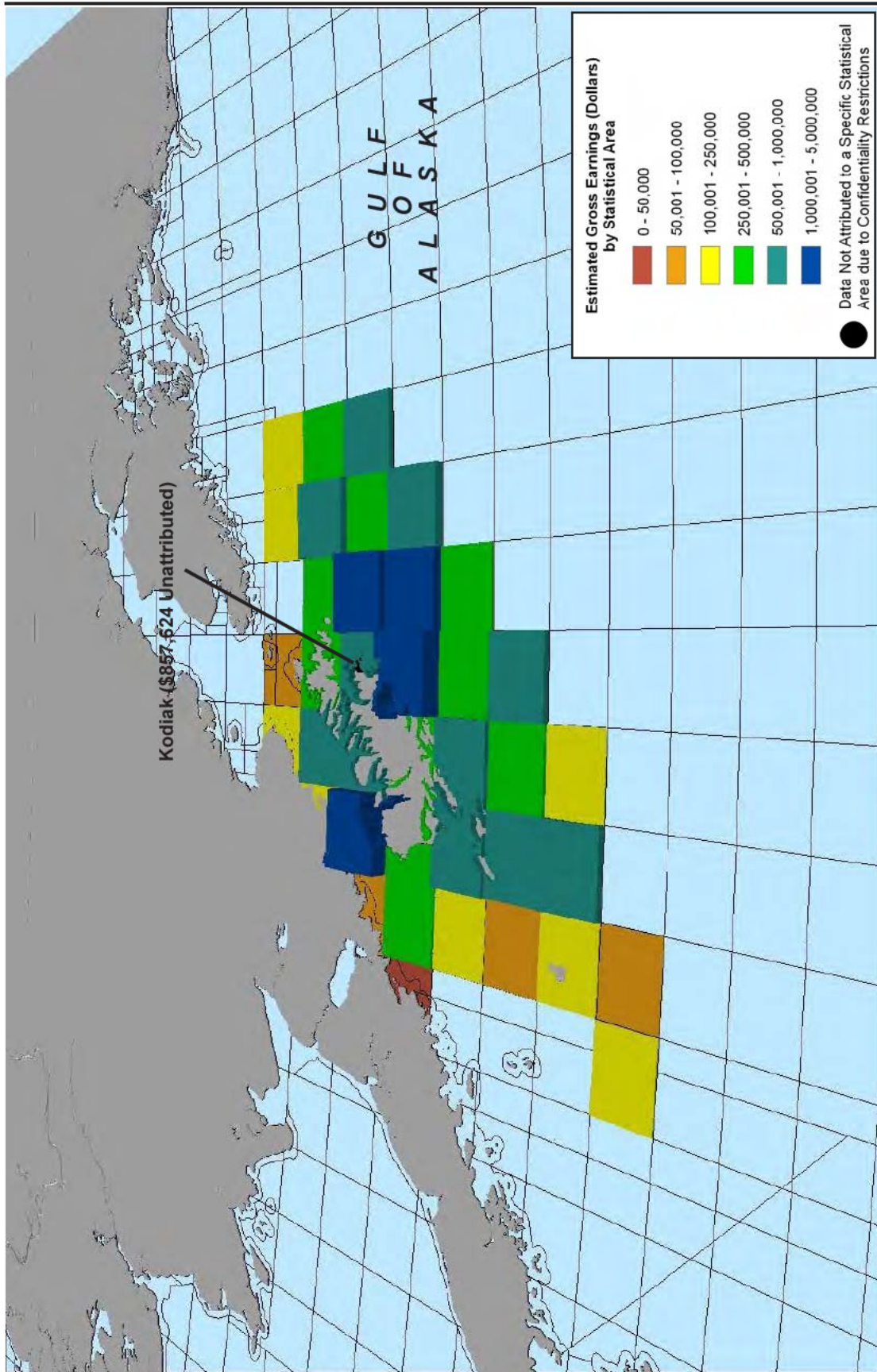
Figure KOD-3
Commercial Groundfish Catch
For Vessels Local to Kodiak
All Gear Types, 1997-1998

Source: Northern Economics, Alaska Department of Fish and Game, ESRI



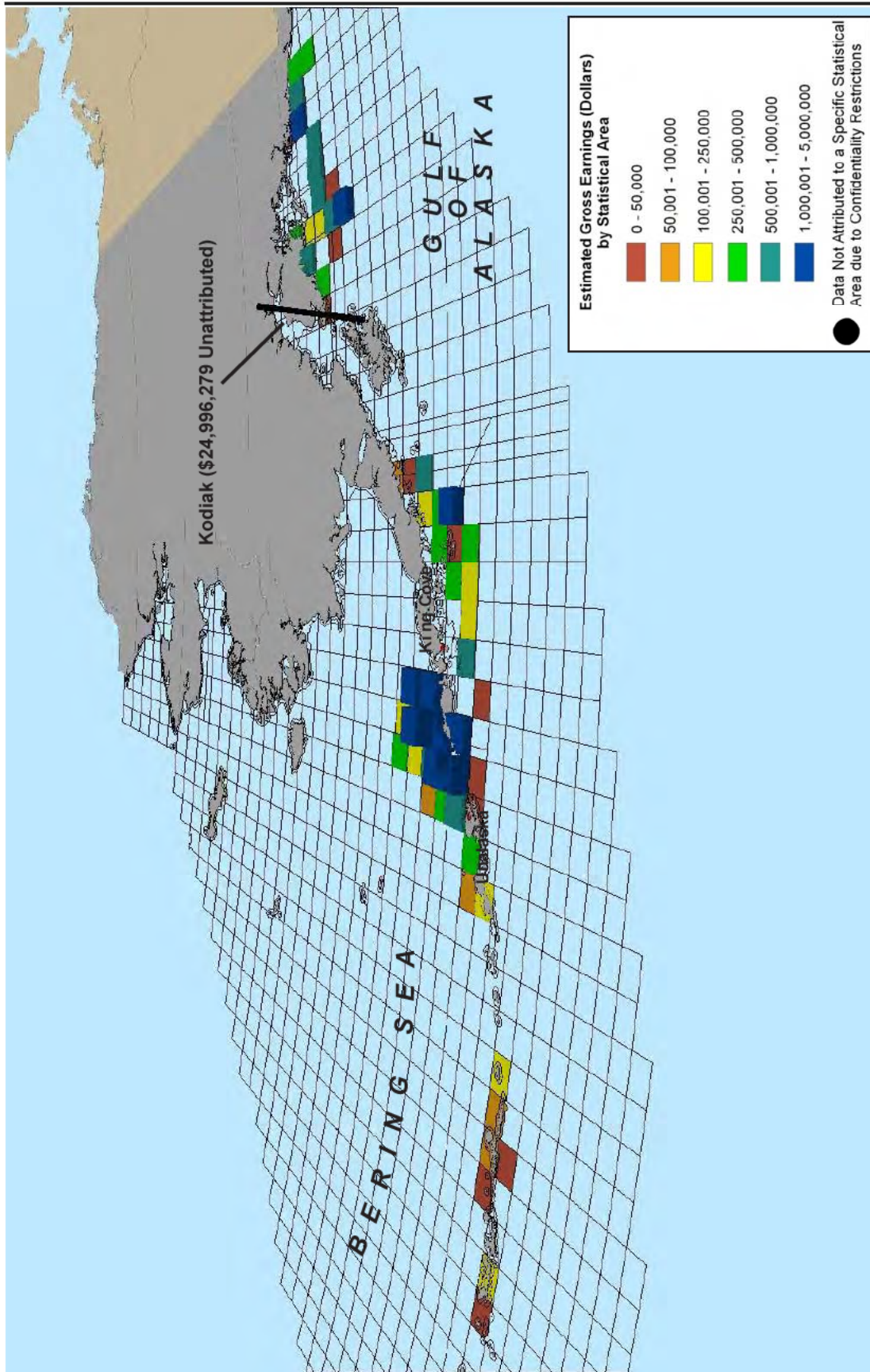
Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KOD-4
Commercial Groundfish Catch
For Vessels Local to Kodiak
All Gear Types, 1999-2000



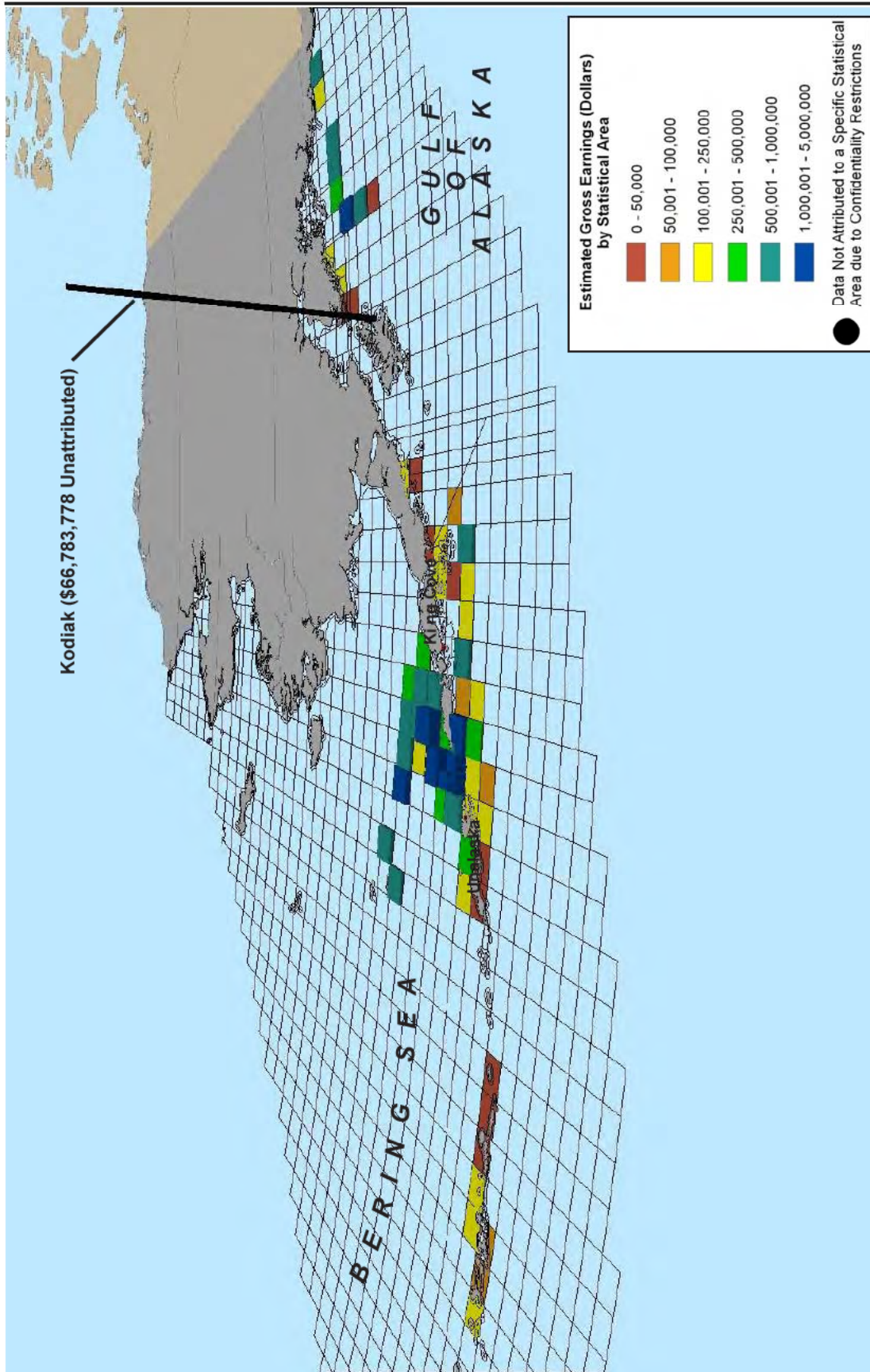
Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KOD-5
Commercial Groundfish Catch
For Vessels Local to Kodiak
All Gear Types, 2001-2002



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KOD-6
Commercial Groundfish Catch
For Vessels Local to Kodiak
All Gear Types, 1995-1998



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KOD-7
Commercial Groundfish Catch
For Vessels Local to Kodiak
All Gear Types, 1999-2002

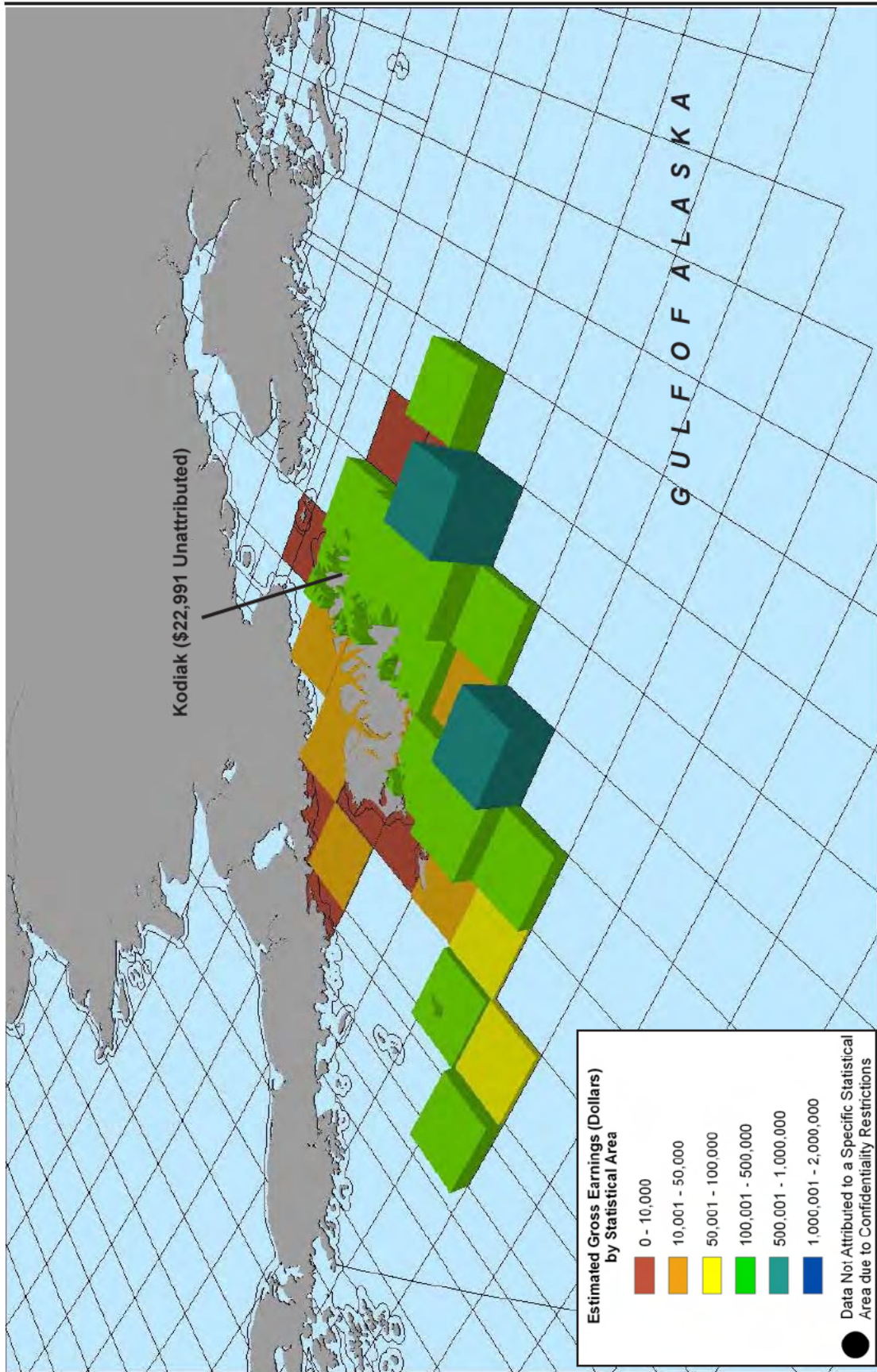


Figure KOD-8
Commercial Groundfish Catch
For Vessels Local to Kodiak
Longline Gear Only, 2001-2002

Source: Northern Economics, Alaska Department of Fish and Game, ESRI

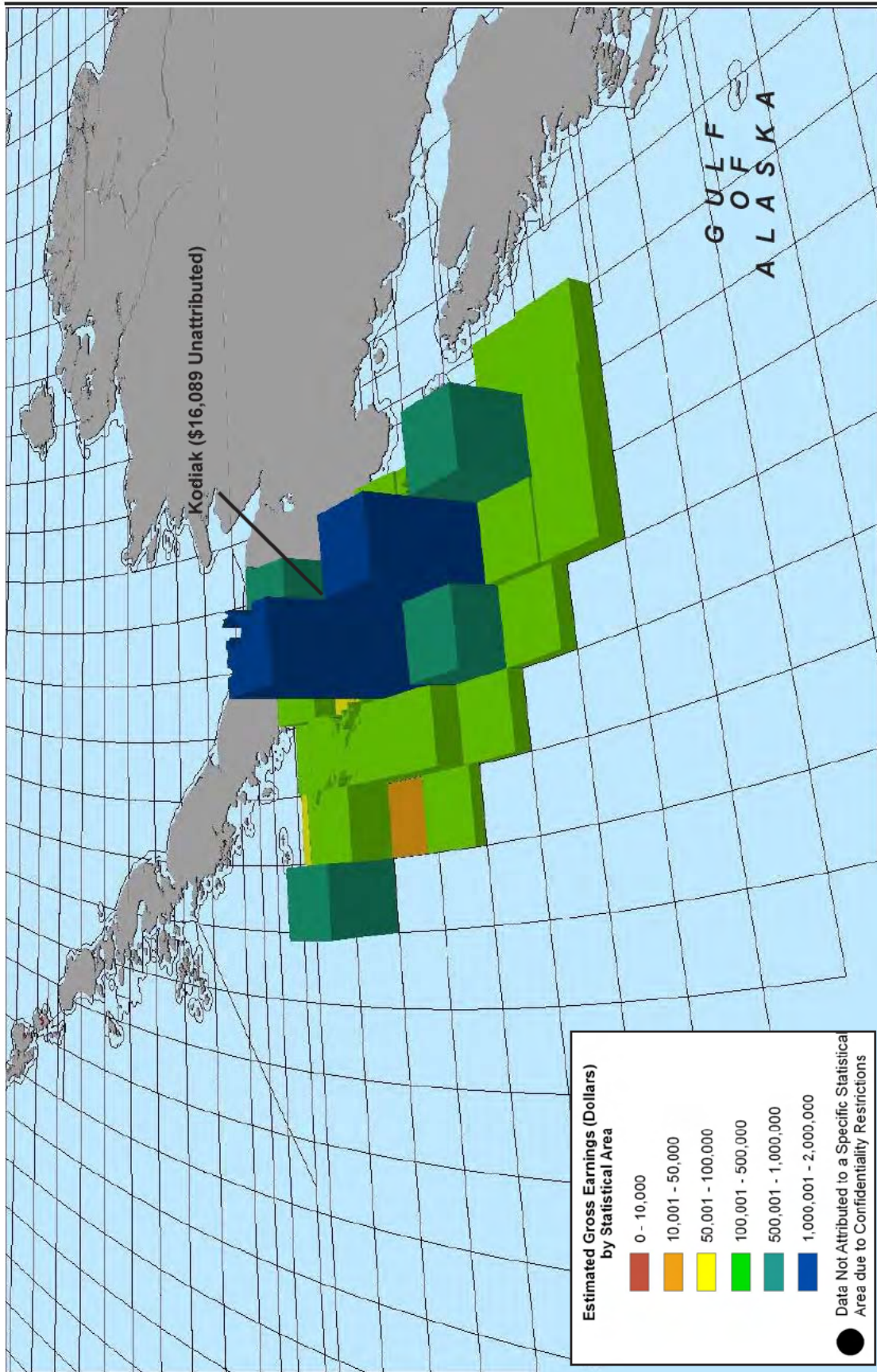
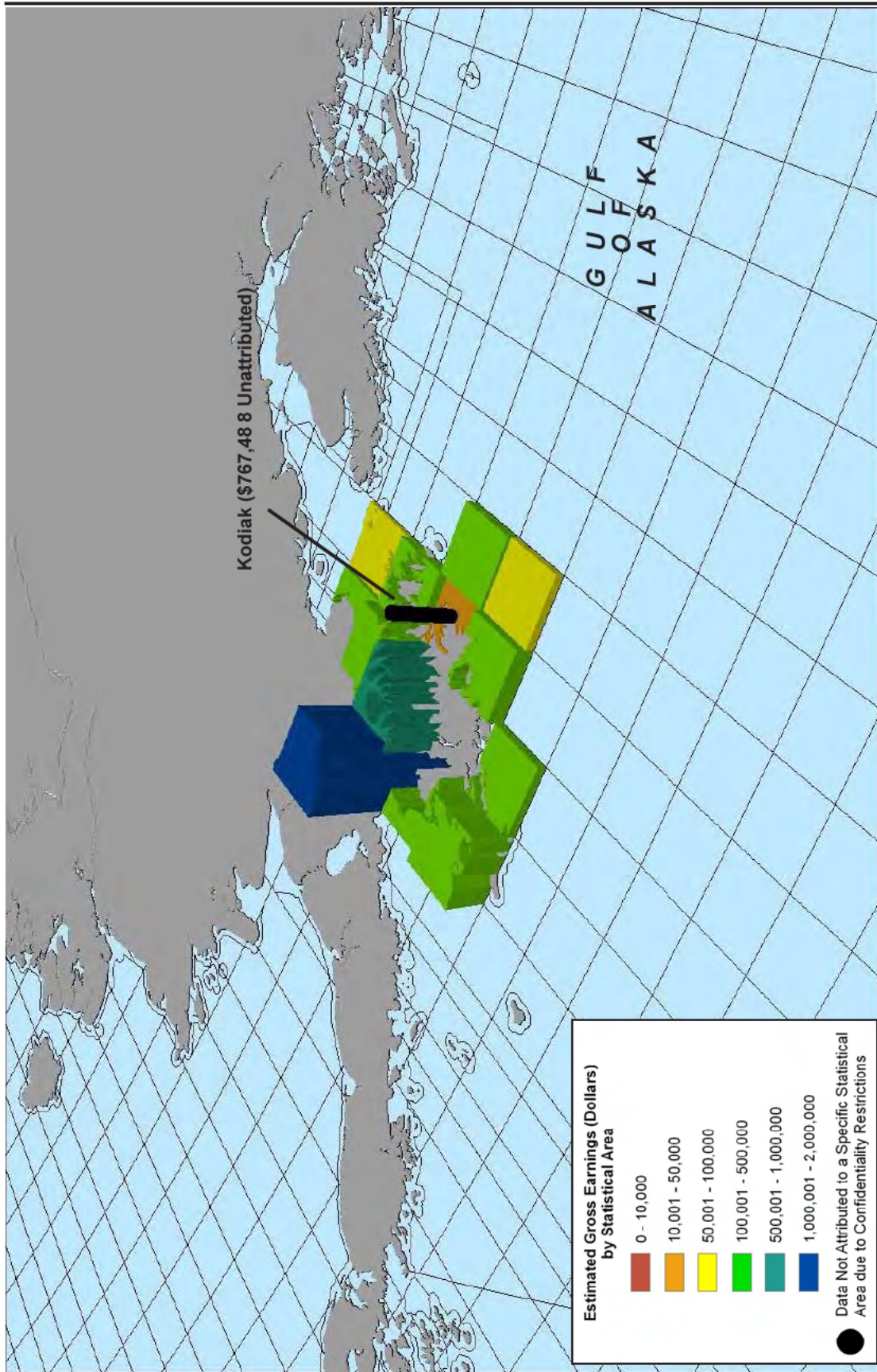
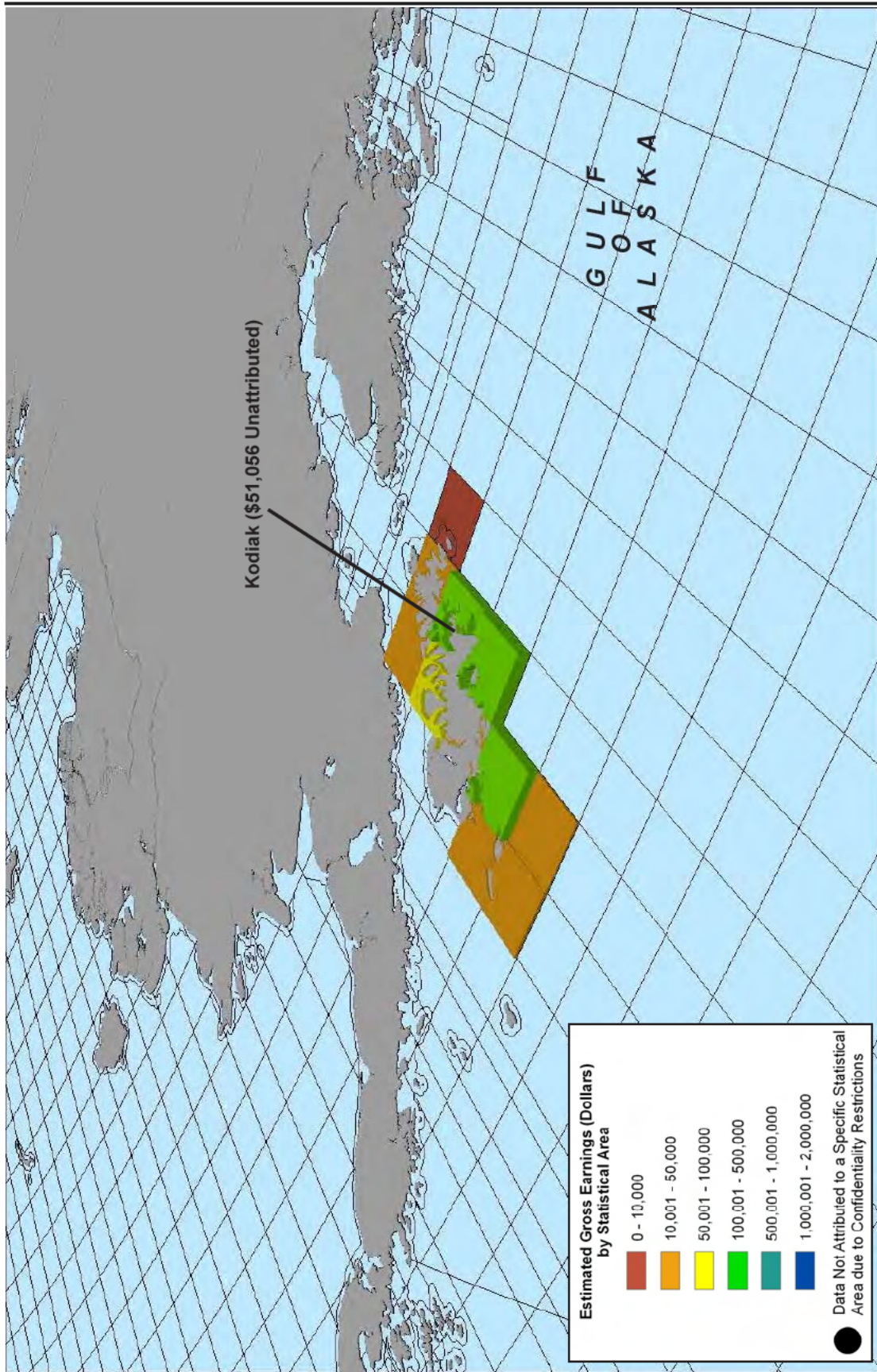


Figure KOD-9
Commercial Groundfish Catch
For Vessels to Local to Kodiak
Trawl Gear Only, 2001-2002



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KOD-10
Commercial Groundfish Catch
For Vessels Local to Kodiak
Pot Gear Only, 2001-2002



Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KOD-11
Commercial Groundfish Catch
For Vessels Local to Kodiak
All Other Gear, 2001-2002

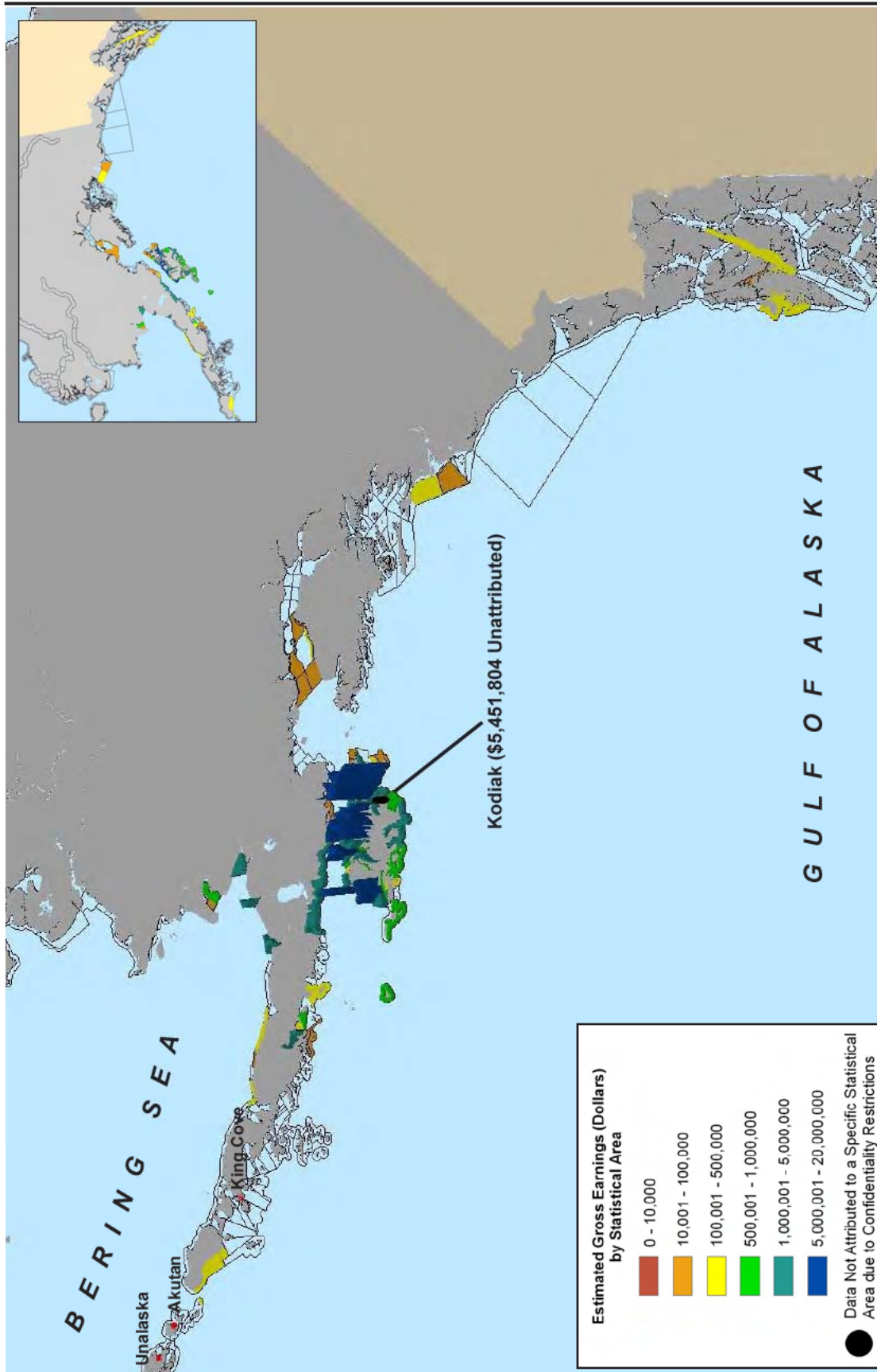
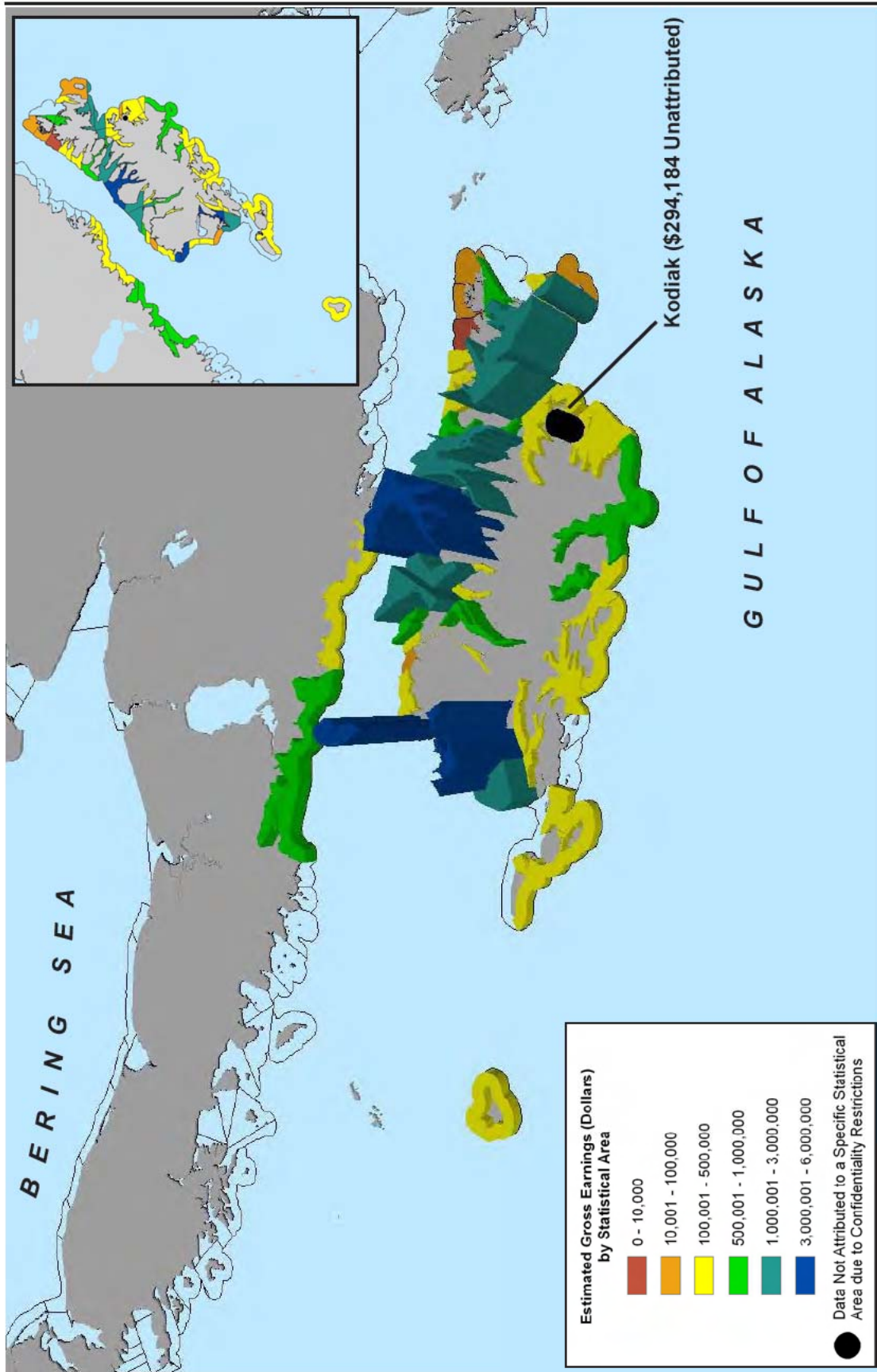


Figure KOD-12
Total Commercial Salmon Catch
For Vessels Local to Kodiak
All Gear Types, 1995-2002

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Source: Northern Economics, Alaska Department of Fish and Game, ESRI

Figure KOD-13
Commercial Salmon Catch
For Vessels Local to Kodiak
All Gear Types, 1995-1996

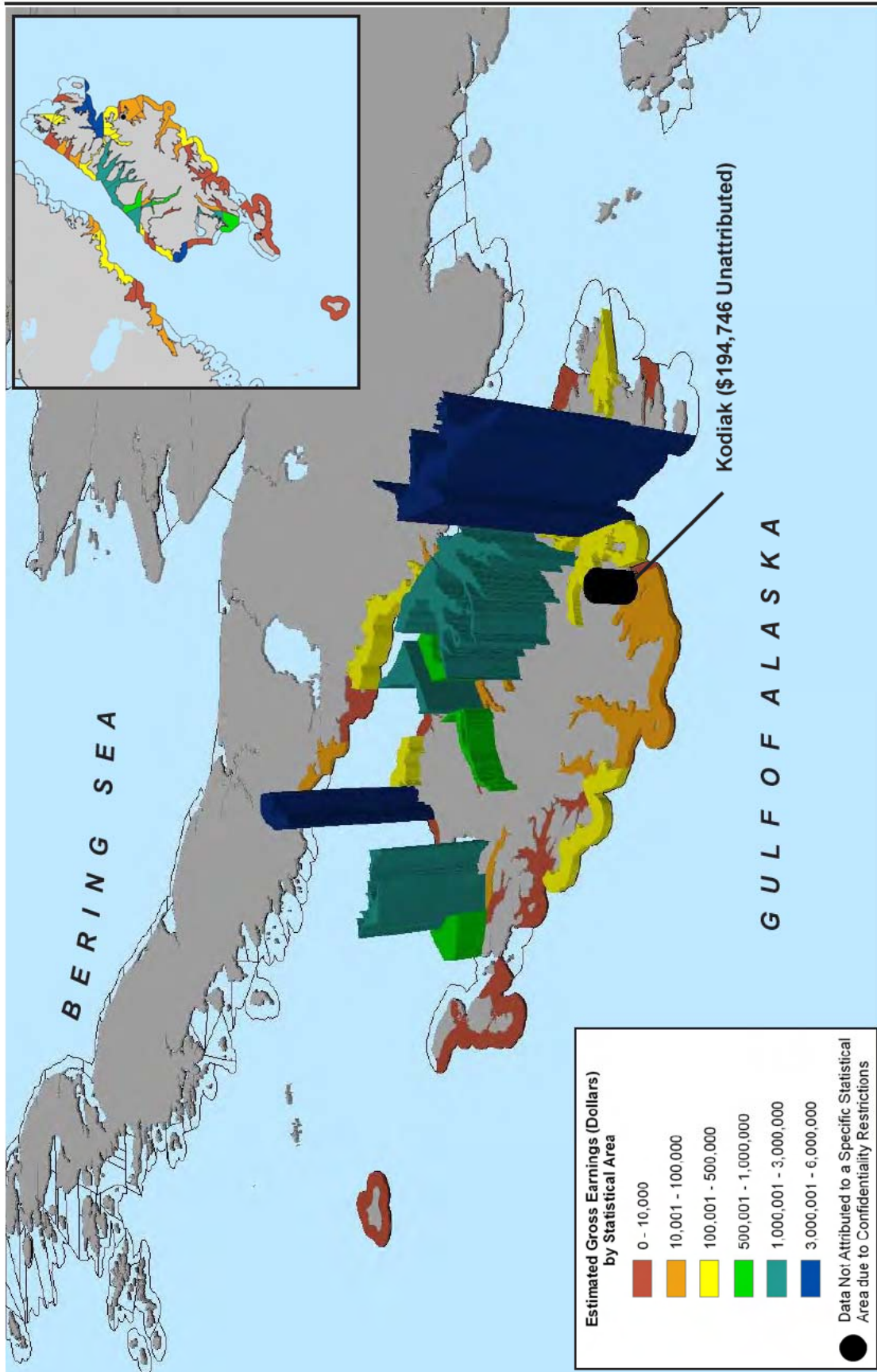


Figure KOD-14
Commercial Salmon Catch
For Vessels Local to Kodiak
All Gear Types, 1997-1998

Source: Northern Economics, Alaska Department of Fish and Game, ESRI

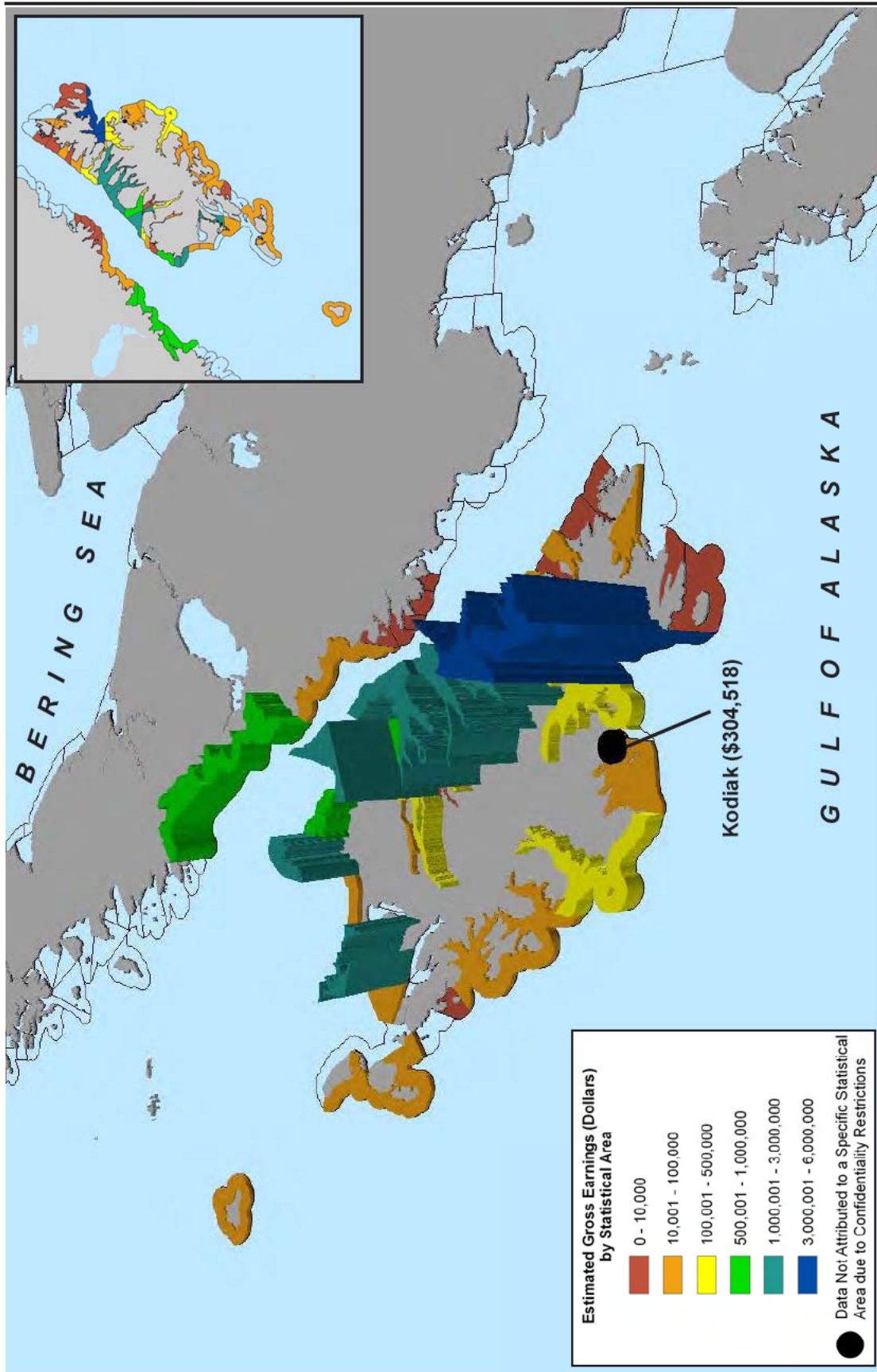


Figure KOD-15
Commercial Salmon Catch
For Vessels Local to Kodiak
All Gear Types, 1999-2000

Source: Northern Economics, Alaska Department of Fish and Game, ESRI

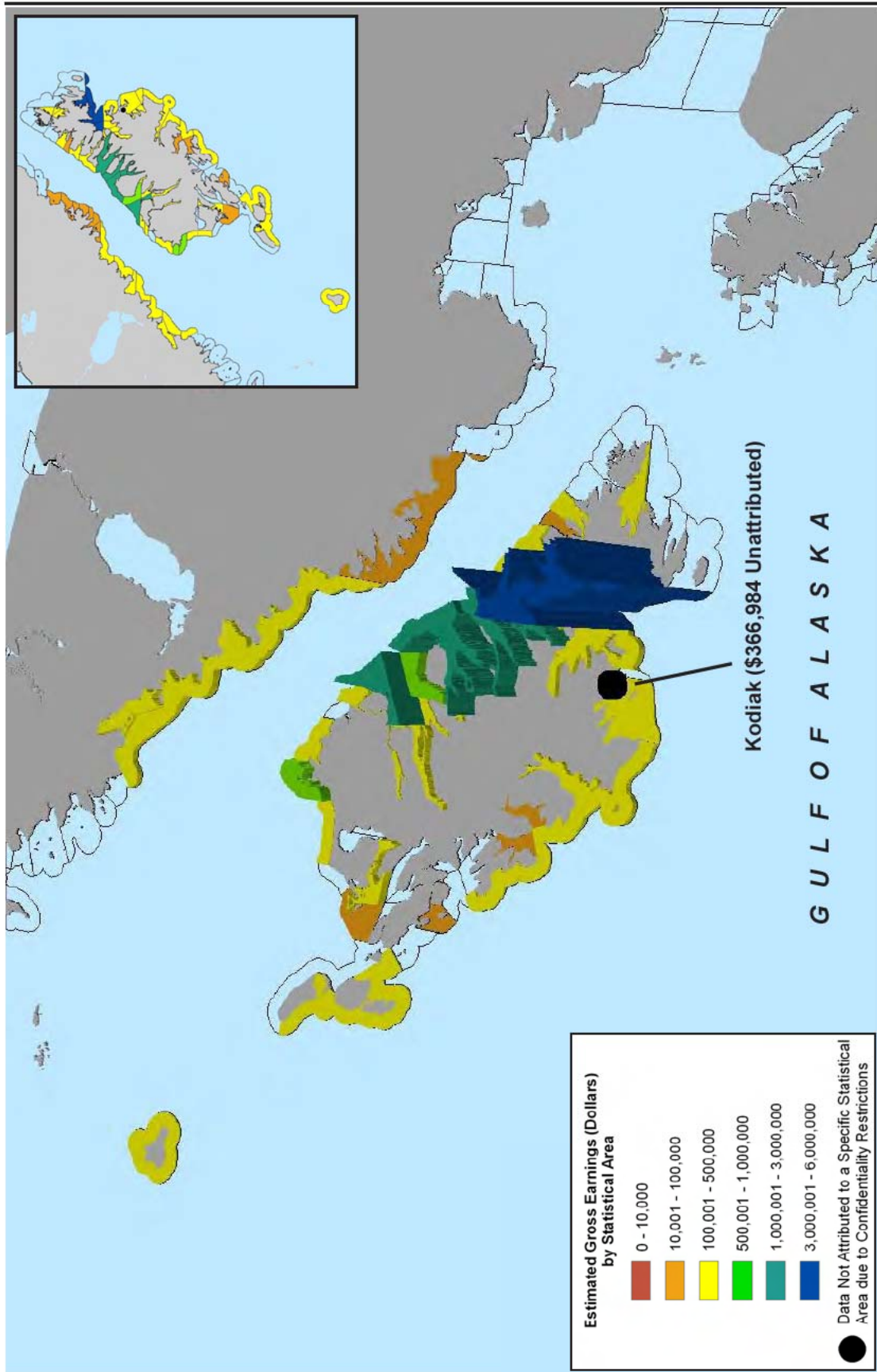


Figure KOD-16
Commercial Salmon Catch
For Vessels Local to Kodiak
All Gear Types, 2001-2002

Source: Northern Economics, Alaska Department of Fish and Game, ESRI

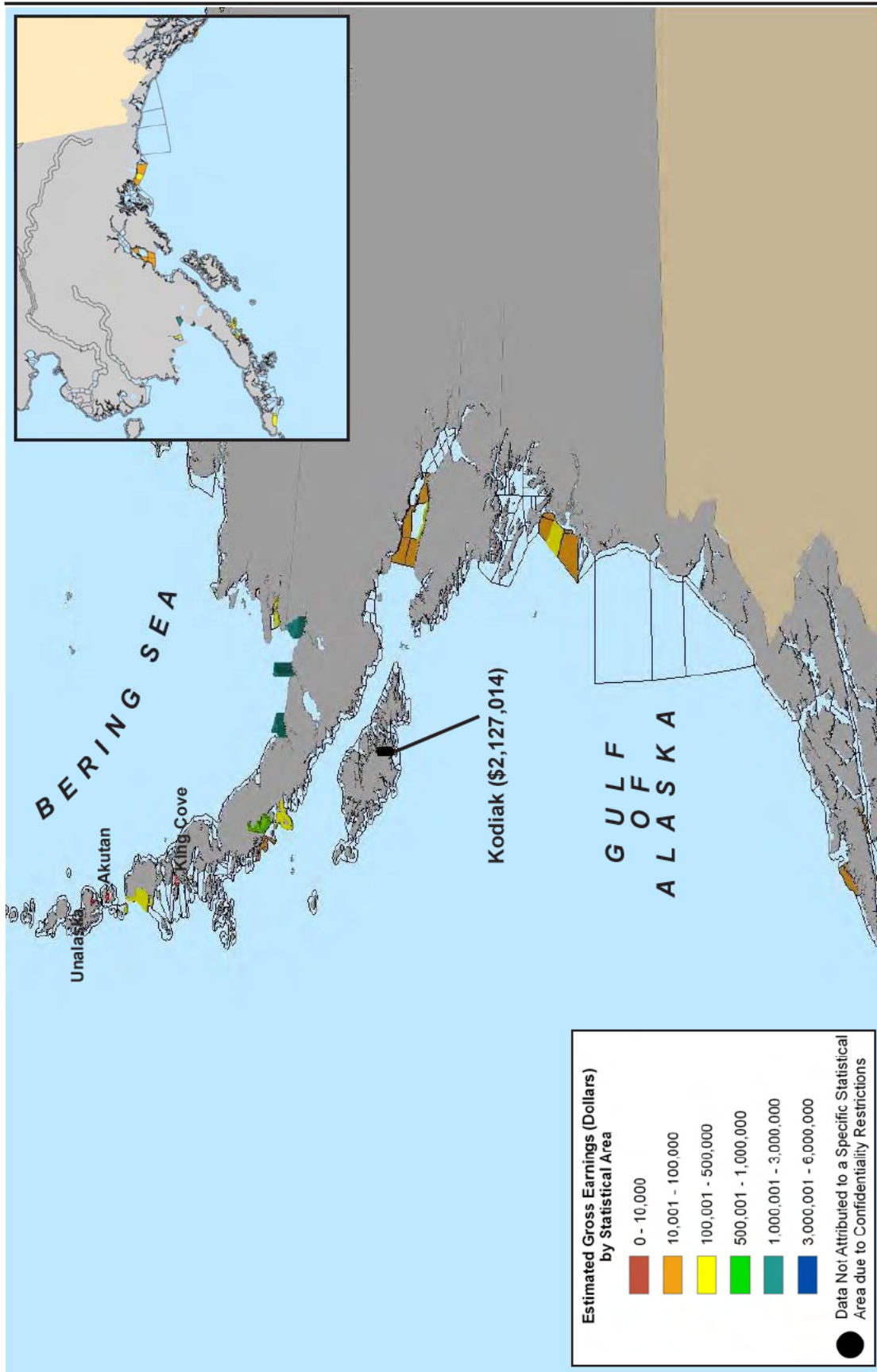


Figure KOD-17
Commercial Salmon Catch
For Vessels Local to Kodiak
All Gear Types, 1995-1998

Source: Northern Economics, Alaska Department of Fish and Game, ESRI

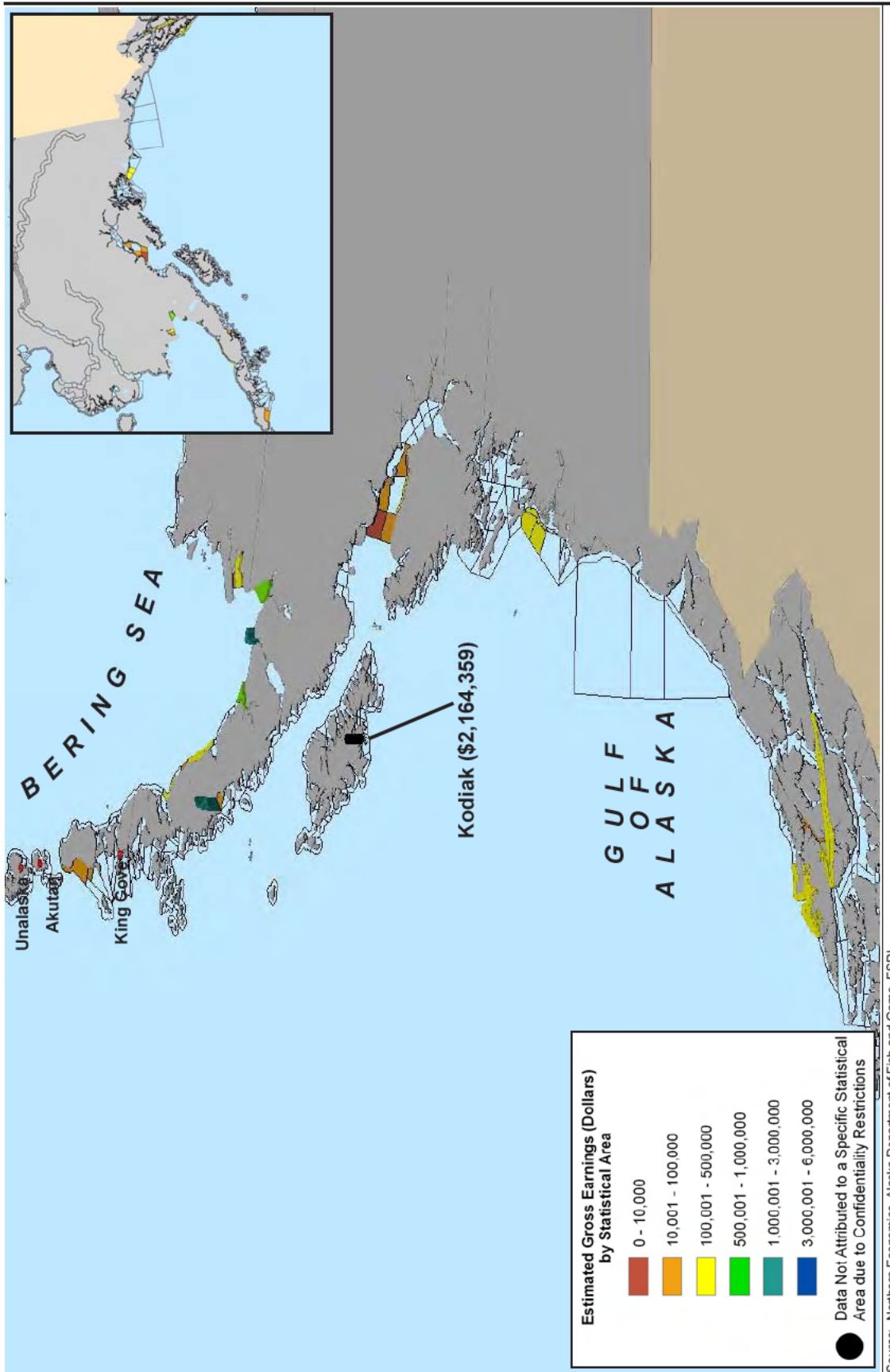


Figure KOD-18
Commercial Salmon Catch
For Vessels Local to Kodiak
All Gear Types, 1999-2002

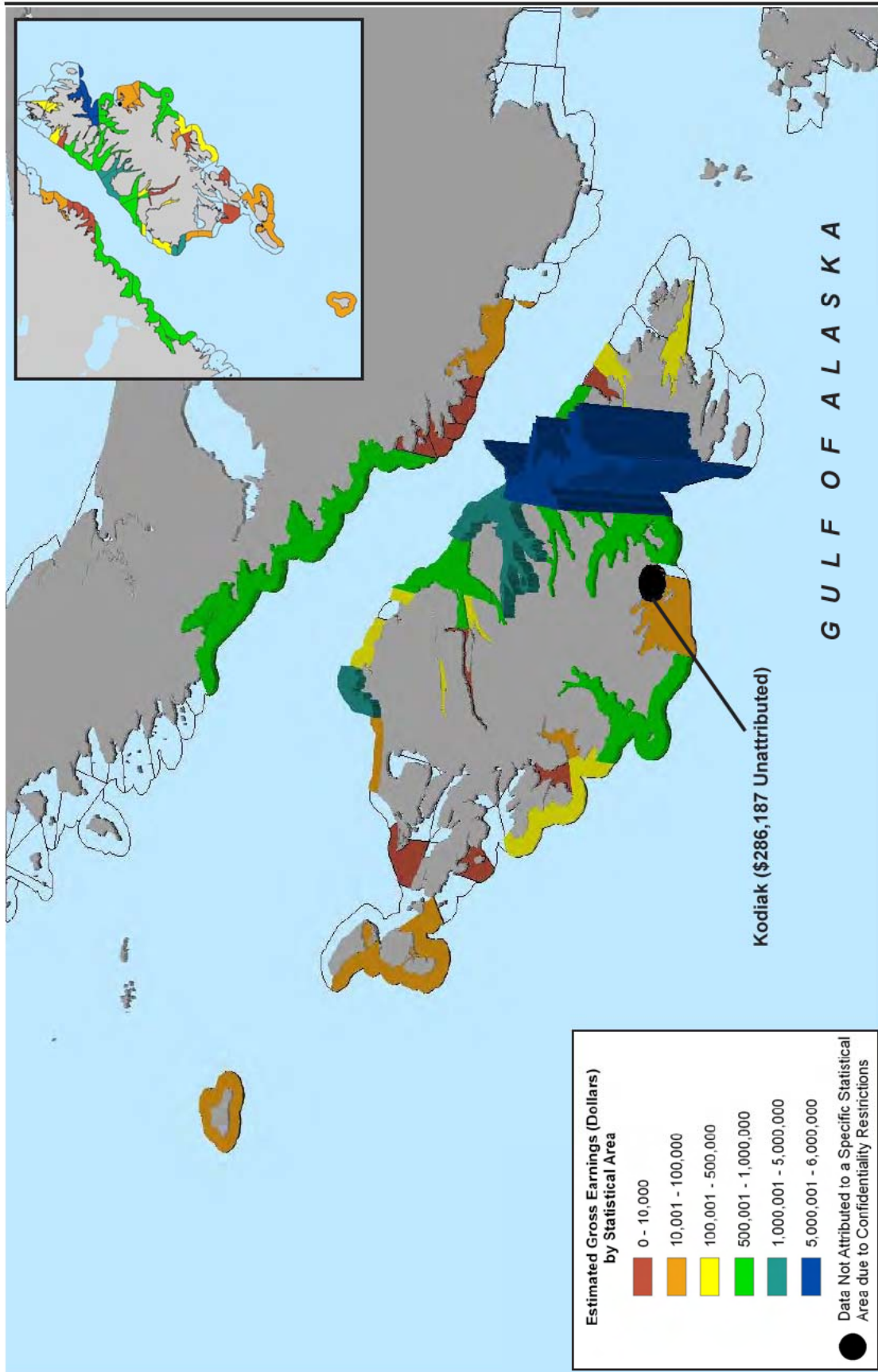


Figure KOD-19
Commercial Salmon Catch
For Vessels Local to Kodiak
Using Seine Only, 2001-2002

Source: Northern Economics, Alaska Department of Fish and Game, ESRI

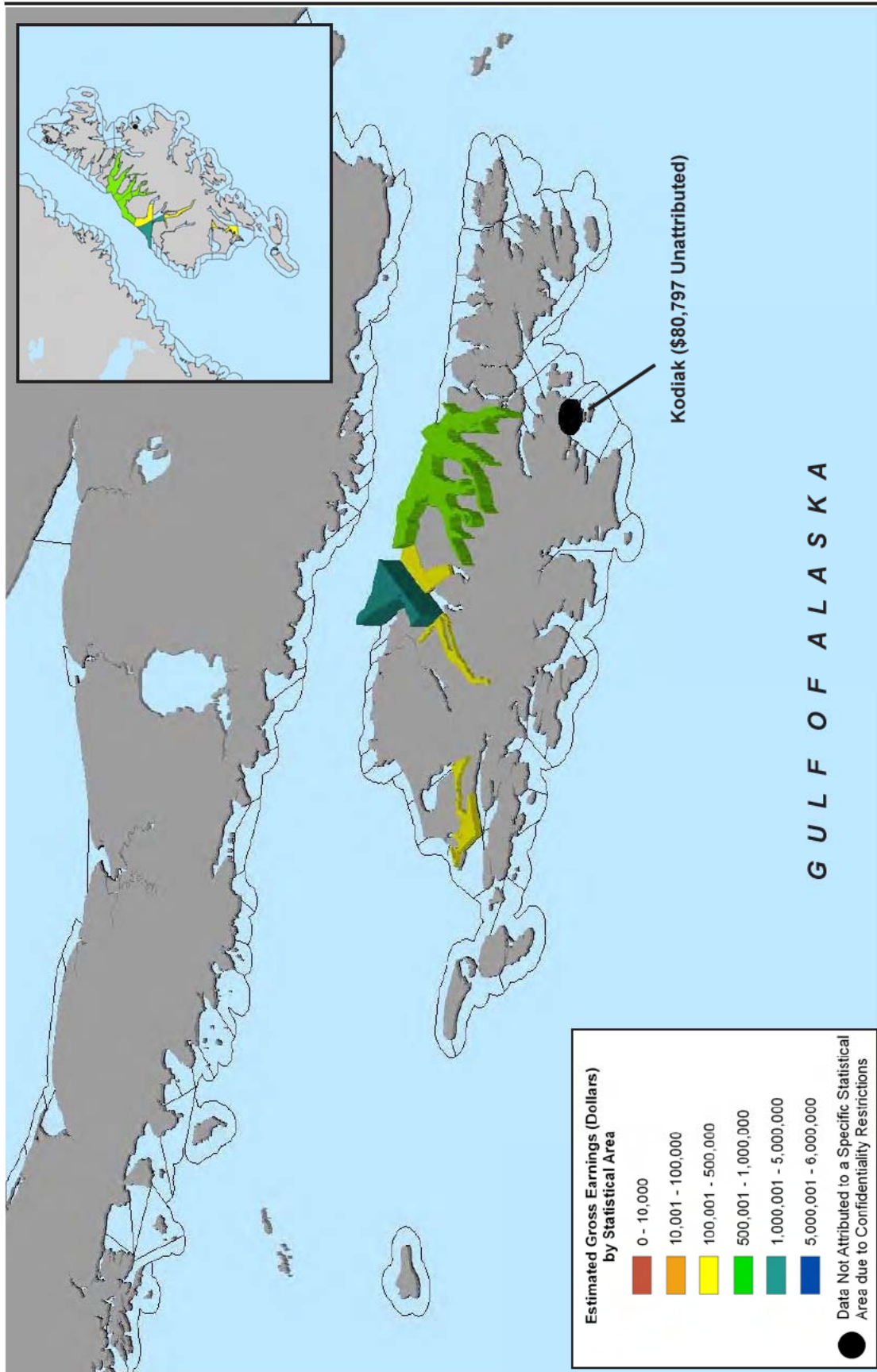


Figure KOD-20
Commercial Salmon Catch
For Vessels Local to Kodiak
Using Set Net Only, 2001-2002

Source: Northern Economics, Alaska Department of Fish and Game, ESRI

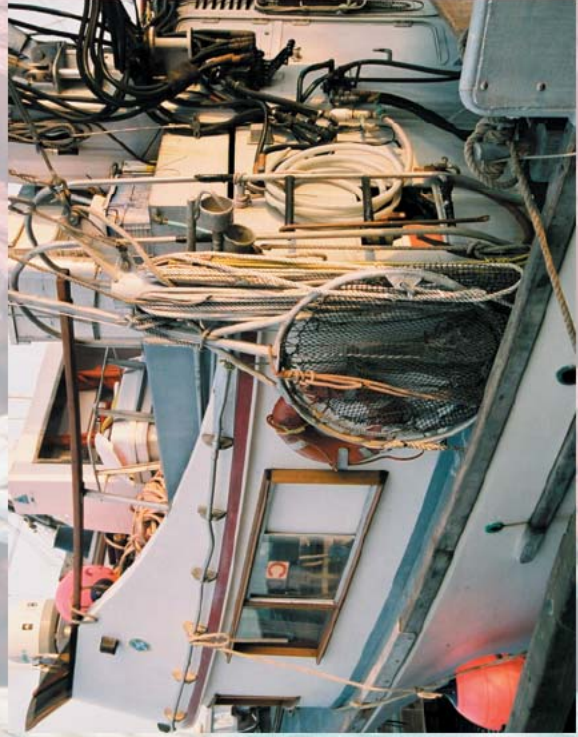
KOD-5a

Harvest Sector

Skiff and local fleet



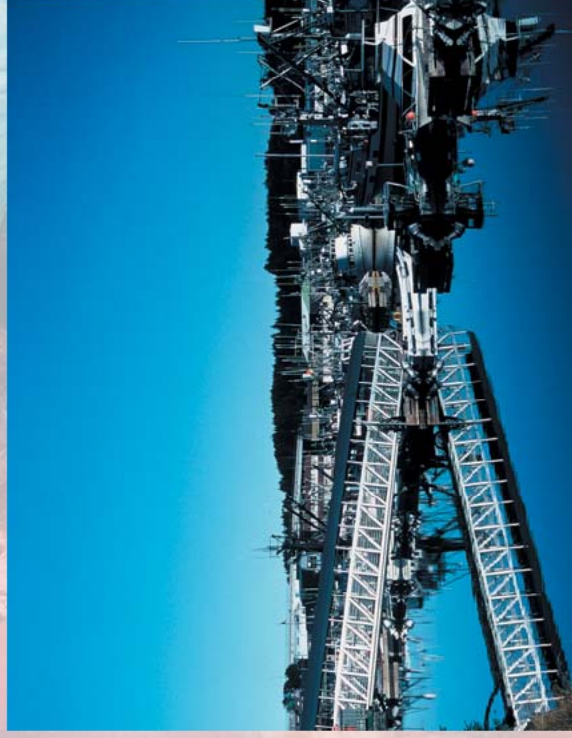
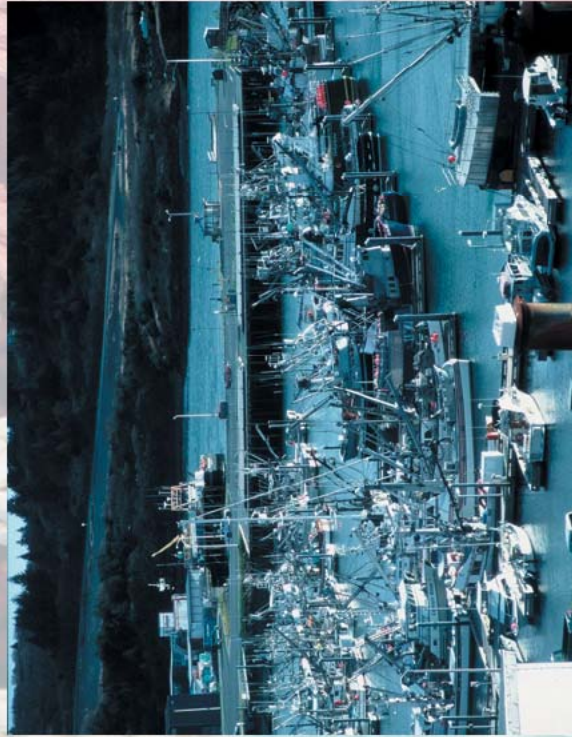
KOD-5b
Harvest Sector
Local fleet



KOD-5c

Harvest Sector

Local fleet in St. Paul and
St. Herman harbors



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(usually those less than 70 feet in length) will make a conversion as soon as tanner season is closed, but the bigger Kodiak trawlers, those in the 80- to 120-foot range, will usually leave their trawl gear on and not make any conversions, unless they are going tendering for salmon or herring. There have been a number of recent changes in conversion patterns, however, and this has resulted in changes in flexibility as the nature of some of the fisheries has changed. For example, in the not-too-distant past, vessels could trawl the better part of the year, so a number of them sold their pots and abandoned the fixed gear fishery. Also, according to local sources, the Kodiak area tanner quota has been so small in recent years that the bigger boats “can’t justify going out,” effectively limiting their flexibility.

5.3.3 Processing

Community Processor Quantitative Description

As Kodiak is known for its numerous and diverse harvest fleet, so it is known for its relatively numerous and diverse processing operations. The following two tables provide information on processors operating in Kodiak during the period 1995 through 2002. Table 5-31 provides a count of active shore processors by year based on the number of processors that submitted fish tickets indicating that delivery was made in the community. As shown, the number of processors has varied substantially over the years, and there has been a decrease in processors every year from 1999 (14 processors) to 2002 (9 processors).

Table 5-31. Number of Active Processors in Kodiak, 1995-2002

1995	1996	1997	1998	1999	2000	2001	2002	Unique Count over All Years
16	11	11	10	14	12	11	9	25

Source: CFEC Fish Ticket Data Summaries, provided to Northern Economics, Inc. by request from CFEC Data Analysis Section, September 2004.

Table 5-32 summarizes Commercial Operators Annual Report (COAR) processing data by year for the period 1995 through 2002 by major species of pounds purchased by processors in the community, along with the ex-vessel and wholesale value associated with those purchases. This information may be used to gauge community processing sector relative engagement in and dependency on particular fisheries.

Table 5-32. Processing Summary for Kodiak, 1995-2002

Species	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Number of Processors								
cod, Pacific (gray)	9	8	8	8	9	8	9	8
crab, Tanner, bairdi	4	4	-	-	-	-	7	6
halibut, Pacific	9	9	8	8	9	9	8	8
herring, Pacific	-	-	-	-	-	-	5	4
king crab, all species	3	3	3	2	3	4	4	3
other species	8	8	9	8	9	8	9	8
pollock, walleye	7	6	7	7	8	7	7	8
sablefish (blackcod)	8	7	8	7	9	8	9	7
salmon, chinook	8	7	7	7	7	8	7	4
salmon, chum	8	6	7	7	6	9	7	6
salmon, coho	9	7	9	8	8	7	8	6
salmon, pink	8	6	6	7	7	8	8	6
salmon, sockeye	9	6	8	8	7	8	7	6
Pounds Purchased								
cod, Pacific (gray)	68,129,346	51,080,490	71,598,150	69,263,677	70,138,954	54,231,296	51,203,091	98,904,875
crab, Tanner, bairdi	585,623	249,375	-	-	-	-	498,643	351,093
halibut, Pacific	6,654,246	7,006,166	11,197,084	8,669,689	7,862,369	7,322,267	9,010,522	7,560,330
herring, Pacific	-	-	-	-	-	-	2,862,296	2,288,620
king crab, all species	x	x	x	x	x	827,338	771,877	x
other species	22,505,272	40,011,363	43,342,284	28,183,268	20,800,524	39,042,325	29,646,987	36,457,641
pollock, walleye	65,305,896	46,025,886	82,516,830	150,583,793	103,502,755	91,123,303	82,260,711	57,259,237
sablefish (blackcod)	2,129,032	2,177,141	2,383,029	2,279,034	1,728,583	1,864,610	2,035,059	1,671,338
salmon, chinook	200,686	137,103	123,933	163,632	168,018	138,091	249,837	166,966
salmon, chum	8,800,734	2,611,002	2,512,812	1,452,516	4,905,283	6,746,460	6,239,652	3,611,517
salmon, coho	1,986,062	1,146,164	2,049,449	2,321,648	1,423,125	1,896,523	2,202,907	3,114,165
salmon, pink	89,875,105	8,082,137	23,604,840	48,734,902	22,897,501	20,323,014	41,115,700	57,693,880
salmon, sockeye	15,380,370	18,823,574	8,496,767	10,135,761	16,341,054	11,450,849	12,007,090	7,452,904
Ex-Vessel Value								
cod, Pacific (gray)	15,312,473	10,507,302	15,875,982	13,102,923	22,232,848	19,883,491	15,455,340	29,542,404
crab, Tanner, bairdi	1,963,217	736,976	-	-	-	-	1,149,878	772,834
halibut, Pacific	12,940,813	15,446,459	23,229,638	10,244,928	16,934,031	17,821,573	17,175,548	16,790,831
herring, Pacific	-	-	-	-	-	-	774,623	529,089
king crab, all species	x	x	x	x	x	4,135,370	3,893,226	x
other species	7,206,165	9,842,199	7,847,483	4,976,424	3,867,519	8,118,845	4,476,738	4,929,973
pollock, walleye	6,610,822	4,356,101	8,503,685	11,335,416	10,461,445	12,641,605	11,005,488	6,203,733
sablefish (blackcod)	6,648,447	6,631,551	8,254,639	5,239,998	4,979,160	6,065,177	6,021,514	4,925,115
salmon, chinook	141,280	87,428	68,561	106,320	107,718	85,984	176,513	56,640
salmon, chum	2,346,533	398,289	468,015	271,746	907,243	1,517,393	2,075,953	594,894
salmon, coho	821,263	499,869	1,175,891	848,961	591,985	957,020	531,003	514,615
salmon, pink	15,144,276	629,021	3,741,351	7,331,075	3,246,064	2,889,977	5,061,348	5,142,074
salmon, sockeye	15,725,860	16,768,160	8,130,838	11,063,614	17,416,566	10,163,470	8,304,434	4,485,340

Species	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Wholesale Value								
cod, Pacific (gray)	36,482,263	29,532,134	33,569,845	30,112,413	44,543,117	32,390,211	30,077,297	30,733,856
crab, Tanner, bairdi	2,654,974	704,546	x	-	-	-	1,604,992	1,089,537
halibut, Pacific	14,082,933	19,811,110	28,571,526	16,429,779	21,944,763	20,041,830	21,658,436	20,906,215
herring, Pacific	-	x	x	-	x	x	1,853,842	1,404,470
king crab, all species	x	x	x	x	4,203,092	4,584,558	4,362,466	x
other species	24,767,659	28,047,928	23,114,831	17,821,898	13,993,704	22,521,273	17,958,508	19,388,585
pollock, walleye	21,193,841	44,915,196	19,036,443	32,513,896	28,868,885	33,277,884	31,246,185	17,841,809
sablefish (blackcod)	8,451,648	8,787,962	9,869,647	7,430,453	6,921,380	7,697,693	6,957,882	6,539,977
salmon, chinook	169,691	98,704	47,668	602,319	90,648	89,939	152,989	102,031
salmon, chum	3,871,280	1,016,370	1,339,597	975,360	2,024,464	2,408,669	3,093,145	1,180,161
salmon, coho	1,412,418	1,288,713	2,448,857	1,653,618	1,512,387	2,030,759	1,533,696	1,867,624
salmon, pink	37,716,641	7,812,875	17,154,020	25,841,598	13,059,527	14,150,608	16,472,466	15,215,713
salmon, sockeye	23,593,184	32,843,673	14,898,587	21,198,689	26,963,553	19,430,349	16,143,874	11,740,836

Source: ADFG Commercial Operator Annual Report Summary, provided to Northern Economics, Inc. in September 2004 by ADFG.
Note: An "x" indicates the data are confidential and cannot be released.

Table 5-33 displays processor non-confidential value added by fishery as calculated by subtracting ex-vessel value from wholesale value for Kodiak for the years 1995 through 2002, with percentage of total non-confidential value contribution by each species or species group.⁶ This information shows the relative dependency of community-based processing operations on particular species on a year-to-year basis. As shown, for most years Pacific cod, pollock, pink salmon, and sockeye salmon are typically the species with a greater than 10 percent of total value contribution. Pollock was most often the leading species, followed by Pacific cod and pink salmon.

Table 5-33. Processing Value Added and Processor Percentage Dependency for Kodiak, 1995-2002

Species	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Total Value Added								
cod, Pacific (gray)	21,169,790	19,024,832	17,693,863	17,009,490	22,310,269	12,506,720	14,621,957	1,191,452
crab, Tanner, bairdi	691,757	-32,430	-	-	-	-	455,114	316,703
halibut, Pacific	1,142,120	4,364,651	5,341,888	6,184,851	5,010,732	2,220,257	4,482,888	4,115,384
herring, Pacific	-	-	-	-	-	-	1,079,219	875,381
king crab, all species	x	x	x	x	x	449,188	469,240	x
other species	17,561,494	18,205,729	15,267,348	12,845,474	10,126,185	14,402,428	13,481,770	14,458,612
pollock, walleye	14,583,019	40,559,095	10,532,758	21,178,480	18,407,440	20,636,279	20,240,697	11,638,076
sablefish (blackcod)	1,803,201	2,156,411	1,615,008	2,190,455	1,942,220	1,632,516	936,368	1,614,862

⁶ This is a rough measure as processor costs, and differential costs by species, of adding value is unknown.

Species	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
salmon, chinook	28,411	11,276	-20,893	495,999	-17,070	3,955	-23,524	45,391
salmon, chum	1,524,747	618,081	871,582	703,614	1,117,221	891,276	1,017,192	585,267
salmon, coho	591,155	788,844	1,272,966	804,657	920,402	1,073,739	1,002,693	1,353,009
salmon, pink	22,572,365	7,183,854	13,412,669	18,510,523	9,813,463	11,260,631	11,411,118	10,073,639
salmon, sockeye	7,867,324	16,075,513	6,767,749	10,135,075	9,546,987	9,266,879	7,839,440	7,255,496
All Species	89,535,383	108,955,856	72,754,938	90,058,618	79,177,849	74,343,868	77,014,172	53,523,272
Percentage of Value Added								
cod, Pacific (gray)	23.6	17.5	24.3	18.9	28.2	16.8	19.0	2.2
crab, Tanner, bairdi	0.8	-0.0	-	-	-	-	0.6	0.6
halibut, Pacific	1.3	4.0	7.3	6.9	6.3	3.0	5.8	7.7
herring, Pacific	-	-	-	-	-	-	1.4	1.6
king crab, all species	x	x	X	x	x	0.6	0.6	x
other species	19.6	16.7	21.0	14.3	12.8	19.4	17.5	27.0
pollock, walleye	16.3	37.2	14.5	23.5	23.2	27.8	26.3	21.7
sablefish (blackcod)	2.0	2.0	2.2	2.4	2.5	2.2	1.2	3.0
salmon, chinook	0.0	0.0	-0.0	0.6	-0.0	0.0	-0.0	0.1
salmon, chum	1.7	0.6	1.2	0.8	1.4	1.2	1.3	1.1
salmon, coho	0.7	0.7	1.7	0.9	1.2	1.4	1.3	2.5
salmon, pink	25.2	6.6	18.4	20.6	12.4	15.1	14.8	18.8
salmon, sockeye	8.8	14.8	9.3	11.3	12.1	12.5	10.2	13.6
All Species	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: ADFG Commercial Operator Annual Report Summary, provided to Northern Economics, Inc. in September 2004 by ADFG.

Note: "Value added" is calculated by subtracting Total Ex-Vessel Value from Total Wholesale Value.

Shaded cells indicate the species that generated the highest value added in the year.

Negative value added indicates that a significant proportion of the amount purchased was custom processed outside the community.

An "x" indicates the data are confidential and cannot be released.

The following set of four tables present information derived from a different data source on the volume and value of the species processed in Kodiak by year for the period 1991 through 2000. The percentage tables display the percentage that each fishery processing category represented for the annual processing total for Kodiak (a form of community processing dependency). With the exception of salmon, which is processed at several different locations within the KIB, nearly all of this activity takes place within the city of Kodiak at shore-based facilities. Table 5-34 and Table 5-35 present volume and percent of volume of processing by species by year for Kodiak for 1991 through 2000. As shown, there is a considerable amount of variation in the absolute and relative volume of individual species processed over this time period.

Table 5-36 and Table 5-37 present the same type of information as in the previous two tables, but in terms of value by species for these same years rather than by volume. The patterns are similar to those of the volume tables but highlight the differences between high volume/low price and low volume/high price species.

Table 5-34. Volume of Fish Processed by Kodiak Processors, by Fishery Category and Year, 1991-2000

Fishery Category	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Crab	6,761,362	6,240,894	5,111,807	2,863,187	1,832,762	1,675,086	1,164,703	1,148,092	1,288,000	2,504,667	30,590,560
Salmon	65,513,180	37,442,748	105,954,109	42,512,087	150,212,021	38,480,944	47,096,755	85,197,066	63,135,227	60,137,591	695,681,728
Halibut	11,175,975	12,407,385	9,886,361	8,959,621	7,345,008	7,396,190	10,673,472	8,429,823	8,293,055	see note	84,610,079
Sablefish	7,823,907	6,770,493	6,869,437	6,157,425	3,664,241	4,739,317	3,798,064	3,572,350	3,085,327	3,251,821	49,732,382
Pollock	95,709,636	128,392,182	155,353,624	163,440,241	65,393,556	45,996,042	83,777,225	164,935,760	129,788,161	106,386,467	1,139,172,894
Pacific Cod	62,211,905	51,844,171	48,156,199	37,220,362	69,992,708	51,710,124	72,633,509	71,460,162	83,670,937	64,051,179	612,951,256
Other Groundfish	16,426,409	20,983,205	20,878,900	13,955,709	18,685,450	34,459,702	36,860,158	30,833,747	26,063,592	47,225,737	266,372,609
Other Fisheries	8,229,555	7,592,926	9,046,307	6,235,468	5,203,241	6,146,351	5,763,016	2,946,939	2,473,634	2,303,039	55,940,476
Non-Commercial	846,854	1,910,625	92,767	7,300,946	631,058	2,629,333	926,659	601,108	3,197,287	7,031,956	25,168,593
Total	274,698,783	273,584,629	361,349,511	288,645,046	322,960,045	193,233,089	262,693,561	369,125,047	320,995,220	292,935,646	2,960,220,577

Notes: Halibut numbers are not available for 2000.

Most numbers are likely to be underestimates and should be used as indicators rather than exact measures. See text.

Source: Summarized from the NPFMC Bering Sea Crab Data Base / 2001_1.

Table 5-35. Percentage of Total Volume of Fish Processed by Kodiak Processors, by Fishery Category and Year, 1991-2000

Fishery Category	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Crab	2.4%	2.3%	1.5%	1.0%	0.6%	0.9%	0.5%	0.3%	0.4%	0.9%	1.0%
Salmon	23.8%	13.7%	29.3%	14.7%	46.5%	19.9%	17.9%	23.1%	19.7%	20.5%	23.5%
Halibut	4.1%	4.5%	2.7%	3.1%	2.3%	3.8%	4.1%	2.3%	2.6%	see note	2.9%
Sablefish	2.8%	2.5%	1.9%	2.1%	1.1%	2.5%	1.4%	1.0%	1.0%	1.1%	1.7%
Pollock	34.8%	46.9%	43.0%	56.6%	20.2%	23.8%	31.9%	44.7%	40.4%	36.3%	38.5%
Pacific Cod	22.6%	18.9%	13.3%	12.9%	21.7%	26.8%	27.6%	19.4%	26.1%	21.9%	20.7%
Other Groundfish	6.0%	7.7%	5.8%	4.8%	5.8%	17.8%	14.0%	8.4%	8.1%	16.1%	9.0%
Other Fisheries	3.0%	2.8%	2.5%	2.2%	1.6%	3.2%	2.2%	0.8%	0.8%	0.8%	1.9%
Non-Commercial	0.3%	0.7%	0.0%	2.5%	0.2%	1.4%	0.4%	0.2%	1.0%	2.4%	0.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: Halibut numbers are not available for 2000.

Most numbers are likely to be underestimates and should be used as indicators rather than exact measures. See text.

Source: Summarized from the NPFMC Bering Sea Crab Data Base / 2001_1.

Table 5-36. Value of Fish Processed by Kodiak Processors, by Fishery Category and Year, 1991-2000

Fishery Category	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Crab	\$9,743,587	\$11,300,117	\$8,840,233	\$7,149,258	\$4,124,565	\$3,463,420	\$2,775,965	\$1,704,518	\$4,414,024	\$7,026,046	\$60,541,733
Salmon	\$28,490,759	\$33,891,223	\$30,919,937	\$19,837,476	\$41,353,791	\$21,319,667	\$16,552,661	\$26,327,348	\$28,587,045	\$18,477,815	\$265,757,722
Halibut	\$22,182,856	\$11,319,145	\$11,705,472	\$16,874,425	\$14,228,126	\$16,144,982	\$22,115,588	\$10,254,626	\$17,374,280	see note	\$142,200,425
Sablefish	\$7,421,681	\$7,828,995	\$6,781,326	\$8,679,003	\$7,233,079	\$9,316,328	\$8,305,717	\$5,282,670	\$5,521,587	\$6,550,433	\$72,920,819
Pollock	\$8,327,265	\$14,772,329	\$11,501,119	\$12,570,228	\$6,574,980	\$4,369,377	\$8,625,740	\$11,190,433	\$12,311,467	\$11,798,065	\$102,041,003
Pacific Cod	\$15,597,588	\$11,423,941	\$8,626,740	\$6,328,672	\$14,786,604	\$10,450,046	\$15,838,914	\$13,186,623	\$24,651,247	\$22,687,612	\$143,577,987
Other Groundfish	\$2,095,784	\$3,094,779	\$3,013,060	\$1,971,551	\$2,855,387	\$4,942,174	\$4,716,379	\$3,193,349	\$2,383,764	\$4,603,873	\$32,870,100
Other Fisheries	\$3,309,612	\$2,072,771	\$2,703,123	\$2,034,232	\$2,972,409	\$4,880,542	\$1,262,864	\$829,988	\$827,202	\$788,980	\$21,681,723
Non-Commercial	\$210,141	\$427,741	\$158,208	\$1,484,242	\$399,986	\$544,197	\$182,897	\$697,593	\$876,674	\$1,360,770	\$6,342,449
Total	\$97,379,273	\$96,131,041	\$84,249,218	\$76,929,087	\$94,528,927	\$75,430,733	\$80,376,725	\$72,667,148	\$96,947,290	\$73,294,519	\$847,933,961

Notes: Halibut numbers are not available for 2000.

Most numbers are likely to be underestimates and should be used as indicators rather than exact measures. See text.

Table includes ALL processors in the named community, whether they processed relevant BSAI crab species or not.

Source: Summarized from the NPFMC Bering Sea Crab Data Base / 2001_1.

Table 5-37. Percentage of Total Value of Fish Processed by Kodiak Processors, by Fishery Category and Year, 1991-2000

Fishery Category	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Crab	10.0%	11.8%	10.5%	9.2%	4.3%	4.6%	3.4%	2.3%	4.6%	9.6%	7.2%
Salmon	29.3%	35.3%	36.7%	25.8%	43.7%	28.3%	20.6%	36.2%	29.5%	25.2%	31.3%
Halibut	22.8%	11.8%	13.9%	21.9%	15.1%	21.4%	27.5%	14.1%	17.9%	see note	16.8%
Sablefish	7.6%	8.1%	8.0%	11.3%	7.7%	12.4%	10.3%	7.3%	5.7%	8.9%	8.6%
Pollock	8.6%	15.4%	13.7%	16.3%	7.0%	5.8%	10.7%	15.4%	12.7%	16.1%	12.0%
Pacific Cod	16.0%	11.9%	10.2%	8.2%	15.6%	13.9%	19.7%	18.1%	25.4%	31.0%	16.9%
Other Groundfish	2.2%	3.2%	3.6%	2.6%	3.0%	6.6%	5.9%	4.4%	2.5%	6.3%	3.9%
Other Fisheries	3.4%	2.2%	3.2%	2.6%	3.1%	6.5%	1.6%	1.1%	0.9%	1.1%	2.6%
Non-Commercial	0.2%	0.4%	0.2%	1.9%	0.4%	0.7%	0.2%	1.0%	0.9%	1.9%	0.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: Halibut numbers are not available for 2000.

Most numbers are likely to be underestimates and should be used as indicators rather than exact measures. See text.

Table includes ALL processors in the named community, whether they processed relevant BSAI crab species or not.

Source: Summarized from the NPFMC Bering Sea Crab Data Base / 2001_1.

Community Processor Characterization

Kodiak's shoreplants have played a significant role in the history of community, influencing its economic and demographic patterns over the years. The contemporary processing plants maintain a considerable amount of diversity in the size, volume, and species processed. It is this diversification that best characterizes Kodiak's ability to weather the ebbs and flows of an industry dependent upon changes in the viability of the resource being harvested, the market itself, and past/future regulatory shifts. Locally based processors vary in product output and specialization, ranging from large quantity canning of salmon, processed at several different locations within Kodiak, to fresh and fresh-frozen products, as well as niche markets servicing the sports-fishing industry. Images of local processing operations may be found in Plate KOD-6a, Plate KOD-6b, and Plate KOD-6c.

Table 5-38 provides summary average annual employment figures for Kodiak plants for the period 1999 through 2002. As noted in the subsequent individual operation discussions, employment varies considerably during any given year as plants will add a shift, hire additional employees, and maximize processing and freezing capabilities during various seasons and season overlaps. These adaptations are required since various species need separate processing lines, machinery, and crews. At other times, especially during the later months of the year, the plants have little, if anything, to process and will reduce employment to a level sufficient to cover maintenance and off-season needs while minimizing overhead costs. All of these factors should lead to caution when looking at "annual average" employment figures. Further, it should be understood that the available data only cover a few years and do not portray important longer-term trends that would require data from the years before 1999 and after 2002 to illustrate. For example, as detailed in subsequent discussions, a number of the plants included in this table were no longer in business at the time of fieldwork in late 2004; others have changed hands in the interim. In general, declines in a number of fisheries have taken their toll on Kodiak over the years. Despite these limitations, the data do allow a look at the relative scale of different processing entities in the community.

Table 5-38. Annual Average Employment by Kodiak Shore-based Processors, 1999 to 2002

Processor	1999	2000	2001	2002
Ocean Beauty Seafoods	337	338	342	206
Trident Seafoods Corporation	100	184	184	188
Cook Inlet Processing (Polar Equipment)	206	228	191	1
North Pacific Processors	218	198	222	182
True World Foods (formerly International Seafoods)	208	147	126	157
Global Seafoods Kodiak LLC	7	137	74	1
Western Alaska Fisheries	137	110	126	133
Alaska Fresh Seafood	36	41	38	40
Kodiak Salmon Packers	21	29	28	1
Kodiak Fishmeal Company	17	16	17	17
Wards Cove Packing Company	3	14	20	9
Island Seafoods	6	9	13	44
Kodiak Seafood Processing	15	4	3	1
Kodiak Smoking & Processing	3	3	6	6
Total	1,314	1,458	1,390	986

Source: McDowell Group, 2002; Department of Labor and McDowell Group Estimates.

At present most retain a “core” crew of Kodiak residents, which they supplement as necessary with additional resident labor, and transient labor housed in a bunkhouse for peak demand periods. Processors seldom wish to bring labor in for any period shorter than the summer, due to the need to train and house such labor, but at least one plant was forced to do so the last couple of years. They constructed a 40-person bunkhouse to accommodate them. Other plants that are part of companies with several processing facilities will transfer labor from one to another as labor needs change in the various locations. Labor costs are reported to have increased, as well as the increase in locally available entry-level jobs in the retail and service sectors. Plant managers also report that many fewer college students approach them (either remotely or by simply appearing in Kodiak) than in years past.

While the presence of local processing has been a constant in the community, individual operations have substantially different histories and have undergone a variety of changes in recent years. For example, among the large plants processing groundfish and salmon in the community, the facility now operating as Trident Seafood Group centers around a converted World War II “Liberty Ship” that was reportedly brought to the community by previous owners (Alaska Packers) in the wake of the devastating 1964 earthquake to become the first plant up and running after that disaster. (This facility apparently later operated under the names All Alaskan and Tyson Seafoods before being acquired by its present owner.) Ocean Beauty, on the other hand, operates in a facility originally built in 1911, which was the oldest and largest seafood production facility in Kodiak when it was purchased in the 1960s. In 1967, B&B Fisheries opened its doors, which became Western Alaska Fisheries in the early 1970s, and is still in existence today. Ownership type also varies widely. For example, International Seafoods is a wholly owned subsidiary of True World Group, Inc., which is in turn owned by the Unification Church. In contrast, Alaska Fresh Seafood, a smaller plant, has been in operation for 26 years and is owned, in part, by Kodiak and other Alaska fishermen.

All plants feature busy and slow periods during the year, but these peaks and valleys differ at least slightly for each processor, based upon the dependence of processor to fishery or the relationship between fleet and processor. This seasonal pattern has also changed with changes in the fisheries. For example, interviews with processing plant personnel pointed out how the role of halibut has changed in terms of local processing since the implementation of the halibut IFQ management program, with three-quarters or more of all halibut going to market as a fresh product, as opposed to perhaps one-quarter before IFQs. This has not only changed the role of halibut in individual operations, it has also resulted in a different pattern of landings, with the economics of the fresh market favoring road-connected ports over Kodiak for at least some harvest areas.

With regard to the workforce among Kodiak processors, the large majority of plant workers in Kodiak are drawn from the local labor pool. While some workers still come to the community specifically for processing work opportunities, in the past 20 years, the importation of short-term workers by the processing companies themselves has become less and less common. As of 2004, among all Kodiak plants, only Trident reports bringing workers into the community during peak periods and providing them company housing on a short-term basis, similar to the pattern seen in the years before the development of a large local workforce. In the not-too-distant past, Ocean Beauty and Western both utilized bunkhouse facilities during peak seasons, but neither continues to do so. This high reliance on the processing workers from a local labor pool differentiates Kodiak from other major processing communities in the southwestern part of the state, such as Unalaska, Akutan, King Cove, and Sand Point, that still retain a relatively transient labor force approach to staffing

KOD-6a

Processing Sector

Local processing plants



KOD-6b

Processing Sector

Local processing plants



KOD-6c

Processing Sector

Halibut processing and King
Crab landings



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processing plants. In January 2005, however, in a departure from the local pattern, Western did hire seasonal workers from outside the community for the early peak cod season but did not offer housing as part of the employment agreement. This ended up causing considerable concern in the community as, according to local newspaper accounts, about 80 people hired through Alaska Job Service in Anchorage arrived in the community prior to the start of the season without having made housing arrangements (despite knowing that they needed to do so) and without sufficient resources to care for themselves prior to earning their first processing paycheck. This, in turn, proved to be a challenge for local service providers, as the unprepared workers utilized local shelters for immediate food and housing needs. While this may have been an isolated incident, it illustrates the continually changing nature of attempting to meet peak processing demands over time. It may also be symptomatic of the overall decline in local year-round processing opportunities, which has been seen as making it harder for resident processing workers to be able to afford to live in the community, thereby shrinking the local labor pool available to processors. The following is a description of each processing plant, its products, annual round, fleet, peak seasons, and workforce.

Alaska Pacific Seafood (APS) was the first American plant to produce surimi. The surimi operation was started through an NOAA (National Oceanic and Atmospheric Administration) grant in 1985 and made surimi every year until 2003, before discontinuing surimi production due to market forces. Processing has become diversified over the years, and now includes salmon, sole, groundfish, pollock, flatfish, herring, and tanner crab. While APS used to have a non-stop workflow with very few peaks and valleys, maintaining this pattern has become more difficult since the late 1990s, and the plant has experienced a decline in crew by an estimated 10 percent per year over the past few years. APS used to bring in employees from outside the community in the 1980s and early 1990s, when they were operating four cannery lines. They have since moved from canning to frozen products and have not used the bunkhouses since the late 1990s, employing long-time Kodiak residents instead. Use of local residents also has brought with it flexibility and, as a result, APS processes more niche species, such as sea cucumbers, which enables the plant to maintain a constant crew, sustain the fleet that brings them higher-value products, and better control overhead. January-March and July-August are characterized as the busy seasons at the plant. APS maintains a skilled labor force of approximately 110 people who are long-time Kodiak residents. This stability reportedly benefits the employees as well as the plant, as with steady employment comes increased benefits, such as insurance. During the busy seasons, the crew increases to 220 people, which runs in two shifts per day during the peak times. Processing slows down at the end of March; during this slow period, the number of crew varies, depending on availability and volume of niche species such as sole and herring are run. There is also year-to-year variability in the cycle as, for example, the cod and pollock season has historically been steady through the middle of March, but ended in February in 2004. The salmon season, beginning in June, marks the start of APS's busiest period. July and August are the absolute busiest times of the year, when salmon, rockfish, and pollock are processed. September and October are generally show, with the trough of employment occurring in November and December when the plant maintains a small crew of 6 to 8 people at 40 hours a week, as well as others to perform maintenance and clean-up for a few days per week.

Interviews with APS processing plant personnel suggested that the number of salmon vessels delivering to the plant has diminished by about one-third in recent years, but those that are going out are making up for the number in volume. The plant takes deliveries from about 20 "core" or "major" salmon vessels, and "random" deliveries from around 40 other salmon boats. With regard

to groundfish, APS maintains a steady delivery relationships with 8 trawl vessels and 8 fixed gear pot and longline vessels. All but two of these have IFQ for halibut and black cod. With regard to halibut, the market has become more competitive; APS's approach is to maintain a good relationship with the vessels bringing in halibut because those same vessels are also bringing cod, crab, and pollock. Although the market has shifted to Homer and is not as much of a "money maker" as it used to be, APS reports it still benefits by maintaining ongoing relationships with vessels and key customers alike. For example, shipping halibut via the airlines maintains steady air cargo freight prices for the company throughout the year. Similarly, as halibut is purchased, it keeps a steady relationship with the vessels when APS needs cod or pollock.

Trident Seafood Group currently processes pollock, rockfish, flatfish, halibut, and Pacific cod. Unlike a number of other Kodiak plants, Trident does not process salmon. The majority of their products are frozen. Products include H&G, fillets (frozen, shatter pack, block), surimi, and some fresh fillets. Trident's peak periods include the pollock and Pacific cod openings, which run January through March, and the rockfish opening in July. The plant also processes halibut and black cod "as it comes in," but these do not represent peak fisheries.

Trident seeks to differentiate itself through the production of top grade surimi and value-added products through their own packaging. Trident staff report a fairly steady local labor force of about 200 individuals, but they are also the only plant in Kodiak that regularly brings in workers from outside the community during peak seasons. The ability to meet fluctuating labor force needs is facilitated by the fact that, as a multi-location company, Trident can balance workforce requirements across plants in different communities that have different peak demand cycles. In the January through March peak season and then again during the July rockfish season, about 75 outside workers supplement the local Kodiak crew. After the March peak, some of the seasonal workers (roughly between 20 and 50 workers, depending on the year) move to other Trident plants, while others go home. Some of these workers are brought back for the summer peak demand period, and after the initial weeks of the July peak, about half of the transient workers are sent to other Trident plants, while the other half of the workers are retained for the pollock and cod openings in late summer/early fall. Trident maintains a local workforce of over 200 on-call workers. The work is fairly steady throughout the year, though from October to mid-January the work slows down substantially. During the peak periods, there are typically two 12-hour shifts, though shifts can last up to 16 hours. Trident has maintained a steady relationship with the same dozen pollock, cod, and rockfish vessels, some of which also participate in hake fishery in the Pacific Northwest.

Western Alaska Fisheries processes cod, pollock, tanner crab, flatfish, salmon, and rockfish, with a heavy emphasis on groundfish. According to plant management, groundfish provides over 90 percent of its product sales; about 8 percent is salmon; and the remaining 2 percent is a combination of crab, herring and halibut. Western does no canning, focusing on a variety of frozen and fresh products. Frozen groundfish products include fillet, surimi, pollock roe, cod roe milt, stomachs (pollock, cod), heads, and milt (primarily for the Japanese and Korean markets). Fresh groundfish products include head and gut and in the round products from cod and pollock, along with milt. Salmon head and gut and fillet products are processed and sold fresh and frozen. According to plant staff, over 60 percent of Western's business is exported, with 40 percent sold domestically, though changes in both markets are occurring, with Asian markets in a growth cycle. Western reported that

while halibut used to be important locally, Kodiak is no longer in a position to compete on prices with communities on the road system, such as Homer.

Western employs a core workforce of about 120 people, but total employment fluctuates with the season. January through March marks the first busy season for Western, with cod, pollock, and tanner crab being important species. According to plant management, during this time, the numbers of employees increase to around 180 to 200 full-time equivalent staff, covering 10- to 12-hour shifts per day, with a substantial reduction to about 20 full-time equivalent staff during the slower months from mid-April through June. Processing speeds up again from June to August when salmon and rockfish seasons open, continuing into the fall. At this time, around 200 people are working full time processing salmon, rockfish, cod, and pollock, pairing down to a crew of 100 in October, with a skeleton crew following in November and December, when the plant is basically down except for maintenance. Western is the only union plant in Kodiak. Western's fleet includes 10 trawlers, 6 longliners, 3 to 4 pot cod and 8 salmon seiners that also harvest herring and tanner crab. They take in salmon from 40 set-net sites as well. As a result of Western's ongoing relationships with the same fleet, year in and year out, it processes fish year-round, turning out products in off-seasons, with rockfish a case in point. According to plant staff, "We do things here just to keep our boats happy. We can make surimi fast, to get the guys offloading, back out there, to keep our own people busy." With regard to shipping products, less than 10 percent of its products are flown out of Kodiak by Northern Air Cargo or Alaska Airlines, but of that amount, almost all go out as fresh fillets, while the other 90 percent is shipped by Horizon Lines as frozen products.

Ocean Beauty Seafood is a major producer of fresh, frozen, and canned salmon but participates in a range of other fisheries as well, including cod, pollock, rockfish, flatfish, perch, and herring, along with tanner and dungeness crab and halibut. Production is year round, with the exception of a dead period from mid-November through the end of the year. Ocean Beauty management reports that about 50 percent of their business relates to salmon processing while groundfish makes up almost all of the remaining half. With regard to groundfish, cod is the most economically important to the plant, with pollock, rockfish, and flatfish following. This 50-50 split has been fairly stable over the last 3 to 5 years. Dungeness and halibut were once more important but now are considered "filler" runs.

Ocean Beauty is one of the few shoreplants that still engages in canning operations. It cans pink salmon, while all other species are sold frozen or fresh. Its busy seasons are January through March, when pollock and cod are processed; June through August during the salmon runs; and then again during the fall pollock and cod seasons during September and October. On-site employment peaks at around 225 during the January-March and June-August busy seasons, when employees can average 60- to 70-hour workweeks. All of Ocean Beauty's workers are drawn from the local residential workforce, with the exception of a few machinists who are brought in for the summer busy season, but who are otherwise employed in the company's Pacific Northwest operations. As operations slow down in the fall, the plant maintains about 20 to 25 people working 40-hour workweeks.

Ocean Beauty maintains an ongoing and steady relationship with the same fleet every year. For groundfish, the fleet includes 4 draggers, 25 fixed gear vessels, a small number of pot gear vessels, and occasional deliveries from transient vessels. For salmon, approximately 55 seine vessels and

30 set gillnet site fishermen deliver to the plant. Ocean Beauty also operates a seasonal plant at Alitak, near the village of Akhiok at the southern end of Kodiak Island,. Open from March 15 through October 1, this plant processes salmon delivered from 25 seiners and 30 set gillnet sites. Because Ocean Beauty's Kodiak shoreplant is geared for canning and freezing salmon, as well as processing groundfish and other niche species, it allows plant management the flexibility to "try and buy as much as we can, of anything we can, as long as it makes economic sense" in order to keep the facility running efficiently. This variability and diversity is typical of the mid-size plants, and some larger plants, on Kodiak. Whereas in the late 1970s, each plant seemed to have a special niche, because the profit margin is smaller now than in the past, there is a greater need to run a variety of fish to cover overhead. Plant personnel reported that two changes have occurred in the recent past: through diversification, running both salmon and groundfish, Ocean Beauty is better able to spread the risk and lessen the potential of losing a particular market, and the demand for value-added processing, including fillet and portioning as well as new products such as freezer pouches and pop-tops, is growing exponentially. Approximately 80 percent of Ocean Beauty's products are shipped domestically via Horizon Lines, the majority are fillets going to the lower 48 states; the other 20 percent is exported to Korea, China, and Japan as H&G and fish in the round. With regard to salmon, 100 percent is sold domestically.

Alaska Fresh Seafood (AFS) is a small plant that has been in operation since 1978. AFS was originally half-owned by fishermen, and two private owners, a broker in Seattle and a Kodiak resident. While the AFS corporate office is in Seattle, it is still managed out of Kodiak. AFS processes cod, king crab, halibut and halibut by-catch (skate and black cod), and some red salmon. AFS receives fish from an average of 158 vessels. Of these, 95 have halibut IFQs and vary from 80-foot vessels to small skiffs. Local management estimates that currently 10 to 20 percent of AFS processing derives from the Bering Sea crab boats. While they have a steady flow all year round, AFS processes cod in January; halibut and skate, a by-catch of halibut, beginning in March; black cod May through August; and king crab in October. A core crew of 12 people works 40-hour weeks throughout the year. This number easily doubles during the busy seasons and can reach a maximum of 40 to 45 people during peak periods. The peak workforce has reportedly changed from college students who years ago came to Kodiak to work during peak periods, to a local workforce today. Similarly, AFS reported that it was common, not so long ago, for USCG spouses to work prior to the holiday season in the fall, but this apparently no longer occurs either. Shifts range from 10- to 16-hour days during the busy seasons.

The plant operating as Island Seafoods has been in Kodiak since 1995. It did not, however, operate in 1998, changed ownership in 1999, and was acquired by its current owner, Pacific Seafood Group, in 2003. While Island Seafoods is the smallest commercial fisheries processor in Kodiak, according to plant management, Pacific Seafood Group is a vertically integrated firm that owns processing and distribution facilities and is North America's fifth largest seafood company. According to interviews with plant personnel, although small, the plant is currently experiencing growth unmatched by other local plants. Island Seafoods processes commercial cod, halibut, rockfish, and salmon. In terms of the commercial vessels that deliver to the plant, its strategy has been to work primarily with vessels that are not serviced by the larger processors. Island works about 25 to 30 small-volume entry-level jig vessels and some longliners and pot boats. Part of the strategy in this fleet mix is to be well positioned as a sustainable fishery in the face of potential future fishery management changes. Island Seafoods obtains its salmon from 5 or 6 set net site owners and a single salmon vessel.

In addition to being of a smaller scale, Island Seafoods differentiates itself from other local processing businesses by being diversified into other business activities, including selling retail and catering to the sport charter fishing industry, processing and shipping sport fish for the visitor trade. Island Seafoods also prepares corporate gift packs and sells its products off a website. Related ventures include operating as a Federal Express facility, and future plans to increase sales to the visitor/tourism market include opening a restaurant. These various ventures are characterized by plant management primarily as “add-on sales,” as Island Seafoods sees itself primarily as gaining efficiencies by “eliminating the middle-man” and delivering commercial seafood directly to Pacific Seafood’s distribution markets, with its strength being found in its focus on fresh products and its ability to adapt quickly to American markets. In terms of the relative dependency on different business avenues, Island Seafoods management estimates that less than 10 percent of its total gross sales comes from sportfishing and its retail business, while over 90 percent remains in commercial seafood production. Currently it is estimated that about 95 percent of product stays in the United States while around 5 percent is exported.

Like other processors, Island Seafoods has a distinct annual cycle, but with different historical roots. The company began processing sportfishing products only, and as time went on, it filled in the remaining years with commercial production, until that became the dominant aspect of the plant production. The plant maintains a core workforce of 20 full-time employees, with the workforce increasing to about 45 employees during the busy seasons of January through April and June to September. As is the case with other plants, December is a dead period with only a skeleton crew performing maintenance and cleanup tasks. Island Seafoods segregates its sportfish processing operation from its commercial operation not only in terms of physical processing but also in terms of its workforce; 8 or 9 of the summer peak season employees work solely with sportfish processing.

True World – International Seafoods processes pollock, cod, salmon, and flatfish at its Kodiak plant. During its busy periods of January through March and June through July, the local True World workforce is comprised of approximately 150 people. In the interim slow seasons, around 40 to 50 employees work at the plant, but labor demand can be difficult to predict on a day-to-day basis as sometimes 16-hour days are followed by several days off between deliveries. In general, True World now has a smaller workforce than was utilized before the plant was shut down for about 6 months in 2002, during which time it changed hands and operations were reorganized. True World utilizes a local workforce, although they do maintain group quarters in the form of two bunkhouses, left over from a number of years ago when peak employment demands at the plant were higher, which they rent to workers.

True World produces a variety of products. From pollock, the plant produces surimi, fillet, head and gut, and fish in the round. With regard to salmon, True World produces head and gut, fillets and salmon rolls; and for cod, products include fillet, head and gut, and round. They do not can any products. Plant management reports that the product mix has changed in recent years, including a greater demand for head and gut going mostly to China, while the overall demand for surimi has diminished. Fresh halibut has been produced in a number of recent years but is not a steady product for the plant. The fleet associated with the plant consists of 30 to 40 vessels, including a number of smaller jig and pot boats, 4 or 5 draggers, and 15 to 20 longliners. Typically, around 15 salmon boats deliver to the plant, but only 7 did so in 2004. Approximately 60 percent of the products

originated at the plant are reported to be exported to Japan, Korea, and China, with a small percentage going to European markets, while fresh cod is sent to domestic markets.

Global Seafoods opened its doors in 1999 and operated for 2 years as a groundfish processing plant. Not financially solvent, Global was shut down for 2 years and reopened in January 2003. Upon reopening, the plant diversified into other fisheries beyond groundfish, with plant management reporting a tripling of production between 2003 and 2004 through a combination of salmon and groundfish processing and marketing relatively underdeveloped species such as skate and arrowtooth flounder. Over 95 percent of its products are frozen, with the remaining sold as fresh or as roe.

The fleet delivering to Global Seafoods includes 3 trawlers, 25 to 40 longline vessels, 10 to 15 jiggers/salmon seiners, and 2 pot boats. Busy seasons for the plant run from January to March and then again from June to August. Global Seafoods employs 200 people during peak seasons, working two 12-hour shifts. Hires are typically drawn from the local labor pool, but when the local pool was unable to keep up with demand brought about by increases in production over the past couple of years, plant management reportedly was able to meet peak demand by matching up in the short term with workers brought to Alaska from overseas.

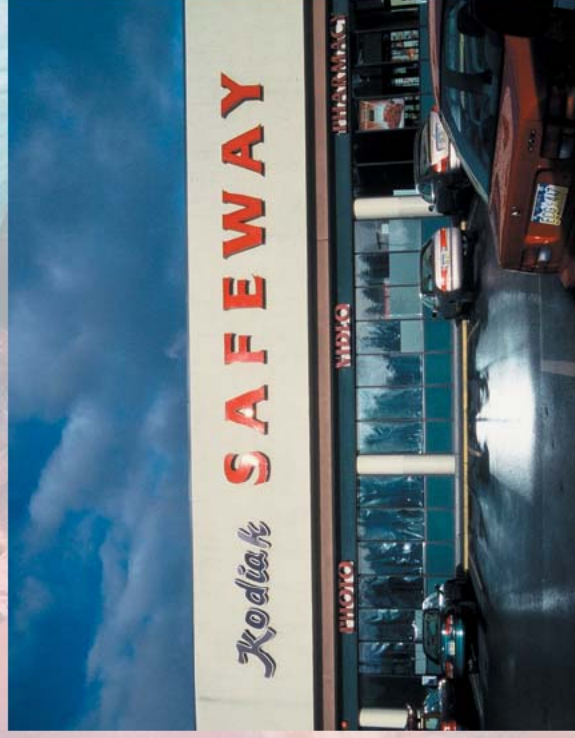
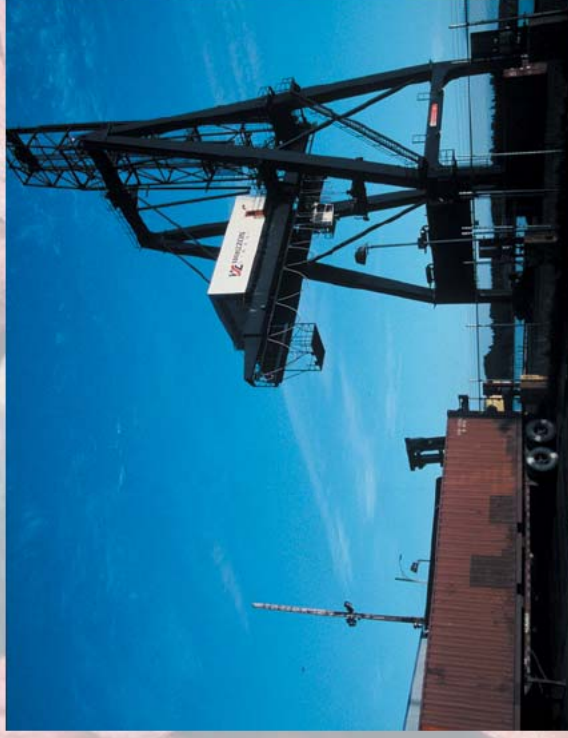
5.3.4 Support Services

The community of Kodiak is distinguished from most other Alaskan fishing ports by the number and range of support service businesses that cater in whole or in part to the commercial fishing industry. Support services include a wide range of companies, including such diverse services as grocery and hardware stores, welding and hydraulics, marine electronics, satellite phone providers, fishmeal and biodrying processors, marine fueling facilities, marine hardware, marine electrical, fishing gear supply, maritime shipping, air cargo transport, passenger airline services, accounting and bookkeeping, banking, engineering, freight forwarding, tug and barge operators, ship repair facilities, stevedoring, and vehicle rentals. In addition, there are also several educational and governmental entities that operate fisheries related research facilities in Kodiak. The locally based Fishery Industrial Technology Center, part of the University of Alaska Fairbanks, has two main academic programs, sustainable harvesting and seafood processing, with programmatic efforts focused on harvest technology, processing technology, seafood quality and safety, contaminants, and collaborative ecological research. The Kodiak Fisheries Research Center, owned by the KIB, leases space to various public entities, such as NOAA Fisheries, which with its Alaska Fisheries Science Center staff operate the Kodiak Laboratory on the premises, the Alaska Department of Fish and Game, and the University of Alaska Fairbanks School of Fisheries and Ocean Sciences. Further, the new NOAA Fisheries research vessel *Oscar Dyson* is scheduled to be home ported in Kodiak. Kodiak College, a 2-year campus of the University of Alaska Anchorage, also offers programs that support the fishing industry and allows residents the opportunity to pursue higher education goals without having to leave the community. Among the communities in the region, Kodiak has the greatest diversity and capacity to support Gulf of Alaska fisheries. The community also serves as a support hub for some of the BSAI fisheries, although Unalaska/Dutch Harbor is far and away the primary support base for that region. Plate KOD-7 provides images of some of the local support service businesses.

KOD-7

Support Services

Local support service
businesses



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While Kodiak has consistently been a center for support service provision for the commercial fishing industry, the level and nature of service provision have not been consistent, with changes in the fishery driving changes in the support sector. While systematic data on how individual support services have been affected by changes in the local fishing economy are not available, there are a number of qualitative indicators of these impacts. Interviews with primary fisheries support businesses, such as the electrical services and hydraulics shops, indicated that fishermen were deferring regular maintenance and canceling upgrades that had been scheduled in the past. In the light of changes in halibut fishery regulations, for example, a lack of urgency has stretched repairs throughout the year, while some upgrades have moved altogether to Oregon or Washington ports. Several businesses noted changes to their previously robust schedule due to changes in halibut fishing, Steller sea lion Resource Protection Areas (RPAs), and the decline in salmon fishing. There is also concern that more changes are on the horizon that could have an adverse impact on Kodiak support services businesses, including BSAI crab rationalization, scheduled for implementation in 2005, and the rationalization of Gulf of Alaska groundfish, currently in the alternative design stage.

Support services may be characterized in a number of different ways, and not all categories of support businesses are mutually exclusive, as a single enterprise may supply a range of services. Further, there are a number of providers of goods and services in the community whose businesses may feel the impact of fishery related activity, but they are not directly connected to the fishery. For the sake of simplicity, however, the following discussion of Kodiak support businesses is organized by general category and limited to direct service providers.

The following business characterizations were derived from limited field interviews conducted over a brief period of time. It was not possible to contact all support service businesses in the community, and these sketches are intended to convey the types and nature of these businesses in the community, and their links to the fisheries, not provide an exhaustive inventory of Kodiak support service businesses.

Shoreplant Support

One specialized support niche in Kodiak is fish waste processing, which may be considered either a form of processing or of fishery support. Kodiak Fishmeal Company is dependent upon the biowaste from the processing plants to produce a high protein product known as fishmeal, along with fish bone and fish oil. Fish waste is ground into a consistent size, and the moisture is extracted. Fishmeal is reportedly the largest and most valuable end product and is primarily sold to the aquaculture industry in Asia as a feed component. The market for fishmeal continues to grow, and two forms are produced in Kodiak: white fishmeal and dark fishmeal. Fish bone is used primarily as fertilizer, and fish oil is either used to run the fishmeal plant boilers or is sold to the aquaculture industry. While a fishmeal plant was operating in the community in the early 1990s, it had a limited capacity such that processors still disposed the remaining majority of the waste by loading it onto barges and discharging it into the ocean. According to interview data, the impetus for the current larger-scale operation began in the mid-1990s when the Environmental Protection Agency demanded that Kodiak processors more closely adhere to federal environmental regulations, risk significant fines, or face a shut-down. At that time, again according to interview data, seven processors formed the Kodiak Fishmeal General Partnership and built a new biodrying plant to handle large amounts of waste per day. On a normal day, Kodiak Fishmeal Company reportedly

handles between 20 and 40 metric tons of biowaste per hour. Kodiak Fishmeal depends on the pollock fishery for 50 percent of its production. Its peak seasons run from January through April and then June through October. Fishmeal and fishbone products are hauled from Kodiak by Horizon Lines and Samson Tug and Barge.

Processing plants in Kodiak, like processing plants elsewhere in Alaska, are to a significant degree self-supplied from outside of the community, given relative ease of shipping and existing business relationships outside of Kodiak. Nonetheless, processing plants do economically interact with various support sector businesses on Kodiak to a degree not seen in more isolated communities such as Unalaska, Akutan, or King Cove, through purchasing groceries for their galleys, fuel purchases, local maintenance contracts, and purchases of various parts and supplies in the community. These include electronics, metal fabrication, hydraulic maintenance, and hardware purchases, among others. These businesses are typically primarily oriented toward vessel support and are described in the next section.

Vessel Support

Kodiak has a well-developed range of support service businesses that are primarily oriented toward commercial fishing vessel support. It is important to keep in mind, however, that many of these same businesses also support processing operations, if to a lesser degree.

One type of direct fishing vessel support service is marine hardware supply, and there are at least three businesses in the community that fall in this category. These are Kodiak Marine Supplies, Net Systems Inc., and Sutliff True Value Hardware. While Net Systems Inc. and Kodiak Marine Supplies focus on marine equipment, Sutliff supplies a local residential market as well as the commercial fishing industry. Kodiak Marine Supplies carries marine equipment, lines, books, and charts. Net Systems produces trawl and seine web and cable, provides custom rigging and splicing services, and has a specialty in selling large-scale hardware such as load-bearing swivel as well as pumps and motors for pumps. The degree of dependency on the fishing business may be gauged by management reporting that the trawl business accounts for about 70 percent of revenues, while commercial fishing as a whole accounts for around 85 to 90 percent of Net Systems' overall business. Over the years, however, the business has seen a great deal of change related to transitions in the local fishing industry, especially the salmon industry. From the late 1980s through the mid 1990s, Net Systems reportedly employed 12 staff, but as of mid-2004 was down to 2 regular employees. Similarly, while net sales used to be a mainstay of the business, only two local customers were reportedly replacing seines in 2004, with the rest "fishing with rags" to avoid costs during poor economic times. There is a pronounced cycle to the business with about a 20-day "insane period" in January building up to the pot, jig, and longline cod fisheries and the A season pollock fishery all opening within a few days of each other. After the winter fisheries slow down, there is another peak when fishermen are gearing up in early June for salmon openers, another around the early July rockfish opening, and another in early October for pollock reopening and the crab fleet gearing up. From October through early January, there is little activity except for a week or so when crabbers are storing gear.

Sutliff True Value Hardware reports that about half its business is fishing related, while the other half of its sales include housewares, paint, clothing, building supplies, lawn and garden, and

non-marine hardware supplies. Sutliff used to carry marine supplies such as longlines, hooks, and snaps but, as a result of rationalization of the halibut fishery, they reported that the effective removal of openings and closings has resulted in increased lead-time for purchases, removing the “urgency-to-buy” prior to season openings and resulting in a shifting of purchases off-island. At the same time, internet commerce became popular, providing price-competitive alternatives and greater access to hardware and materials outside Kodiak. Inventory now includes rain gear, clothing, pumps, survival suits, boat repair tools, anchors, emergency locate finders, and shackles rather than fishing gear per se. Because Sutliff is roughly equally dependent on fishing and non-fishing related merchandise sales, there are two separate but overlapping “busy” seasons for them. With regard to the fishing related activity, there are two primary peaks: May through September when a number of fisheries are open, and then again during fishery closures, when tools are bought for boat repairs during down-time. The summer (June through September) is the busiest time for non-fishery sales.

One common thread in interviews with the marine supply business sector was the observation of the changes brought about by a transition to IFQs in the halibut fishery. Before halibut IFQs were in place, personnel from each store described a rush of sales immediately before each opening during the year. After the IFQ system was in place, the rush was significantly reduced because fishermen, no longer in a race for fish, no longer were driven by the necessity of making immediate purchases. This changed the balance of the “time versus money” equation, giving fishermen the option of “waiting it out,” performing price comparisons, or purchasing items off-island. At the same time, a number of other changes were occurring that may have served to soften the traditional marine hardware market locally, including the growth of the internet, which created a new array of options for customers, and new entrants into related markets, such as the opening of a Wal-Mart store in the community. While Wal-Mart is reportedly not competitive when it comes to specialized marine hardware, other commercial fishing related purchases, such as small appliances, paper goods, and miscellaneous spot purchases may be affected.

There are two hydraulic shops in Kodiak that are primary providers to the local commercial fishing sector, Alaska Hydraulics and Island Hydraulics. Alaska Hydraulics, which has a full machine shop, manufactures hoses, and performs a variety of other manufacturing and repair services, has been in Kodiak since the 1970s, with a second shop in Anchorage. Alaska Hydraulics estimates that about 90 percent of their current business in Kodiak is fishing related. Most of the vessel support work takes place on board vessels themselves as opposed to in the shop. Most of the work is associated with trawl vessels and salmon seiners, although there is a spike in activity just before crab season as well. Salmon related activity results in a busy period in the early summer, but trawl vessel work is more evenly spread through the year. They also report providing tech support to remote salmon sites and troubleshooting problems via phone and e-mail. Processors are also important customers for Alaska Hydraulics, with about 70 percent of the processing related work being in the form of supplying parts, and the remaining 30 percent being field service related tasks. Alaska Hydraulics employs six persons, two of whom are long-time Kodiak residents and the balance more recently arrived recruits from a tech school in the Seattle area.

Island Hydraulics has been in business since 1987 and includes a full machine shop, manufacturing hydraulic hoses for boats and providing repairs. Island staff reports that approximately 85 percent of its business is generated through fishing/marine services, with the remaining 15 percent attributable to servicing the trucking industry. Island Hydraulics has two long-term resident

employees and interview data suggest that while there is relatively steady work throughout the year, there are marked increases seen 2 weeks before each major fishing season opens as preparations for openers are made. The last half of December and early January are the busiest seasons. Within the overall commercial fleet, most work currently derives from trawl vessels, as the hydraulic equipment is larger, more complex, and more difficult for non-specialists to repair. This is a change from years past, however, when a higher relative volume of repair work was associated with crab and salmon seasons. Island Hydraulics also re-manufactures cranes at the processing plants, though this is characterized as “a tiny portion” of their overall work. As a result of decrease in demand brought about by changes in the fishing industry, Island Hydraulics has reportedly felt the need to diversify to maintain sales and has made an investment in new, more accurate capital equipment to enable them to compete for potential opportunities and expand into new markets. As with the other support service businesses, these companies report that as a result of the change in “derby” style fishing seasons and the general decline of the salmon fishery, fishermen have more time to shop around or they may choose to make repairs themselves. This has led to less work for the hydraulics businesses, less impulse types of purchases, and a more predictable flow of business, but at the expense of reducing if not eliminating some of the profitable peak demand periods.

The community of Kodiak is also home to at least seven different welding operations of various scales, including a number of independent, one-man shops. Two of the local welding shops have a speciality of servicing the fishing industry, with the larger of the two being Arc N’ Spark Welding. Arc N’ Spark, which began in the mid-1970s, had 9 employees as of 2004, down from 14 welders in the late 1980s. (Many of the welders who now operate independently apparently gained training and experience through Arc N’ Spark, which is known to train both men and women as welders.) One senior Arc N’ Spark employee estimated that around 80 percent of their business is commercial fishing related. While niches among the various welders are not mutually exclusive, Arc N’ Spark focuses on salmon seiners and crab boats, while all operators apparently work on various pot, longline, and trawl vessels. One noted trend was an increase in fiberglass seiners in recent years, reducing the demand for welding services for that particular fleet component.

Different welding firms have been more or less affected by changes in the fishing industry over time. One welder, for example, noted that when halibut moved to an IFQ system his company was not adversely affected. He reported that although there are less boats to work on, those he does work on are larger and more complex, requiring greater care, and the end result is about the same, in terms of dollar value of welding work. Others reported that work is fairly steady throughout the year. April and May are when welders work on tenders, as well as getting catcher vessels ready for salmon season, and September is busy with crab boat repairs. October through December focuses on tanner, cod, and pollock boats. February, June, and July tend to be the slower months. In addition to strictly welding services, Arc N’ Spark operates two boom trucks used by individual fishermen to pull small boats out of the water, move crab pots, repair and replace pot launchers, install new components, work on exhaust systems, and move seine nets. It offers professional tooling, metal purchases for welding, boat fabrication, repair services, and a heavy duty metal rolling and bending machine on the island. It would appear that the volume of welding work is sensitive to marine fuel prices, as one interviewee noted that as fuel prices have increased, the number of boats seeking welding repairs has decreased with a decrease in disposable income (and a greater tendency to defer maintenance or perform do-it-yourself work). The busy times of the year are reported to run through the summer or when most boats go into dry dock for repair, which is October through January.

Support services for marine electronics on Kodiak are provided mainly by Radar Alaska, the only local shop that specializes in selling and servicing marine electronic equipment. Radar provides equipment for boats such as VHF radios, satellite phones, radars, orator boxes (for clarifying sound and blocking background noise), and the electronics for net systems. Radar management estimates that about 95 percent of its business comes from commercial fishing vessels with the remaining 5 percent deriving from sport charter vessels. In terms of an annual cycle, the shop has marked busy periods in January during the 2 weeks before the multiple season openings, for March through June when work on smaller boats increases, and December when Radar technicians make repairs and work on boats that are in dry dock until the seasons begin again in January. Like a number of other Kodiak support businesses, activity levels have decreased dramatically in recent years. In 1995, Radar employed seven technicians, while as of 2004 there was only one technician employed in Kodiak. This decline was brought about in part by changes directly attributable to fishing economics, where fishermen try to stretch resources in economically challenging times, but also in part by changes in electronics technology. These latter changes included improvements in the longevity of the equipment, and that fact that the cost of electronic gear has declined to the point where replacement, rather than repair, has in many cases become more economically viable than repairing existing equipment. Overall, in the mid-1990s Radar had a total of 13 employees in Kodiak; whereas in 2004 there were 3 employees on site. They attribute this to changes in regulations, less people fishing, greater efficiencies, an increase in competition from farmed fish, catalog/internet sales, and greater technical reliability with regard to equipment improvements. The dip in overall sales began around 1997, when computers, which used to be an anomaly onboard vessels, became increasingly inexpensive, common-place, and user friendly/plug-and-play capable. On the other hand, one fishing regulatory shift that changed the business was the move to halibut IFQs, which, according to Radar's staff, leveled out the peaks prior to each season. There is now less of a rush, and more time to set up communication systems on the boats, resulting in increased safety because the removal of derby fishing eliminates pressure to go out in times when the communications system on the boat is not working properly. On the other hand, Radar is experiencing reduced sales because consumers have more time to shop around to get the best price, which might include ordering online and having a product shipped, a luxury pre-IFQ scenarios did not always provide for, given the previous urgency of repairs and service needs.

There is some differentiation in the fleet from an electronics perspective, as draggers tend to have more electronics on their boats compared to salmon fishermen. Radar Alaska management reported that it used to do work for the processors on communication gear, but in recent years they have switched to satellite phones, which do not require the same degree of maintenance. Radar does sell satellite phones and satellite communication services to the processing plants. Additionally, plants do continue to buy equipment on behalf of the boats via purchase orders, with the boats settling with the processors at a later time. These types of sales are estimated to comprise about 10 to 15 percent of total sales. Another market for communications gear comprises set-net site owners who are also required to have a radio. Overall, approximately two-thirds of Radar's business is sales, with the remaining one-third comprising of technical service and repair.

Mechanical services represent yet another fishery support service sector on Kodiak. There are a few independent mechanics in Kodiak that focus on marine work, with E. Norton Inc., being one of the better known shops. In operation since 1988, it specializes in propulsion, design, and engineering of exhaust components and systems, repair of auto-baiter equipment, and re-powering of jig and pot

cod boats. According to the shop's founder, 90 percent of the company's work derives from the fishing industry and, of that figure, approximately 15 percent comes from charter boats; 20 percent from commercial draggers; 10 percent from commercial longline vessels; and the remaining proportion from a combination of salmon, halibut, and small vessels. Small vessel work includes skiffs with jet propulsion systems that are used to move nets. While the busy season runs from November through May, it is reported that vessel owners prefer to get work done prior to the end of the year to ensure a tax write-off for repairs and maintenance. These tax benefits are available for capital repairs on engine and propulsion systems. To facilitate bookkeeping and optimize benefits, some fishermen set up capital construction funds, a pretax fund that can be used for capital improvements. Like a number of other Kodiak support businesses, Norton reports that the drop in the price of salmon dramatically affected service demand. In the early 1990s, over 80 percent of the business was reportedly in selling parts and equipment, which included sales, maintenance, consumables, and upgrades. As a result of changes in the salmon industry, half of the maintenance and upgrade business declined. This was partially due to a consolidation of the salmon processors, and an overall reduction in maintenance needs. The groundfish fleet tends to go south to Oregon or Washington for repairs, as a lift is needed to bring the boats into dry-dock, something Kodiak does not yet have for larger boats (though a large lift has been proposed). This current facilities limitation is seen, in turn, as limiting potential expansion of the business.

Marine fuel sales are also an important support business in Kodiak. There are two primary marine fueling facilities in the community, North Pacific Fuel and Petro Marine Services. Due to increased security measures following the 9/11 terrorist attacks, it is no longer possible to obtain detailed information on fueling facilities, though some general information is available. Petro Marine uses a city dock to unload the fuel, which is moved by barge to the marine facility. Both companies deliver refined diesel products for commercial fishing related services. North Pacific Fuel management estimates that about 65 percent of their annual business derives from servicing fishing vessels (with less than 5 percent linked with catcher processor vessels), while the remaining 35 percent of their sales goes to the residential market and processing plants. Recent increases in fuel prices are reported to have affected the level of participation among local fleets. The companies noted that some vessels were simply tied up as a result of increased prices, pointing to the leftover pollock quota as an example, where the price of pollock, compared to the rising cost of fuel, confined fishermen to half the catch as approximately 40 percent of the gross income paid for fuel costs (based upon a maximum load). Similarly, they pointed to difficulties in collection for both businesses and vessels. A large part of their business is the dragger fleet, as draggers tend to burn more fuel than other vessels. Summer is the busiest season for fuel sales, due to the salmon and pollock seasons, though there has been a noticeable decrease over the last 4 or 5 years, likely due to a decrease in the salmon industry, with about half the number of boats going out now compared to levels seen in the late 1990s.

Some Kodiak businesses also support the commercial fishing sector through sales of groceries and supplies to the fleet. As of 2004, there were two major grocery stores in Kodiak substantially participating in this market, while a third competed on a more limited basis. These include Safeway, Food for Less, and Wal-Mart, and they vary in their structural approach to fleet sales. For example, the Safeway store was specifically designed to accommodate vessel supply demands through a large storage capacity (20,000 square feet out of a total store area of 70,000 square feet), enabling the store to hold large supplies of food for the commercial boats as well as for individuals operating set-net sites. Typically, a crew member calls ahead with an order (or a processing plant will send

a purchase order on behalf of a vessel) and then the store prepares and boxes grocery supplies (via an investment in cardboard boxes) while the boats are out to sea and delivers the boxes to the docks at no additional cost to the customer. They can also store and refrigerate the groceries until pick-up or delivery. This efficiency reduces downtime in between fishing trips, generating customer loyalty. According to store management, grocery purchases can easily range from \$200 to \$8,000 per trip, per vessel.

Safeway management also reports that most of the Kodiak Safeway store's business is related to commercial fishing in some manner, and some management effort is necessary to ensure efficiency for both fishing related and typical residential customers. For example, in-store commercial grocery purchases are conducted using special checkout stations, designed to accommodate large box orders, thereby mitigating the impact large orders could otherwise have on everyday costumers. With regard to seasonal fluctuations, Safeway management reported that January and the May through September season are the busiest periods of the year for fisheries related business. The tanner crab opening in January generates the most activity, when on-call staff are brought in to work a greater number of hours. Safeway employs between 110 and 135 persons and does not add additional staff for the busy periods. The general decline of the economic vitality of the salmon fishery has had a noticeable impact on their business. The transition of halibut to an IFQ system has also affected the store's ability to track and predict an ebb and flow to their business. Previously, upon halibut derby season openings, sales could be more closely anticipated and planned. At present, sales are more evenly spread throughout the year and "transactions," a term used to describe the number of person/groups coming into the store, are down and the sales specifically attributable to vessels have declined. Overall, there are noticeably fewer spikes occurring before and during the various fishery openings, with the exception of the tanner crab season, which continues to be significant. Safeway reports an approximate 32 percent difference in sales between fishing peaks and non-fishing seasons. In the mid-1990s, according to local management, the Kodiak store was 1 of top 10 Safeway stores in the U.S. in terms of sales volume. Since that time, fishery related demands have decreased, the residential population has remained relatively flat, and more competition has come into the market. As of 2004, Wal-Mart was reportedly considering a significant expansion, which would presumably have an impact on the other two major grocery stores in the community, as well as on other support service providers that are in direct competition with Wal-Mart.

Kodiak also has a boatyard for vessel support. Fuller Boatyard is a privately owned incorporated business, which has been in operation since 1964. In 1987, the current owners purchased the business from Ted and Fern Fuller, the original owners. Fuller's operates primarily as an open air repair facility on 4.4 acres of tidelands on the Near Island channel⁷ with an inside, heated net loft on-site along with some additional warehouse space.

Fuller's services 18-foot to 96-foot-long vessels under 150 tons. They lift, launch, and store commercial fishing vessels, as well as some recreational power and sail boats. The boatyard operates three lifts and a hoist (one 25-ton Marine Travelift, one 100-ton Travelift, one 150-ton Travelift, and a 50-ton Acme Hoist) and also provides blocking. Fuller's also rents out pressure washers and welding equipment and provides 110-volt electricity for the tradesmen and vessels.

⁷ The City of Kodiak, in the 1970s, sold its tidelands along the urban waterfront to private enterprise. All tidelands along the urban waterfront, with the exception of the harbor, are now privately owned, including the parcels where the seafood processors are located.

Fuller's is reportedly the only boatyard in Alaska that is an "open yard" that allows vessel owners to bring in their own tradesmen to do fabrication and repairs. This yard thus serves as a facility to outside tradesmen, some of whom rent approximately half of the warehouse space in the yard, to provide welding, fiberglass work, boat repair, woodwork, interior finish work, electrical services, and other services on-site.

The capacity of the largest lift at Fuller Boatyard is well below the size of the larger vessels in the resident commercial fishing fleet, so these vessels at present must seek dry dock facilities outside the community. As discussed in a later section, the City of Kodiak is in the process of obtaining a larger lift that, according to plan, would be operated by a private entity to be determined (that is, it may or may not be operated by Fuller's). At present (2005), Fuller's primarily services the salmon seine fleet, crab vessels, tenders, and some pot cod boats. The owners estimate that 99 percent of the boatyard business is associated with the commercial fishing fleet. Despite a limited lift capacity, an estimated 58 percent of the boats serviced at the yard are from Washington, Oregon, or California. Business has changed in recent years with changes in fishery management and the economic vitality of local commercial fishing in general. For example, since halibut has gone to an IFQ system and the salmon fishery has experienced relatively poor economic returns, the number of boats stored at the yard has reportedly declined by 50 percent or more, from 80 to 90 boats down to around 40 vessels.

Shipping

There are several cargo carriers with a long-term local presence that are used to ship seafood products off Kodiak Island. Four are marine shipping carriers, and two are air cargo carriers. They include Horizon Lines, American President Lines (APL), Western Pioneer Shipping, Samson Tug & Barge, Alaska Airlines/ERA and Northern Air Cargo.

Horizon Lines is a domestic carrier that has gone through a number of ownership changes in recent years. Known as Sea-Land before becoming CSX Lines, in 2002 CSX Lines was sold to the Carlyle Group, which changed the name of its domestic shipping service to Horizon Lines. In the spring of 2004, the Carlyle Group sold Horizon Lines to Castle Harlan, but the Horizon name was retained. According to Horizon management in Kodiak, over three-quarters of the containers they ship from Kodiak are seafood products, but the weight of full seafood containers is significantly more than the weight of other household goods, dunnage, and autos. As a result, greater than 85 percent of the wharfage collected by the City of Kodiak from Horizon Lines is seafood related. While Horizon does business with all the processing plants in Kodiak, it does not service catcher-processors. Horizon operates two routes that include Kodiak. Both start in Tacoma, stop in Anchorage, and continue on to Kodiak. One route returns to Tacoma and the second travels to Dutch Harbor, where it connects with international carriers, then turns around and travels south to Tacoma. While less than 10 percent of Horizon's northbound business is related to commercial fisheries, northbound vessels do connect to export vessels in Dutch Harbor. Of its seafood related business, approximately 70 percent is headed southbound toward domestic markets. In 2003, between 70 and 80 percent of all products shipped by Horizon were destined for domestic markets. Some fluctuations in shipping mode for commercial fisheries related cargo do occur during different seasons, even within individual fisheries. For example, Horizon management reported that when halibut opens early in the year, the initial price is high as fresh fish comes onto a new market and then as the market becomes saturated, demand decreases. This effectively determines the pattern of shipment. Over

the period 2000 to 2004, the volume of halibut flown fresh out of Kodiak has increased slightly and occurs in the first part of the year, between January and April. Halibut is then shipped by container from April through June. From June to December, halibut is typically delivered to Homer and trucked over the road.

Horizon is an agent for MAERSK shipping, which provides export shipping from Dutch Harbor. APL also has an office in Kodiak, although no export vessels call in the community. Vessels with cargo destined for overseas travel from Kodiak to Dutch Harbor, where export vessels pick up the cargo and ship from Dutch Harbor. In 2004, a dramatic shift to the export market was occurring due to growth in the Asian market. The Chinese market is purchasing fish in the round, increasing the volume in cargo due to the larger product sizes. Similarly, as surimi is increasingly produced within Asia, competition has effectively decreased the volume of surimi products shipped.

Samson Tug and Barge operates a container hauling and break-bulk service in Kodiak, averaging 150 to 200 containers per trip. Samson provides shipment of 20-foot and 40-foot dry containers and 20-foot shipping platforms. Kodiak is one of three ports in Alaska that receives container shipments, and the only port in the area with a deep draft. Because ships with deeper hulls cannot get into the outlying communities in the Kodiak Archipelago, Samson brings salmon and other products from remote canneries to a central location in the greater Kodiak area, and transfers the containers to Horizon Lines. Products to be exported go through Dutch Harbor, are transferred to APL, and are shipped out of Dutch Harbor. Horizon contracts with Samson to haul empty containers to King Cove and Sand Point, as well as to bring cargo into and out of the small communities in the region. Processors typically use Horizon or Norther Air Cargo when shipping frozen or fresh products, while Samson is used to move cargo that does not require a 3-day turnaround. Samson does have refrigeration capacity to ship frozen products as well as dry cargo such as canned salmon.

Western Pioneer Shipping Services has a different niche, dealing primarily with household goods and/or pallets of freight, though Western Pioneer serves customers and suppliers in the commercial fishing industry as well. Western Pioneer is an ocean-going bulk cargo carrier providing marine freight service between Washington and Alaska. Western Pioneer vessels haul frozen, chilled, and dry cargo. Western Pioneer hauls equipment and supplies (non-containerized) to Alaskan ports and transports seafood products from Alaska to market in the United States and internationally. Western Pioneer has terminals located in Seattle and Dutch Harbor in addition to Kodiak.

The Port and Harbor Department of the City of Kodiak itself also acts as a support service provider for commercial fishing related activities. The department, which manages the port and its two harbors, is operated via an enterprise fund. Its purpose is to serve the commercial and recreational boat fleet by providing marine infrastructure and services. It provides customer service and billing for port and cargo operations; it coordinates scheduling and use of facilities; provides limited search and rescue within city limits; and in conjunction with other city departments provides emergency response for fire, crime, and accidents. The department provides security and services 24 hours a day, 7 days a week, with 13 staff members including 8 full-time patrol officers.

The Port of Kodiak has more than 650 boat slips and 3 commercial piers that can handle vessels up to 850 feet long. In addition to the freight carriers already mentioned, it also supports several freight forwarders and consolidators. The 3 piers include the general use/ferry pier, the city dock, and the

cargo terminal pier that together support the ferries, facilities for D7 class container ships, cruise ships, commercial fishing vessel loading and off-loading, and other cargo vessels. The City operates two marinas. Saint Paul Harbor, located downtown, has 250 slips for vessels up of 24 to 60 feet in length. Saint Herman Harbor, in Dog Bay on Near Island, has 325 slips for vessels 17 feet to 150 feet in length. Overall, Kodiak has the largest mooring capacity for large fishing vessels of any port in Alaska, with over 80 slips for vessels 90 feet to 150 feet in length. Both harbors are fully occupied, with 95 percent of the occupancy coming from commercial fishing vessels, with some commercial vessels originating from Washington and Oregon. Vessels with exclusive slips pay an annual fee for moorage; all other vessels pay a daily rate.

The City is planning to upgrade their vessel support facilities in the form of a travel lift to be located on city lands adjacent to St. Herman Harbor. As of 2005, the City has applied for a \$2.3 million grant from the federal Economic Development Administration for this project, which is being developed with public funds rather than as a private enterprise due to the City owning the tidelands upon which it will be located (necessitating a public partnership in any event) and the capital-intensive nature of the project. The City is planning to partner with a private entity that would operate the lift. At present, larger Kodiak vessels must travel outside of the community (typically to Seattle) for dry dock repairs. The only local lift, at the privately owned and operated Fuller Boatyard, has a 150-ton capacity, while the new lift would have a 600-ton/38-foot-beam capacity, meaning it could service the largest of the locally owned vessels. Having a local facility would save each vessel fuel and incidental costs (such as crew expenses) involved in taking their vessels to Seward (220 miles away) or Seattle (1,000 miles away). This would save up to an estimated \$30,000 to \$40,000 in round-trip fuel costs alone associated with hauling out in Seattle, and it would keep vessel service dollars circulating in the community.

With fleet consolidation that is expected to accompany fishery rationalization (most immediately in the BSAI crab fishery) there is concern that support service demand in Kodiak will continue to decline. It is hoped that the planned travel lift would attract business from larger Bering Sea crab boats, whether home ported in Kodiak or not, expanding the City's fishing related economic base. Successful implementation of this project would result in a larger dry dock capacity than is present at any facility to the west in the Gulf of Alaska or to the north in the Bering Sea and, it is hoped, generate additional business opportunities for other Kodiak marine support service providers, such as welding, hydraulics, mechanical, and electronics service entities. According to City officials, travel lift fees would be structured in such a way as to discourage smaller vessels that now use Fuller Boatyard from using the new lift (to avoid direct competition), while at the same time offering services to larger vessels in a manner that allows a competitive advantage relative to costs for similar services in Seward. One approach the City is taking to encourage additional support service growth is planning the facility as an "open yard," allowing vessel owners to bring in mechanics and tradesmen of their choice. Further, although there is no private sector commercial activity on Near Island at present, the City is also anticipating selling land for support service business development near the planned travel lift boatyard site.

The harbormaster also collects a wharfage fee for any commercial cargo. Currently, over 85 percent of the wharfage fee collected is for outgoing seafood products via Horizon Lines. At this time (2005), little or no raw fish is unloaded at the docks managed by the City. Fishing boats typically off-load at the processors directly, with the exception of small catcher/processors, which off-load

at private docks. There is one private dock/processing facility available for fishermen to off-load into their own containers and rent storage. This processor's niche is to process catch from the sportfishing charter boat fleet, including smoking, packaging, and shipping. While still a relatively modest operation, the charter boat fleet has grown significantly in the last 10 years.

In addition to the Port of Kodiak facilities, there is a privately operated terminal in the greater Kodiak area. Seaport Terminal Services Inc., a subsidiary of LASH⁸ Corporation, operates the terminal and provides associated support services. The terminal presently has over 1,200 feet of dock space available. The terminal also has warehousing, yard storage, crane services with 40-ton to 150-ton cranes, 4-ton to 40-ton forklifts, trucking, waste disposal, and water. Fuel is also available through delivery from Kodiak's local distributors. Seaport maintains three mooring buoys within the "designated anchorage" in Womens Bay to provide moorage capabilities for large vessels and barges. Vessel haul-out and storage are available for most vessels up to 50 feet in length. LASH Corporation is presently developing an industrial park next to the terminal with property for sale or long-term lease.

Kodiak State Airport is located about 4 miles southwest of downtown Kodiak. The airport is owned by the USCG, is leased to the State of Alaska, and operated by the Alaska Department of Transportation and Public Facilities. In addition to linking Kodiak to Anchorage and other mainland destinations, the airport also serves as a regional hub for smaller outlying communities. With one of its runways being in excess of 7,500 feet, an instrument landing system/distance measuring equipment (ILS/DME) approach capability, and a control tower manned for 16 hours per day, Kodiak State Airport has functional passenger transportation and cargo shipping capacity far in excess of other fishing communities in the southwestern part of the state (including the other fishing communities profiled in this document [Unalaska/Dutch Harbor, Akutan, and King Cove]). While volume of product moving by air is small in proportion to the volume of product that moves by surface transport, air shipping of seafood is nonetheless an important part of the local transportation economy. For example, with the start of halibut season in 2005, one of the carriers was anticipating shipping 100,000 pounds of halibut in the first week alone. With relatively quick and reliable connections to the global air shipping capabilities found at Ted Stevens Anchorage International Airport, air shipment of fresh product from Kodiak is more economically feasible than is the case from many other rural Alaska seaports, but price/cost competition with fresh product landed at road system communities such as Homer (that can then be trucked to Anchorage and beyond) remains challenging.

5.4 LOCAL GOVERNANCE AND REVENUES

As described above, Kodiak is home to a wide range of governmental institutions. Some images of local institutions may be found in Plate KOD-8a and Plate KOD-8b.

Fishing related revenues are an important component of overall revenues for both the city of Kodiak and the KIB. Municipal revenue information for the period 1999 through 2003 parallel to that

⁸ In most shipping contexts, LASH is an acronym for Lighter Aboard Ship vessels that carry multiple (approximately 90) standard size LASH barges that can be independently loaded/off-loaded and towed to and from the oceangoing ship to smaller ocean or inland waterways ports. In this case, LASH is simply an acronym for the founders of the company.

presented for the other Alaska communities profiled is presented in Table 5-39. In terms of fish taxes specifically, the City of Kodiak received \$788,947 in fisheries business tax (raw fish tax) sharing in Fiscal Year (FY) 2004 and \$37,048 in fishery resource landing taxes.

Table 5-39. Kodiak Municipal Revenues, 1999-2003

	1999	2000	2001	2002	2003
Local Operating Revenues					
Taxes	\$7,377,771	\$7,998,729	\$7,736,345	\$7,740,939	\$7,879,249
License/Permits	\$65,969	\$44,028	\$39,355	\$44,628	\$38,063
Service Charges	\$2,522,717	\$1,400,947	\$1,275,700	\$1,427,824	\$2,050,628
Enterprise	\$5,559,886	\$6,315,214	\$7,005,648	\$6,808,064	\$5,972,076
Other Local Revenue	\$1,941,751	\$2,105,864	\$1,509,686	\$1,115,994	\$742,066
Total Local Operating Revenues	\$17,508,094	\$17,864,782	\$17,566,734	\$17,137,449	\$16,682,082
Outside Operating Revenues					
Federal Operating	\$0	\$0	\$0	\$0	\$0
State Revenue Sharing	\$118,049	\$82,265	\$73,635	\$68,511	\$63,501
State Municipal Assistance	\$332,799	\$222,926	\$199,391	\$211,503	\$203,517
State Fish Tax Sharing	\$615,603	\$618,504	\$667,927	\$889,316	\$627,719
Other State Revenue	\$105,844	\$92,950	\$100,141	\$82,655	\$51,667
Other Intergovernmental	\$0	\$0	\$20,000	\$0	\$3,650
State/Federal Education Funds	\$0	\$0	\$0	\$0	\$0
Total Outside Revenues	\$1,172,295	\$1,016,645	\$1,061,094	\$1,251,985	\$950,054
Total Operating Revenues	\$18,680,389	\$18,881,427	\$18,627,828	\$18,389,434	\$17,632,136
Operating Revenue Per Capita	\$2,710	\$2,762	\$2,941	\$2,810	\$2,973
State/Federal Capital Project Revenues	\$7,500	\$491,851	\$26,683	\$175,821	\$1,310,547
TOTAL ALL REVENUES	\$18,687,889	\$19,373,278	\$18,654,511	\$18,565,255	\$18,942,683

Source: DCED Website, 2001, 2002, personal communication 2004.

Beyond the revenue sources that accrue to the municipality directly, residents of Kodiak (like the residents of other communities on the island) derive benefits from services provided by the borough, which also funds its services in part through fishery derived revenues. The borough has a resource-based severance tax that applies to extraction of natural resources including rock, sand, and gravel as well as timber and fish. While in past years timber used to make up the majority of this revenue, borough management estimates that approximately 90 to 95 percent of its \$800,000 plus severance tax for FY 2004 is attributable to fish. This borough tax is designed to mirror that state raw fish tax with the taxes being applied to the transactional value at the point of extraction, based on the value paid to commercial fishermen (as part of the transaction with the processors upon landing).

In addition to the severance tax, commercial fishing related activity contributes to borough revenues in a variety of ways. For example, the borough levies both real and personal property taxes on processing plants both within and outside of incorporated municipalities. (Borough real property taxes are paid on lands and buildings, borough personal property taxes are paid on equipment within the plants, and both are assessed at 10.25 mills; the City of Kodiak does not levy personal property taxes, but levies real property taxes at a rate of 2 mills, so seafood processing plants within the city boundaries pay a combined total of 12.25 mills in real property taxes.) The borough also levies a flat tax on vessels over 5 tons (only), which is equivalent to a personal property tax. This tax is set at \$15 per vessel per year and while this low amount means that considerable potential revenue is

KOD-8a

**Community Services/
Facilities**

**Kodiak City and Borough
offices**



KOD-8b

**Community Services/
Facilities**

Clockwise from upper left:
Kodiak Public Library,
Kodiak Launch Complex
logo, Kodiak Launch
Complex site, and U.S. Coast
Guard installation



foregone, the intent of not taxing more aggressively is to support the commercial fishing industry. This, in turn, provides a range of benefits to Kodiak and the borough as a whole. The borough also exempts any and all commercial fishing gear (exclusive of vessels) from personal property tax.

The state fisheries business tax benefits both the borough and the city directly through revenue sharing, with this revenue being shared evenly between the borough and the state where the activity takes place within the borough but outside of an incorporated municipality, and split 50 percent to the state, 25 percent to the borough, and 25 percent to the city where the activity takes place within an incorporated municipality. The borough also derives revenue from the state fishery resource landing tax, which is levied on processed fishery resources first landed in Alaska, based on the unprocessed value of the resource. (This tax is primarily collected from at-sea and floating processors that process resources outside of the 3-mile limit but bring their products to Alaska for transshipment.) Together, the Borough is anticipating approximately \$800,000 in state fish related revenue from these two sources in FY 2004. Table 5-40 provides a summary of shared fisheries specific taxes received by the KIB, which is largely driven by activity in the City of Kodiak, for FY 1999 through FY 2003. As shown, there has been considerable variation in annual totals over the past few years. Borough management estimates that of \$11.5 million in total revenues for FY 2004, approximately \$6 million is attributable in one way or another to fishing related activities.

Table 5-40. Shared Fisheries Tax Received by the Kodiak Island Borough, FY 1999-2003

Fiscal Year Received by Borough	Fishing Year in which Taxes were Collected	Value of Seafood Landed in Kodiak (millions of dollars)	Resource Landing Tax	Fisheries Business Tax	Total
1999	1997	\$82.9	\$13,946	\$841,131	\$855,077
2000	1998	\$79.3	\$10,247	\$718,310	\$728,557
2001	1999	\$103.9	\$24,592	\$923,772	\$948,364
2002	2000	\$94.5	\$5,219	\$1,282,125	\$1,287,344
2003	2001	\$80.5	\$37,162	\$759,211	\$796,393

Source: McDowell Group, 2002; Department of Revenue annual reports on shared taxes.

Table 5-41 provides information on state fish tax revenue sharing over the FY 1976 through FY 2004 period. As shown, there were several peaks and valleys over this span of years. During the most recent era, revenue ranged between \$1.3 million in FY 1991 and \$800,000 in FY 2003 before dropping to \$600,000 in FY 2004.

Table 5-41. Kodiak Island Borough Fish Tax Revenue Sharing, 1976-2004

Fiscal Year	Raw Fish Tax
1976	\$54,039
1977	\$66,709
1978	\$79,834
1979	\$251,716
1980	\$182,348
1981	\$452,802
1982	\$428,924
1983	\$828,783
1984	\$884,740
1985	\$709,477
1986	\$651,383
1987	\$647,057
1988	\$871,703
1989	\$875,085
1990	\$2,044,881
1991	\$1,082,779
1992	\$1,295,921
1993	\$1,005,664
1994	\$1,244,127
1995	\$997,032
1996	\$1,077,121
1997	\$1,349,834
1998	\$994,768
1999	\$918,010
2000	\$833,980
2001	\$1,006,947
2002	\$1,364,248
2003	\$840,768
2004	\$649,928

Source: Kodiak Island Borough spreadsheet, October 2004.

APPENDIX A

DETAILED CATCH AND EARNINGS ESTIMATES

APPENDIX A

DETAILED CATCH AND EARNINGS ESTIMATES

Commercial Fisheries Entry Commission (CFEC) annually creates a data report called “Permit and Fishing Activity by Year, State, Census Division, or Alaskan City.” As described at the CFEC site on the Internet at http://www.cfec.state.ak.us/Mnu_Summary_Info.htm, these reports—commonly referred to as the *Census Area Reports*—show information on the number of permits issued and fished; the number of permit holders; and the number of fishermen, pounds, and estimated gross earnings. The tables shown in this Appendix summarize these reports by permit type for Akutan, Kodiak, Unalaska, and King Cove.

While CFEC makes every effort to provide as much detail as possible in the *Census Area Reports*, many entries for pounds landed and revenues are not released due to confidentiality restrictions. Any permits with fewer than four permit holders are subject to confidentiality. For example, if the community of King Cove had only three residents who owned Kodiak Area purse seine permits (S01K), the CFEC data would not include information for pounds landed and gross revenue. In cases where data were not released, Northern Economics has imputed missing values by using fishery averages. By imputing missing values, reasonably complete estimates of landings and revenue for permit holders in each community in the study area can be provided. The general process by which missing information is estimated is by looking at average information from successively more inclusive geographical areas. For example, if catches are confidential at the community level, but not in the community’s Borough (or Census Area) level, then the average catch for that permit type in the Borough (or Census Area) is used and is multiplied by the number of active permits in the community to generate an estimate of catch in the community. If catch for that particular permit type is also confidential at the Borough level, then the average catch of permit from other larger geographic aggregations, based on the community type (e.g., urban/rural, or small/large communities) are made. After all permit types in all communities are assigned an average catch estimate, all of the “estimated” pounds and revenues for each permit type are pro-rated such that the total (estimated and non-estimated) for each community is equivalent to CFEC’s total catch for that particular community.

It should also be noted that halibut revenues were not available for 2002. Revenues estimates were based on estimated prices from 2001.

Table A-1. Detailed Catch and Earnings Estimates for Akutan Permit Holders by Permit Type, 1995-2002

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Crab Fisheries								
Dungeness Crab using pot gear vessels under 60 ft. in the Westward Area								
Permits Held	-	-	1	1	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
King Crab using pot gear vessels 60 ft. or over in the Bering Sea Area								
Permits Held	-	-	-	1	-	-	-	-
Permits Fished	-	-	-	1	-	-	-	-
Pounds	-	-	-	17,091	-	-	-	-
Revenue	-	-	-	35,579	-	-	-	-
King Crab using pot gear vessels 60 ft. or over in the Bristol Bay Area								
Permits Held	-	-	-	-	1	1	1	-
Permits Fished	-	-	-	-	-	1	1	-
Pounds	-	-	-	-	-	29,729	26,815	-
Revenue	-	-	-	-	-	142,229	128,949	-
Tanner Crab using pot gear vessels 60 ft. or over in the Bering Sea Area								
Permits Held	-	-	-	-	1	-	1	-
Permits Fished	-	-	-	-	1	-	1	-
Pounds	-	-	-	-	578,945	-	76,165	-
Revenue	-	-	-	-	569,103	-	118,112	-
All Crab Fisheries using all gears combined in All Areas Combined								
Permits Held	-	-	1	2	2	1	2	-
Permits Fished	-	-	-	1	1	1	2	-
Pounds	-	-	-	17,091	578,945	29,729	102,980	-
Revenue	-	-	-	35,579	569,103	142,229	247,061	-
Halibut Fisheries								
Halibut using longline vessels under 60 ft. in the Statewide Area								
Permits Held	4	5	4	3	4	4	5	5
Permits Fished	4	5	3	3	3	4	3	5
Pounds	5,288	26,478	31,815	44,488	47,016	93,166	73,841	111,010
Revenue	9,896	52,235	63,140	43,371	85,320	232,628	143,611	236,284
Groundfish Fisheries								
Groundfish using hand trolls/handlines in the Statewide Area								
Permits Held	1	3	3	4	6	4	2	3
Permits Fished	1	-	1	3	4	1	-	-
Pounds	1,873	-	4,947	16,120	15,613	4,083	-	-
Revenue	722	-	873	3,373	5,121	1,665	-	-
Groundfish using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Groundfish using longline vessels under 60 ft. in the Statewide Area								
Permits Held	-	1	-	2	2	-	1	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Groundfish using mechanical jigs in the Statewide Area								
Permits Held	2	3	4	3	3	1	1	1
Permits Fished	2	1	2	2	2	-	-	1
Pounds	33,778	12,633	18,567	30,178	39,092	-	-	34,955
Revenue	8,350	2,989	3,626	5,161	11,414	-	-	7,595
Groundfish using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	-	1	-	1	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Groundfish using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	-	-	-	-	-	-	1	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Groundfish Fisheries using all gears combined in All Areas Combined								
Permits Held	4	8	7	10	11	5	5	4
Permits Fished	3	1	3	5	6	1	-	1
Pounds	35,651	12,633	23,514	46,298	54,705	4,083	-	34,955
Revenue	9,072	2,989	4,499	8,534	16,536	1,665	-	7,595
Miscellaneous Shellfish Fisheries								
Octopi/Squid using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	-	-	1	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Sablefish Fisheries								
Sablefish using longline vessels under 60 ft. in the Statewide Area								
Permits Held	-	-	1	1	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Sablefish using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	-	-	-	-	-	-	1	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Sablefish Fisheries using all gears combined in All Areas Combined								
Permits Held	-	-	1	1	-	-	1	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All fisheries using all gears in all areas								
All Fisheries using all gears combined in All Areas Combined								
Permits Held	6	11	12	15	15	8	11	7
Permits Fished	5	4	5	8	9	4	4	4
Pounds	38,295	25,872	39,421	85,633	657,158	80,395	139,900	90,460
Revenue	14,020	29,107	36,069	65,798	628,299	260,207	318,866	125,737

Source: Commercial Fishing Entry Commission "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City" from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

Note: If fewer than 4 permits were fished in a given year then the pounds and revenue numbers shown in the table are estimates produced by Northern Economics, Inc. Otherwise the pounds and revenue numbers reflect CFEC data.

Table A-2. Detailed Catch and Earnings Estimates for Kodiak Permit Holders by Permit Type, 1995-2002

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Crab Fisheries								
Dungeness Crab using diving gear in the Southeast Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	1	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Dungeness Crab using pot gear vessels under 60 ft. in the Alaska Peninsula Area								
Permits Held	-	-	1	-	1	1	1	1
Permits Fished	-	-	-	-	-	-	1	1
Pounds	-	-	-	-	-	-	-	32,769
Revenue	-	-	-	-	-	-	-	44,238
Dungeness Crab using pot gear vessels under 60 ft. in the Chignik Area								
Permits Held	-	-	-	-	-	-	-	1
Permits Fished	-	-	-	-	-	-	-	1
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Dungeness Crab using pot gear vessels under 60 ft. in the Westward Area								
Permits Held	30	30	32	27	24	23	26	20
Permits Fished	12	12	14	6	9	6	11	11
Pounds	184,151	294,402	205,457	93,547	170,510	73,195	30,898	60,926
Revenue	321,159	315,010	433,168	135,736	268,777	120,772	58,923	89,135
Dungeness Crab using pot gear vessels 60 ft. or over in the Alaska Peninsula Area								
Permits Held	-	-	-	1	-	-	-	-
Permits Fished	-	-	-	1	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Dungeness Crab using pot gear vessels 60 ft. or over in the Cook Inlet Area								
Permits Held	-	-	1	1	1	1	1	1
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Dungeness Crab using pot gear vessels 60 ft. or over in the Yakutat Area								
Permits Held	-	1	1	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Dungeness Crab using pot gear vessels 60 ft. or over in the Westward Area								
Permits Held	13	10	9	8	10	8	8	7
Permits Fished	7	4	5	5	3	5	5	4
Pounds	204,716	278,524	237,912	154,012	114,949	43,389	16,259	48,873
Revenue	345,869	306,024	501,518	223,471	181,160	71,592	31,006	71,501
King Crab using pot gear vessels under 60 ft. in the Bering Sea Area								
Permits Held	-	1	1	1	1	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
King Crab using pot gear vessels under 60 ft. in the Bristol Bay Area								
Permits Held	-	-	-	-	1	2	1	1
Permits Fished	-	-	-	-	-	1	-	-
Pounds	-	-	-	-	-	10,615	-	-
Revenue	-	-	-	-	-	51,044	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
King Crab using pot gear vessels under 60 ft. in the Norton Sound Area								
Permits Held	2	1	-	-	-	-	-	-
Permits Fished	2	1	-	-	-	-	-	-
Pounds	5,016	3,152	-	-	-	-	-	-
Revenue	14,415	7,156	-	-	-	-	-	-
King Crab using pot gear vessels under 60 ft. in the Prince William Sound Area								
Permits Held	-	-	-	-	1	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
King Crab using pot gear vessels 60 ft. or over in the Adak/Western Aleutians Area								
Permits Held	3	1	-	-	-	-	-	-
Permits Fished	3	1	-	-	-	-	-	-
Pounds	402,364	103,725	-	-	-	-	-	-
Revenue	1,196,631	221,918	-	-	-	-	-	-
King Crab using pot gear vessels 60 ft. or over in the Bering Sea Area								
Permits Held	40	35	34	35	7	5	2	2
Permits Fished	33	29	31	32	-	-	-	1
Pounds	840,537	638,365	973,425	607,904	-	-	-	24,609
Revenue	2,338,472	1,675,562	2,499,695	1,253,128	-	-	-	80,865
King Crab using pot gear vessels 60 ft. or over in the Bristol Bay Area								
Permits Held	8	36	42	44	41	38	34	37
Permits Fished	-	35	39	44	35	33	31	36
Pounds	-	1,163,128	1,034,840	1,681,596	1,368,421	862,572	810,844	1,157,584
Revenue	-	4,685,079	3,378,751	4,425,961	8,574,526	4,167,619	3,919,030	7,246,790
King Crab using pot gear vessels 60 ft. or over in the Dutch Harbor Area								
Permits Held	1	1	2	1	1	-	3	3
Permits Fished	1	1	2	-	-	-	2	2
Pounds	77,330	84,201	144,062	-	-	-	105,849	57,910
Revenue	223,793	186,754	322,914	-	-	-	341,937	252,752
King Crab using pot gear vessels 60 ft. or over in the Kodiak Area								
Permits Held	5	1	-	-	-	2	2	3
Permits Fished	2	-	-	-	-	1	1	1
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
King Crab using pot gear vessels 60 ft. or over in the Norton Sound Area								
Permits Held	-	1	1	-	-	-	-	-
Permits Fished	-	1	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Miscellaneous Crab using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	1	-	-	-	-	-	-	-
Pounds	62,298	-	-	-	-	-	-	-
Revenue	170,697	-	-	-	-	-	-	-
Tanner Crab using pot gear vessels under 60 ft. in the Kodiak Area								
Permits Held	3	3	2	3	-	-	123	152
Permits Fished	-	-	-	-	-	-	90	125
Pounds	-	-	-	-	-	-	271,445	204,800
Revenue	-	-	-	-	-	-	625,952	415,949
Tanner Crab using pot gear vessels under 60 ft. in the Yakutat Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Tanner Crab using pot gear vessels 60 ft. or over in the Bering Sea Area								
Permits Held	42	48	47	40	45	39	29	28
Permits Fished	38	45	39	34	40	36	25	25
Pounds	8,026,352	6,398,009	14,888,653	26,198,466	23,109,192	4,158,218	2,023,168	2,969,714
Revenue	19,244,401	9,176,810	11,730,828	14,802,134	22,716,336	7,773,381	3,145,109	4,110,005
Tanner Crab using pot gear vessels 60 ft. or over in the Kodiak Area								
Permits Held	5	2	3	2	-	-	32	34
Permits Fished	-	-	-	-	-	-	25	27
Pounds	-	-	-	-	-	-	95,414	57,312
Revenue	-	-	-	-	-	-	220,025	116,401
Tanner Crab using ring nets in the Southeast Area								
Permits Held	-	-	-	-	-	-	1	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Crab Fisheries using all gears combined in All Areas Combined								
Permits Held	155	171	176	163	133	119	263	290
Permits Fished	100	129	130	122	87	82	191	234
Pounds	9,802,764	8,963,505	17,484,348	28,735,525	24,763,072	5,147,989	3,353,877	4,614,498
Revenue	23,855,436	16,574,312	18,866,874	20,840,430	31,740,799	12,184,408	8,341,982	12,427,636
Halibut Fisheries								
Halibut using hand trolls/handlines in the Statewide Area								
Permits Held	2	2	2	-	1	-	-	1
Permits Fished	1	-	-	-	1	-	-	-
Pounds	1,186	-	-	-	823	-	-	-
Revenue	1,683	-	-	-	1,012	-	-	-
Halibut using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	256	150	130	116	110	98	70	51
Permits Fished	192	117	105	98	96	83	52	48
Pounds	5,991,020	4,823,521	7,139,438	6,496,229	6,355,255	5,802,013	4,723,326	4,521,978
Revenue	11,311,268	10,355,743	14,241,957	7,922,533	12,762,996	14,302,684	9,240,947	9,617,224
Halibut using longline vessels under 60 ft. in the Statewide Area								
Permits Held	46	108	117	135	149	162	178	177
Permits Fished	15	72	87	82	124	138	142	159
Pounds	19,230	1,515,434	3,272,389	3,376,844	4,553,933	4,865,623	5,507,188	6,303,468
Revenue	37,298	3,235,563	6,639,589	4,120,972	9,095,761	12,010,662	10,699,392	13,406,050
Halibut using mechanical jigs in the Statewide Area								
Permits Held	3	2	9	10	20	25	22	12
Permits Fished	-	-	4	3	10	15	11	6
Pounds	-	-	7,423	5,238	22,500	30,968	12,780	24,041
Revenue	-	-	15,032	5,370	47,204	69,084	24,428	51,130
All Halibut Fisheries using all gears combined in All Areas Combined								
Permits Held	307	262	258	261	280	285	270	241
Permits Fished	208	189	196	183	231	236	205	213
Pounds	6,011,436	6,338,955	10,419,250	9,878,311	10,932,511	10,698,604	10,243,294	10,849,487
Revenue	11,350,249	13,591,306	20,896,578	12,048,875	21,906,973	26,382,430	19,964,767	23,074,404
Herring Fisheries								
Herring using gillnets in the Norton Sound Area								
Permits Held	-	1	1	1	1	-	-	-
Permits Fished	-	1	1	-	-	-	-	-
Pounds	-	50,685	45,295	-	-	-	-	-
Revenue	-	23,399	4,128	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Herring Roe using gillnets in the Alaska Peninsula Area								
Permits Held	1	2	2	1	1	1	1	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Herring Roe using gillnets in the Bristol Bay Area								
Permits Held	9	18	10	6	5	5	2	-
Permits Fished	2	6	-	1	1	1	-	-
Pounds	102,085	87,995	-	42,142	38,342	69,525	-	-
Revenue	44,407	35,374	-	6,701	8,550	7,370	-	-
Herring Roe using gillnets in the Kodiak Area								
Permits Held	47	51	54	51	50	48	48	47
Permits Fished	36	40	32	4	4	6	5	11
Pounds	805,524	1,094,630	567,994	135,297	82,266	107,711	352,748	561,096
Revenue	589,622	1,168,113	98,263	24,489	24,515	29,621	114,643	140,274
Herring Roe using gillnets in the Goodnews Bay Area								
Permits Held	-	1	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Herring Roe using gillnets in the Norton Sound Area								
Permits Held	-	-	-	-	-	1	1	1
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Herring Roe using gillnets in the Security Cove Area								
Permits Held	2	9	6	4	2	2	1	-
Permits Fished	1	2	-	1	-	1	-	-
Pounds	19,552	18,901	-	28,525	-	5,694	-	-
Revenue	9,365	7,669	-	3,280	-	631	-	-
Herring Roe using gillnets and purse seines in the Kodiak Area								
Permits Held	1	1	1	1	1	1	1	1
Permits Fished	1	1	1	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Herring Roe using purse seines in the Alaska Peninsula Area								
Permits Held	13	16	11	5	3	2	1	2
Permits Fished	3	2	-	-	-	-	-	-
Pounds	184,592	213,118	-	-	-	-	-	-
Revenue	38,026	97,608	-	-	-	-	-	-
Herring Roe using purse seines in the Bristol Bay Area								
Permits Held	36	54	51	26	19	22	18	16
Permits Fished	26	42	36	16	11	17	10	7
Pounds	3,923,322	5,096,594	5,265,300	6,141,888	5,282,243	6,154,896	4,012,538	4,533,617
Revenue	1,628,179	1,794,001	584,448	951,993	908,546	578,560	284,890	231,214
Herring Roe using purse seines in the Chignik Area								
Permits Held	7	9	7	5	2	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Herring Roe using purse seines in the Cook Inlet Area								
Permits Held	8	8	9	9	9	9	9	9
Permits Fished	3	8	6	3	-	-	-	-
Pounds	570,690	472,352	757,637	102,827	-	-	-	-
Revenue	353,257	469,046	76,521	11,208	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Herring Roe using purse seines in the Kodiak Area								
Permits Held	32	30	32	30	34	34	31	31
Permits Fished	28	18	26	19	11	9	13	12
Pounds	2,528,584	1,458,455	2,646,424	2,420,416	2,030,928	1,054,351	1,630,783	1,076,769
Revenue	1,658,464	1,531,378	479,003	510,708	623,495	365,860	482,712	245,371
Herring Roe using purse seines in the Prince William Sound Area								
Permits Held	9	9	11	12	10	11	11	11
Permits Fished	-	-	3	-	-	-	-	-
Pounds	-	-	592,572	-	-	-	-	-
Revenue	-	-	47,406	-	-	-	-	-
Herring Roe using purse seines in the Southeast Area								
Permits Held	-	-	1	1	1	1	2	2
Permits Fished	-	-	-	1	1	1	1	2
Pounds	-	-	-	339,840	463,092	229,017	448,945	734,649
Revenue	-	-	-	42,140	125,961	-	-	110,197
Herring Food/Bait using gillnets in the Alaska Peninsula Area								
Permits Held	-	-	-	-	-	-	1	3
Permits Fished	-	-	-	-	-	-	1	-
Pounds	-	-	-	-	-	-	26,344	-
Revenue	-	-	-	-	-	-	6,586	-
Herring Food/Bait using gillnets in the Kodiak Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Herring Food/Bait using otter trawls in the Kodiak Area								
Permits Held	2	2	3	3	3	2	-	1
Permits Fished	1	2	3	-	-	-	-	-
Pounds	-	325,203	305,737	-	-	-	-	-
Revenue	-	62,764	61,148	-	-	-	-	-
Herring Food/Bait spawn on kelp or in pounds in the Southeast Area								
Permits Held	-	-	-	-	-	-	-	2
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Herring Food/Bait using purse seines in the Alaska Peninsula Area								
Permits Held	-	2	1	3	3	5	2	2
Permits Fished	-	2	1	2	2	2	2	2
Pounds	-	250,667	141,347	351,014	439,475	337,473	380,474	152,416
Revenue	-	39,654	26,997	73,362	107,232	67,495	65,061	24,692
Herring Food/Bait using purse seines in the Kodiak Area								
Permits Held	10	13	21	16	9	5	4	4
Permits Fished	1	3	4	2	-	-	1	1
Pounds	-	649,337	879,944	-	-	-	-	-
Revenue	-	125,972	181,269	-	-	-	-	-
Herring Food/Bait using purse seines in the Prince William Sound Area								
Permits Held	-	1	1	3	2	1	-	-
Permits Fished	-	1	1	-	-	-	-	-
Pounds	-	147,907	115,353	-	-	-	-	-
Revenue	-	13,460	16,149	-	-	-	-	-
Herring Food/Bait using purse seines in the Southeast Area								
Permits Held	-	-	-	2	2	2	3	2
Permits Fished	-	-	-	2	2	-	-	-
Pounds	-	-	-	705,000	560,084	-	-	-
Revenue	-	-	-	109,225	76,732	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
All Herring Fisheries using all gears combined in All Areas Combined								
Permits Held	178	227	222	179	157	152	136	134
Permits Fished	102	128	114	51	32	37	33	35
Pounds	8,134,349	9,865,845	11,317,603	10,266,950	8,896,430	7,958,668	6,851,832	7,058,545
Revenue	4,321,320	5,368,437	1,575,332	1,733,106	1,875,031	1,049,536	953,892	751,749
Groundfish Fisheries								
Groundfish using hand trolls/handlines in the Statewide Area								
Permits Held	24	27	49	34	35	34	20	12
Permits Fished	5	9	9	7	11	9	2	1
Pounds	11,939	21,925	45,671	16,354	43,529	61,123	21,627	7,906
Revenue	3,842	7,385	11,224	4,654	16,734	24,611	6,503	2,237
Groundfish using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	72	40	26	24	21	21	18	15
Permits Fished	32	17	15	9	7	7	6	3
Pounds	9,207,586	1,968,624	1,734,061	1,670,560	295,364	1,187,608	946,405	38,758
Revenue	3,717,841	434,936	524,848	344,118	88,433	473,183	286,596	17,287
Groundfish using longline vessels under 60 ft. in the Statewide Area								
Permits Held	4	39	43	51	56	72	68	56
Permits Fished	-	19	20	23	22	43	31	20
Pounds	-	1,580,958	2,168,678	2,658,118	3,756,265	3,682,377	2,476,274	2,737,323
Revenue	-	345,401	528,413	552,308	1,130,137	1,445,621	792,287	777,826
Groundfish using mechanical jigs in the Statewide Area								
Permits Held	29	16	130	154	173	207	162	137
Permits Fished	16	4	53	60	75	84	58	49
Pounds	241,139	90,788	1,483,433	1,590,574	1,343,461	1,339,382	1,719,370	1,603,393
Revenue	79,281	29,445	349,108	363,369	495,848	531,573	500,750	429,640
Groundfish using experimental gears in the Statewide Area								
Permits Held	-	-	2	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Groundfish using otter trawls in the Statewide Area								
Permits Held	51	56	59	53	46	40	39	38
Permits Fished	47	52	50	46	40	33	35	34
Pounds	156,723,731	140,762,725	128,671,797	124,348,466	119,160,550	119,665,075	121,697,675	119,094,276
Revenue	27,980,228	26,177,813	28,072,721	11,262,928	16,383,214	16,283,866	14,864,572	10,549,802
Groundfish using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	29	35	56	51	71	78	47	35
Permits Fished	23	24	30	31	48	48	29	25
Pounds	3,947,319	6,128,579	7,979,881	9,734,062	12,865,329	8,257,055	5,301,238	9,613,808
Revenue	946,429	1,360,933	1,883,163	2,018,295	3,905,004	2,937,612	1,506,845	2,440,175
Groundfish using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	86	74	65	67	72	70	46	41
Permits Fished	68	50	39	39	49	55	24	25
Pounds	23,837,975	25,741,556	19,821,298	19,325,809	20,690,047	14,458,709	8,934,210	9,892,499
Revenue	5,290,161	4,891,792	4,070,994	3,830,179	6,090,699	4,963,528	2,311,035	2,498,665
Groundfish using purse seines in the Statewide Area								
Permits Held	2	2	2	2	1	1	1	1
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
All Groundfish Fisheries using all gears combined in All Areas Combined								
Permits Held	297	289	432	436	475	523	401	335
Permits Fished	191	175	216	215	252	279	185	157
Pounds	193,969,689	176,295,155	161,904,819	159,343,944	158,154,545	148,651,329	141,096,799	142,987,962
Revenue	38,017,782	33,247,705	35,440,471	18,375,851	28,110,068	26,659,994	20,268,588	16,715,632
Demersal Shelf Rockfish Fisheries								
Demersal Shelf Rockfish using hand trolls/handlines in the Southeast Area								
Permits Held	-	1	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Demersal Shelf Rockfish using longline vessels 60 ft. or over in the Southeast Area								
Permits Held	1	1	1	-	-	-	-	1
Permits Fished	-	-	-	-	-	-	-	1
Pounds	-	-	-	-	-	-	-	9,304
Revenue	-	-	-	-	-	-	-	9,180
Demersal Shelf Rockfish using longline vessels under 60 ft. in the Southeast Area								
Permits Held	-	1	-	1	1	1	1	1
Permits Fished	-	-	-	1	-	-	-	1
Pounds	-	-	-	13,860	-	-	-	9,135
Revenue	-	-	-	11,644	-	-	-	10,888
Demersal Shelf Rockfish using mechanical jigs in the Southeast Area								
Permits Held	-	-	-	1	1	1	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Demersal Shelf Rockfish Fisheries using all gears in All Areas Combined								
Permits Held	1	3	1	2	2	2	1	2
Permits Fished	-	-	-	1	-	-	-	2
Pounds	-	-	-	13,860	-	-	-	18,439
Revenue	-	-	-	11,644	-	-	-	20,068
Ling Cod Fisheries								
Ling Cod using dinglebar trolls in the Statewide Area								
Permits Held	-	-	3	2	2	1	1	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Ling Cod using hand trolls/handlines in the Statewide Area								
Permits Held	-	-	3	2	1	-	-	-
Permits Fished	-	-	-	-	1	-	-	-
Pounds	-	-	-	-	661	-	-	-
Revenue	-	-	-	-	626	-	-	-
Ling Cod using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	-	-	-	-	-	-	-	1
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Ling Cod using longline vessels under 60 ft. in the Statewide Area								
Permits Held	-	-	-	-	-	-	1	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Ling Cod using mechanical jigs in the Statewide Area								
Permits Held	-	-	12	11	9	12	7	3
Permits Fished	-	-	3	-	1	1	-	-
Pounds	-	-	9,784	-	1,769	1,455	-	-
Revenue	-	-	4,667	-	984	900	-	-
Ling Cod using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	-	-	-	-	1	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Ling Cod using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	-	-	3	2	2	2	2	2
Permits Fished	-	-	2	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Ling Cod Fisheries using all gears in All Areas Combined								
Permits Held	-	-	21	17	15	15	11	6
Permits Fished	-	-	5	-	2	1	-	-
Pounds	-	-	9,784	-	2,429	1,455	-	-
Revenue	-	-	4,667	-	1,610	900	-	-
Miscellaneous Shellfish Fisheries								
Abalone using diving gear in the Statewide Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Clams using shovels in the Statewide Area								
Permits Held	-	-	-	-	-	1	3	3
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Geoduck Clam using diving gear in the Southeast Area								
Permits Held	-	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	1	-	-
Pounds	-	-	-	-	-	5,200	-	-
Revenue	-	-	-	-	-	6,261	-	-
Miscellaneous Marine Invertebrates using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	-	-	1	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Octopi/Squid using hand trolls/handlines in the Statewide Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Octopi/Squid by hand picking in the Statewide Area								
Permits Held	-	-	1	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Octopi/Squid using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	1	-	-	-	-	3	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Octopi/Squid using longline vessels under 60 ft. in the Statewide Area								
Permits Held	-	-	-	-	5	-	-	-
Permits Fished	-	-	-	-	1	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Octopi/Squid using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	4	7	15	19	22	-	21	9
Permits Fished	-	1	5	9	9	-	1	-
Pounds	-	1,369	25,519	57,368	28,288	-	-	-
Revenue	-	884	14,495	23,149	9,250	-	-	-
Octopi/Squid using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	13	13	11	9	12	31	7	4
Permits Fished	3	2	6	2	5	13	-	1
Pounds	9,562	3,836	28,509	-	15,518	63,972	-	-
Revenue	3,801	2,069	16,894	-	5,074	23,154	-	-
Scallops using dredges in the Statewide Area								
Permits Held	4	4	3	1	2	1	1	1
Permits Fished	2	3	2	1	2	1	1	1
Pounds	61,876	218,527	99,714	83,464	107,448	68,196	92,040	80,634
Revenue	326,433	1,401,155	537,949	395,604	395,675	268,759	358,979	327,811
Sea Cucumber using diving gear in the Southeast Area								
Permits Held	-	-	-	-	-	2	3	3
Permits Fished	-	-	-	-	-	1	1	-
Pounds	-	-	-	-	-	5,156	5,725	-
Revenue	-	-	-	-	-	11,542	9,975	-
Sea Cucumber using diving gear in the Statewide Area								
Permits Held	19	20	18	12	14	10	11	15
Permits Fished	10	14	13	10	10	7	8	13
Pounds	59,847	77,093	62,163	76,062	64,580	39,890	73,677	86,195
Revenue	73,854	96,366	72,544	91,274	77,496	89,114	97,688	109,467
Sea Urchin using diving gear in the Southeast Area								
Permits Held	-	-	-	-	-	-	-	-
Permits Fished	-	-	-	1	-	1	-	-
Pounds	-	-	-	5,018	-	53,388	-	-
Revenue	-	-	-	2,237	-	18,811	-	-
Sea Urchin using diving gear in the Statewide Area								
Permits Held	11	12	12	7	4	4	5	2
Permits Fished	5	5	1	1	1	2	1	-
Pounds	25,692	28,362	4,650	-	-	-	-	-
Revenue	34,448	32,475	4,874	-	-	-	-	-
Shrimp using beam trawls in the Statewide Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Shrimp using beam trawls in the Westward Area								
Permits Held	-	-	-	-	-	-	-	1
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Shrimp using otter trawls in the Prince William Sound Area								
Permits Held	-	-	-	-	1	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Shrimp using otter trawls in the Statewide Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Shrimp using otter trawls in the Westward Area								
Permits Held	-	2	3	8	5	1	-	1
Permits Fished	-	-	-	4	2	-	-	-
Pounds	-	-	-	12,820	166,861	-	-	-
Revenue	-	-	-	4,584	98,030	-	-	-
Shrimp using pot gear vessels under 60 ft. in the Southeast Area								
Permits Held	-	1	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Shrimp using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	3	-	-	-	-	-	-	-
Permits Fished	1	-	-	-	-	-	-	-
Pounds	3,739	-	-	-	-	-	-	-
Revenue	10,195	-	-	-	-	-	-	-
Shrimp using pot gear vessels under 60 ft. in the Westward Area								
Permits Held	-	1	6	7	7	-	12	12
Permits Fished	-	-	-	-	-	-	1	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Shrimp using pot gear vessels 60 ft. or over in the Southeast Area								
Permits Held	-	-	-	1	1	1	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Shrimp using pot gear vessels 60 ft. or over in the Westward Area								
Permits Held	-	2	2	1	2	13	4	3
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Snails using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	1	1	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Snails using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	3	3	1	-	-	-	-	-
Permits Fished	-	2	-	-	-	-	-	-
Pounds	-	702,294	-	-	-	-	-	-
Revenue	-	210,688	-	-	-	-	-	-
All Miscellaneous Shellfish Fisheries using all gears combined in All Areas Combined								
Permits Held	63	66	73	65	75	67	67	54
Permits Fished	21	27	27	28	30	26	13	15
Pounds	160,715	1,031,481	220,556	234,732	382,694	235,801	171,442	166,829
Revenue	448,731	1,743,637	646,755	516,848	585,525	417,640	466,642	437,278

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Sablefish Fisheries								
Sablefish using fixed gear vessels under 60 ft. in the Prince William Sound Area								
Permits Held	-	-	1	1	-	-	-	-
Permits Fished	-	-	1	1	-	-	-	-
Pounds	-	-	1,813	-	-	-	-	-
Revenue	-	-	4,098	-	-	-	-	-
Sablefish using longline vessels 60 ft. or over in the Northern Southeast Area								
Permits Held	2	-	-	-	-	-	-	-
Permits Fished	2	1	1	-	-	-	-	-
Pounds	76,659	39,366	39,939	-	-	-	-	-
Revenue	148,949	83,517	100,006	-	-	-	-	-
Sablefish using longline vessels 60 ft. or over in the Southern Southeast Area								
Permits Held	1	1	1	-	-	-	-	-
Permits Fished	1	1	1	-	-	-	-	-
Pounds	24,291	22,072	21,908	-	-	-	-	-
Revenue	47,330	44,230	49,740	-	-	-	-	-
Sablefish using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	63	37	33	31	25	23	19	16
Permits Fished	46	32	25	26	19	19	15	15
Pounds	2,463,982	1,786,490	1,187,262	1,126,379	670,460	852,705	755,240	631,477
Revenue	4,868,003	3,555,303	2,661,258	1,740,021	1,243,289	1,873,894	1,437,304	1,205,808
Sablefish using longline vessels under 60 ft. in the Statewide Area								
Permits Held	-	22	28	28	30	33	34	35
Permits Fished	-	17	21	20	18	21	27	29
Pounds	-	885,162	1,052,303	1,246,412	989,889	1,100,302	1,222,327	1,387,039
Revenue	-	1,773,578	2,319,499	1,895,042	1,782,340	2,313,317	2,240,670	2,642,395
Sablefish using mechanical jigs in the Statewide Area								
Permits Held	-	-	3	1	1	1	1	1
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Sablefish using otter trawls in the Statewide Area								
Permits Held	1	1	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Sablefish using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	-	-	-	1	1	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Sablefish using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	-	1	-	-	-	1	-	-
Permits Fished	-	1	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Sablefish Fisheries using all gears combined in All Areas Combined								
Permits Held	67	62	66	62	57	58	54	52
Permits Fished	49	52	49	47	37	40	42	44
Pounds	2,564,932	2,733,091	2,303,225	2,372,791	1,660,349	1,953,006	1,977,567	2,018,516
Revenue	5,064,282	5,456,629	5,134,602	3,635,063	3,025,629	4,187,211	3,677,974	3,848,203

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Salmon Fisheries								
Salmon using beach seines in the Kodiak Area								
Permits Held	18	18	17	17	17	16	16	16
Permits Fished	7	5	3	2	3	2	-	-
Pounds	551,643	17,401	113,250	-	26,105	-	-	-
Revenue	5,185,481	5,527,356	5,241,269	3,714,086	3,173,108	4,359,058	4,024,451	3,537,037
Salmon using drift gillnets in the Alaska Peninsula Area								
Permits Held	2	3	3	3	3	4	3	3
Permits Fished	2	3	3	3	3	4	2	-
Pounds	334,829	245,600	325,568	283,574	242,309	374,214	104,856	-
Revenue	110,770	14,769	25,256	-	22,025	-	-	-
Salmon using drift gillnets in the Bristol Bay Area								
Permits Held	23	22	23	25	25	29	32	31
Permits Fished	23	23	22	23	23	25	20	12
Pounds	2,894,862	2,296,785	1,067,940	589,249	1,636,857	1,420,721	1,171,982	679,328
Revenue	2,283,013	1,817,568	984,069	692,342	1,371,542	940,066	476,488	324,750
Salmon using drift gillnets in the Cook Inlet Area								
Permits Held	9	8	9	8	8	7	6	7
Permits Fished	8	8	7	6	5	6	5	6
Pounds	218,319	217,233	127,795	51,402	80,084	82,625	44,675	185,554
Revenue	203,245	223,847	136,506	42,109	94,866	54,478	25,495	74,000
Salmon using drift gillnets in the Prince William Sound Area								
Permits Held	5	5	5	4	5	4	4	4
Permits Fished	4	3	5	3	4	4	3	4
Pounds	79,663	169,156	177,490	96,376	83,702	98,641	154,295	48,727
Revenue	86,238	173,448	153,283	119,308	136,640	109,281	126,775	54,254
Salmon using drift gillnets in the Southeast Area								
Permits Held	-	-	-	-	-	-	2	1
Permits Fished	-	-	-	-	-	-	2	-
Pounds	-	-	-	-	-	-	115,429	-
Revenue	-	-	-	-	-	-	53,786	-
Salmon using gillnets in the Lower Yukon Area								
Permits Held	-	-	-	1	-	-	-	-
Permits Fished	-	-	-	1	-	-	-	-
Pounds	-	-	-	1,581	-	-	-	-
Revenue	-	-	-	3,212	-	-	-	-
Salmon using hand trolls/handlines in the Statewide Area								
Permits Held	4	3	4	3	2	3	3	4
Permits Fished	1	-	-	-	-	-	-	-
Pounds	3,465	-	-	-	-	-	-	-
Revenue	3,243	-	-	-	-	-	-	-
Salmon using power trolls in the Statewide Area								
Permits Held	-	-	-	-	-	-	-	1
Permits Fished	-	-	-	-	-	-	-	1
Pounds	-	-	-	-	-	-	-	24,450
Revenue	-	-	-	-	-	-	-	16,280
Salmon using purse seines in the Alaska Peninsula Area								
Permits Held	1	1	1	1	2	1	1	1
Permits Fished	-	-	1	-	-	-	-	-
Pounds	-	-	183,744	-	-	-	-	-
Revenue	-	-	59,089	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Salmon using purse seines in the Chignik Area								
Permits Held	9	9	9	9	8	9	8	9
Permits Fished	9	7	9	7	9	11	8	1
Pounds	2,003,824	1,010,748	786,521	621,318	1,871,612	1,266,611	1,097,020	309,805
Revenue	1,094,052	737,426	373,203	546,046	1,612,814	991,908	514,579	190,428
Salmon using purse seines in the Kodiak Area								
Permits Held	164	165	168	168	165	174	169	165
Permits Fished	130	117	114	106	105	105	87	73
Pounds	65,168,957	15,661,466	20,038,027	43,899,831	28,471,923	23,624,923	39,988,904	36,199,127
Revenue	16,964,134	7,922,759	6,349,488	11,950,929	11,284,263	7,554,635	7,931,796	4,544,800
Salmon using purse seines in the Prince William Sound Area								
Permits Held	-	-	-	-	-	1	1	1
Permits Fished	-	-	-	-	-	-	1	1
Pounds	-	-	-	-	-	-	524,652	364,602
Revenue	-	-	-	-	-	-	79,919	42,066
Salmon using purse seines in the Southeast Area								
Permits Held	1	1	4	6	5	4	4	4
Permits Fished	-	1	3	5	4	3	3	2
Pounds	-	786,917	1,710,109	2,997,376	3,222,695	1,376,439	2,531,085	1,392,354
Revenue	-	115,960	396,967	543,705	616,598	361,389	483,670	118,909
Salmon using set gillnets in the Alaska Peninsula Area								
Permits Held	1	1	-	-	-	-	-	-
Permits Fished	1	1	-	-	-	-	-	-
Pounds	74,124	71,048	-	-	-	-	-	-
Revenue	50,848	45,482	-	-	-	-	-	-
Salmon using set gillnets in the Bristol Bay Area								
Permits Held	9	10	10	10	10	9	11	8
Permits Fished	11	9	9	9	10	10	11	7
Pounds	223,935	257,068	177,012	142,090	310,330	250,022	211,691	129,436
Revenue	175,545	204,811	163,361	167,556	259,006	164,766	87,221	62,849
Salmon using set gillnets in the Kodiak Area								
Permits Held	97	91	88	93	94	87	92	90
Permits Fished	88	80	83	82	85	76	83	53
Pounds	14,835,131	6,721,283	5,928,316	10,020,217	7,129,144	5,614,196	6,786,420	7,732,168
Revenue	6,166,430	4,447,087	3,123,874	4,553,911	5,291,327	2,944,249	2,625,518	1,455,075
Salmon using set gillnets in the Kuskokwim Area								
Permits Held	-	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	1	-	-
Pounds	-	-	-	-	-	5,863	-	-
Revenue	-	-	-	-	-	2,015	-	-
Salmon using set gillnets in the Yakutat Area								
Permits Held	-	1	1	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Salmon Fisheries using all gears combined in All Areas Combined								
Permits Held	343	338	342	348	344	348	352	345
Permits Fished	284	257	259	247	251	247	225	160
Pounds	86,388,752	27,454,706	30,635,772	58,703,014	43,074,761	34,114,255	52,731,008	47,065,551
Revenue	32,323,000	21,230,513	17,006,366	22,333,204	23,862,190	17,481,846	16,429,699	10,420,447

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
All fisheries using all gears in all areas								
All fisheries using all gears combined in All Areas Combined								
Permits Held	1,411	1,418	1,591	1,533	1,538	1,569	1,555	1,459
Permits Fished	955	957	996	894	922	948	894	860
Pounds	307,032,637	232,682,737	234,295,357	269,549,125	247,866,791	208,761,107	216,425,818	214,779,829
Revenue	115,380,799	97,212,538	99,571,645	79,495,021	111,107,824	88,363,964	70,103,544	67,695,417

Source: Commercial Fishing Entry Commission "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City" from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

Note: If fewer than 4 permits were fished in a given year then the pounds and revenue numbers shown in the table are estimates produced by Northern Economics, Inc. Otherwise the pounds and revenue numbers reflect CFEC data.

Table A-3. Detailed Catch and Earnings Estimates for Unalaska/Dutch Harbor Permit Holders by Permit Type, 1995-2002

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Crab Fisheries								
Dungeness Crab using pot gear vessels under 60 ft. in the Alaska Peninsula Area								
Permits Held	5	3	1	-	-	-	-	-
Permits Fished	-	1	1	-	-	-	-	-
Pounds	-	-	22,442	-	-	-	-	-
Revenue	-	-	47,600	-	-	-	-	-
Dungeness Crab using pot gear vessels under 60 ft. in the Westward Area								
Permits Held	2	3	1	2	2	1	1	1
Permits Fished	-	-	1	-	-	-	1	1
Pounds	-	-	14,676	-	-	-	2,809	5,539
Revenue	-	-	30,941	-	-	-	5,357	8,103
Dungeness Crab using pot gear vessels 60 ft. or over in the Alaska Peninsula Area								
Permits Held	-	-	2	-	-	-	-	-
Permits Fished	-	-	2	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Dungeness Crab using pot gear vessels 60 ft. or over in the Westward Area								
Permits Held	2	1	3	1	-	1	1	1
Permits Fished	1	1	3	1	-	1	-	1
Pounds	29,245	69,631	142,747	30,802	-	8,678	-	12,218
Revenue	49,410	76,506	300,911	44,694	-	14,318	-	17,875
King Crab using pot gear vessels under 60 ft. in the Bristol Bay Area								
Permits Held	-	-	-	-	-	1	-	-
Permits Fished	-	-	-	-	-	1	-	-
Pounds	-	-	-	-	-	10,615	-	-
Revenue	-	-	-	-	-	51,044	-	-
King Crab using pot gear vessels under 60 ft. in the Norton Sound Area								
Permits Held	1	2	-	-	-	1	3	-
Permits Fished	1	1	-	-	-	1	2	-
Pounds	2,508	3,152	-	-	-	9,481	13,757	-
Revenue	7,207	7,156	-	-	-	29,299	64,903	-
King Crab using pot gear vessels 60 ft. or over in the Adak/Western Aleutians Area								
Permits Held	9	6	-	-	-	-	-	-
Permits Fished	7	5	-	-	-	-	-	-
Pounds	1,096,794	518,624	-	-	-	-	-	-
Revenue	3,261,865	1,109,589	-	-	-	-	-	-
King Crab using pot gear vessels 60 ft. or over in the Bering Sea Area								
Permits Held	4	9	8	7	2	-	2	1
Permits Fished	4	9	8	6	1	-	2	1
Pounds	80,826	164,249	178,385	92,049	44,197	-	49,318	24,609
Revenue	224,915	428,545	453,419	181,836	137,144	-	159,494	80,865
King Crab using pot gear vessels 60 ft. or over in the Bristol Bay Area								
Permits Held	-	9	9	8	6	4	3	2
Permits Fished	-	8	7	8	5	3	2	2
Pounds	-	248,120	232,785	286,386	200,144	89,362	52,313	64,310
Revenue	-	999,427	760,043	753,768	1,254,104	425,312	252,841	402,599

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
King Crab using pot gear vessels 60 ft. or over in the Dutch Harbor Area								
Permits Held	3	3	3	2	1	2	1	2
Permits Fished	3	2	3	2	1	1	1	2
Pounds	231,990	168,401	216,092	418,983	100,123	229,097	52,925	57,910
Revenue	671,379	373,509	484,370	792,530	310,683	777,211	170,969	252,752
Korean Hair Crab using pot gear vessels 60 ft. or over in the Bering Sea Area								
Permits Held	-	-	1	-	-	-	-	-
Permits Fished	-	-	1	-	-	-	-	-
Pounds	-	-	36,124	-	-	-	-	-
Revenue	-	-	115,454	-	-	-	-	-
Miscellaneous Crab using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	-	1	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Miscellaneous Crab using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	2	1	-	-	-	-	-	-
Permits Fished	2	1	-	-	-	-	-	-
Pounds	124,596	40,224	-	-	-	-	-	-
Revenue	341,394	112,426	-	-	-	-	-	-
Tanner Crab using pot gear vessels under 60 ft. in the Dutch Harbor Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Tanner Crab using pot gear vessels 60 ft. or over in the Adak/Western Aleutians Area								
Permits Held	-	1	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Tanner Crab using pot gear vessels 60 ft. or over in the Bering Sea Area								
Permits Held	11	13	7	6	10	6	3	2
Permits Fished	9	12	7	6	9	6	3	2
Pounds	1,799,134	2,169,967	2,675,476	4,283,224	5,488,979	632,090	236,116	237,339
Revenue	4,108,188	3,043,948	2,108,275	2,420,022	5,395,666	1,167,318	366,646	328,396
Tanner Crab using pot gear vessels 60 ft. or over in the Dutch Harbor Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	1	-	-	-	-	-	-	-
Pounds	81,748	-	-	-	-	-	-	-
Revenue	130,053	-	-	-	-	-	-	-
All Crab Fisheries using all gears combined in All Areas Combined								
Permits Held	41	52	35	26	21	16	14	9
Permits Fished	28	40	33	23	16	13	11	9
Pounds	3,446,842	3,382,368	3,518,728	5,111,444	5,833,444	979,323	407,237	401,926
Revenue	8,794,411	6,151,106	4,301,013	4,192,850	7,097,596	2,464,502	1,020,209	1,090,591

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Halibut Fisheries								
Halibut using hand trolls/handlines in the Statewide Area								
Permits Held	-	-	1	1	3	1	1	-
Permits Fished	-	-	1	1	1	-	-	-
Pounds	-	-	3,858	2,497	4,019	-	-	-
Revenue	-	-	6,070	2,269	5,873	-	-	-
Halibut using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	12	8	5	3	5	4	4	4
Permits Fished	9	6	5	3	5	3	3	3
Pounds	206,495	181,777	191,492	224,290	361,714	227,443	260,902	122,015
Revenue	343,817	324,675	372,539	226,440	584,263	432,029	442,986	220,044
Halibut using longline vessels under 60 ft. in the Statewide Area								
Permits Held	15	13	14	12	12	15	18	22
Permits Fished	8	10	11	6	10	13	12	19
Pounds	115,661	119,107	244,178	159,748	190,540	241,462	254,130	438,169
Revenue	200,446	192,576	418,226	149,566	292,576	525,939	431,336	790,201
Halibut using mechanical jigs in the Statewide Area								
Permits Held	1	4	6	5	6	5	5	4
Permits Fished	-	3	5	4	4	4	2	2
Pounds	-	6,725	11,041	9,524	24,680	23,131	1,920	2,913
Revenue	-	12,983	20,876	8,517	41,025	45,286	2,929	5,253
All Halibut Fisheries using all gears combined in All Areas Combined								
Permits Held	28	25	26	21	26	25	28	30
Permits Fished	17	19	22	14	20	20	17	24
Pounds	322,156	307,609	450,570	396,060	580,952	492,036	516,951	563,097
Revenue	544,263	530,234	817,711	386,792	923,737	1,003,253	877,251	1,015,498
Herring Fisheries								
Herring spawn on kelp or in pounds in the Prince William Sound Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Herring Roe using purse seines in the Bristol Bay Area								
Permits Held	-	-	-	-	-	1	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Herring Food/Bait using gillnets in the Alaska Peninsula Area								
Permits Held	-	-	-	-	-	-	10	16
Permits Fished	-	-	-	-	-	-	6	15
Pounds	-	-	-	-	-	-	158,063	268,588
Revenue	-	-	-	-	-	-	39,516	53,718
Herring Food/Bait using purse seines in the Alaska Peninsula Area								
Permits Held	1	1	-	-	-	-	-	2
Permits Fished	1	1	-	-	-	-	-	-
Pounds	189,748	125,334	-	-	-	-	-	-
Revenue	29,601	19,827	-	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
All Herring Fisheries using all gears combined in All Areas Combined								
Permits Held	2	1	-	-	-	1	10	18
Permits Fished	1	1	-	-	-	-	6	15
Pounds	189,748	125,334	-	-	-	-	158,063	268,588
Revenue	29,601	19,827	-	-	-	-	39,516	53,718
Ling Cod Fisheries								
Ling Cod using mechanical jigs in the Statewide Area								
Permits Held	-	-	-	-	-	1	1	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Groundfish Fisheries								
Groundfish using beam trawls in the Statewide Area								
Permits Held	-	1	1	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Groundfish using hand trolls/handlines in the Statewide Area								
Permits Held	4	2	2	1	1	1	1	2
Permits Fished	1	1	2	-	-	-	-	1
Pounds	4,123	707	7,874	-	-	-	-	7,906
Revenue	1,876	274	2,506	-	-	-	-	2,237
Groundfish using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	9	4	5	4	6	4	3	3
Permits Fished	5	1	4	1	3	2	1	1
Pounds	561,525	62,611	393,356	99,471	152,390	85,984	96,671	12,919
Revenue	213,132	20,494	261,162	21,886	50,260	30,121	27,893	5,762
Groundfish using longline vessels under 60 ft. in the Statewide Area								
Permits Held	12	13	10	7	10	9	13	15
Permits Fished	2	4	1	1	3	4	6	6
Pounds	3,167	14,394	27,542	43,763	107,610	139,899	168,095	175,803
Revenue	605	3,848	8,173	9,880	35,658	46,795	45,310	29,916
Groundfish using mechanical jigs in the Statewide Area								
Permits Held	34	40	33	24	20	18	17	19
Permits Fished	19	23	15	9	8	7	4	5
Pounds	1,004,089	631,021	394,064	248,626	168,045	102,715	19,990	59,869
Revenue	297,244	178,672	118,822	65,470	58,388	32,469	6,941	13,342
Groundfish using otter trawls in the Statewide Area								
Permits Held	2	2	1	1	1	1	2	-
Permits Fished	1	1	-	-	-	1	1	-
Pounds	3,334,547	2,654,931	-	-	-	3,368,704	3,477,076	-
Revenue	595,324	519,326	-	-	-	463,706	424,702	-
Groundfish using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	3	8	6	5	3	2	2	3
Permits Fished	1	1	1	-	1	-	-	2
Pounds	171,623	219,677	226,137	-	253,885	-	-	678,101
Revenue	41,149	48,955	53,535	-	76,941	-	-	176,217

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Groundfish using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	8	10	7	5	6	6	2	2
Permits Fished	6	7	4	1	4	5	1	1
Pounds	969,266	2,741,977	919,560	395,000	241,672	757,246	356,687	395,700
Revenue	227,020	512,283	196,028	79,690	74,132	231,366	91,290	99,947
All Groundfish Fisheries using all gears combined in All Areas Combined								
Permits Held	72	80	65	47	47	41	40	44
Permits Fished	35	38	27	12	19	19	13	16
Pounds	6,048,340	6,325,319	1,968,533	786,860	923,601	4,454,548	4,118,519	1,330,298
Revenue	1,376,349	1,283,852	640,226	176,926	295,379	804,456	596,136	327,420
Miscellaneous Shellfish Fisheries								
Octopi/Squid using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	1	1	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Octopi/Squid using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	2	1	1	-	-	2	-	-
Permits Fished	1	-	1	-	-	-	-	-
Pounds	3,187	-	4,752	-	-	-	-	-
Revenue	1,267	-	2,816	-	-	-	-	-
Scallops using dredges in the Statewide Area								
Permits Held	-	-	1	-	-	-	-	-
Permits Fished	-	-	1	-	-	-	-	-
Pounds	-	-	49,857	-	-	-	-	-
Revenue	-	-	268,974	-	-	-	-	-
Sea Cucumber using diving gear in the Statewide Area								
Permits Held	2	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Sea Urchin using diving gear in the Statewide Area								
Permits Held	5	19	7	2	1	1	1	-
Permits Fished	-	5	-	-	-	-	-	-
Pounds	-	28,362	-	-	-	-	-	-
Revenue	-	32,475	-	-	-	-	-	-
Sea Urchin by hand picking in the Statewide Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Shrimp using otter trawls in the Prince William Sound Area								
Permits Held	-	-	1	1	1	1	1	1
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Shrimp using otter trawls in the Statewide Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Shrimp using pot gear vessels under 60 ft. in the Prince William Sound Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Shrimp using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	3	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Shrimp using pot gear vessels under 60 ft. in the Westward Area								
Permits Held	-	3	1	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Shrimp using pot gear vessels 60 ft. or over in the Westward Area								
Permits Held	-	1	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Miscellaneous Fisheries using all gears combined in All Areas Combined								
Permits Held	16	25	11	3	2	4	2	1
Permits Fished	1	5	2	-	-	-	-	-
Pounds	3,187	28,362	54,609	-	-	-	-	-
Revenue	1,267	32,475	271,790	-	-	-	-	-
Sablefish Fisheries								
Sablefish using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	5	6	5	2	4	3	3	2
Permits Fished	3	3	2	2	4	2	1	1
Pounds	133,120	146,662	88,617	72,696	261,190	87,863	54,818	70,459
Revenue	264,581	297,994	202,867	108,967	467,203	186,024	104,219	136,625
Sablefish using longline vessels under 60 ft. in the Statewide Area								
Permits Held	2	6	2	1	3	4	5	6
Permits Fished	-	1	1	1	2	3	3	4
Pounds	-	32,311	28,965	32,485	50,480	37,921	28,957	39,170
Revenue	-	66,250	66,846	50,274	92,417	74,215	53,484	70,962
Sablefish using mechanical jigs in the Statewide Area								
Permits Held	2	6	1	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Sablefish using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	-	2	-	-	-	-	-	2
Permits Fished	-	-	-	-	-	-	-	1
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Sablefish using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	-	2	-	-	-	-	2	2
Permits Fished	-	-	-	-	-	-	1	2
Pounds	-	-	-	-	-	-	113,210	319,804
Revenue	-	-	-	-	-	-	196,028	558,677
All Sablefish Fisheries using all gears combined in All Areas Combined								
Permits Held	9	22	8	3	7	7	10	12
Permits Fished	3	4	3	3	6	5	5	8
Pounds	133,120	178,973	117,582	105,181	311,670	125,784	196,985	429,433
Revenue	264,581	364,244	269,713	159,242	559,620	260,239	353,731	766,264
Salmon Fisheries								
Salmon using drift gillnets in the Alaska Peninsula Area								
Permits Held	1	1	1	1	2	1	1	-
Permits Fished	1	1	1	1	-	-	-	-
Pounds	167,415	81,867	108,523	94,525	-	-	-	-
Revenue	164,104	66,307	95,956	96,086	-	-	-	-
Salmon using drift gillnets in the Bristol Bay Area								
Permits Held	2	1	1	2	1	3	1	3
Permits Fished	1	2	1	2	1	3	1	2
Pounds	112,580	170,142	37,430	52,034	63,701	164,022	46,798	102,606
Revenue	88,232	134,429	34,167	59,400	53,170	107,864	18,834	48,667
Salmon using drift gillnets in the Prince William Sound Area								
Permits Held	1	1	1	1	1	1	1	1
Permits Fished	1	1	1	1	1	1	1	1
Pounds	43,156	56,385	61,613	32,125	40,134	53,905	51,432	66,188
Revenue	44,459	57,816	53,278	39,769	55,811	39,080	42,258	37,544
Salmon using gillnets in the Lower Yukon Area								
Permits Held	1	1	-	1	1	-	-	-
Permits Fished	1	1	-	-	1	-	-	-
Pounds	5,325	4,365	-	-	2,488	-	-	-
Revenue	8,451	6,324	-	-	8,374	-	-	-
Salmon using hand trolls/handlines in the Statewide Area								
Permits Held	-	-	-	-	-	1	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Salmon using power trolls in the Statewide Area								
Permits Held	-	-	-	1	1	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Salmon using purse seines in the Alaska Peninsula Area								
Permits Held	3	3	3	3	1	1	-	1
Permits Fished	2	1	-	-	-	-	-	-
Pounds	1,254,071	155,783	-	-	-	-	-	-
Revenue	340,298	40,453	-	-	-	-	-	-
Salmon using purse seines in the Chignik Area								
Permits Held	1	-	-	1	1	1	1	1
Permits Fished	1	-	-	1	1	1	1	-
Pounds	239,966	-	-	124,723	322,278	176,753	213,595	-
Revenue	136,214	-	-	101,480	256,128	124,412	80,038	-
Salmon using purse seines in the Kodiak Area								
Permits Held	1	1	1	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Salmon using set gillnets in the Bristol Bay Area								
Permits Held	-	1	2	2	1	-	-	-
Permits Fished	-	2	2	2	1	-	-	-
Pounds	-	59,855	35,482	29,008	30,908	-	-	-
Revenue	-	47,239	32,354	33,388	25,659	-	-	-
All Salmon Fisheries using all gears combined in All Areas Combined								
Permits Held	10	9	9	12	9	8	4	6
Permits Fished	7	8	5	7	5	5	3	3
Pounds	1,822,512	528,397	243,047	332,415	459,509	394,680	311,825	168,794
Revenue	781,757	352,569	215,756	330,124	399,142	271,356	141,130	86,212
All fisheries using all gears in all areas								
All fisheries using all gears combined in All Areas Combined								
Permits Held	178	214	154	112	112	103	109	120
Permits Fished	92	115	92	59	66	62	55	75
Pounds	11,965,904	10,876,362	6,353,069	6,731,960	8,109,176	6,446,371	5,709,580	3,162,136
Revenue	11,792,228	8,734,307	6,516,208	5,245,933	9,275,474	4,803,806	3,027,973	3,339,703

Source: Commercial Fishing Entry Commission "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City" from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

Note: If fewer than 4 permits were fished in a given year then the pounds and revenue numbers shown in the table are estimates produced by Northern Economics, Inc. Otherwise the pounds and revenue numbers reflect CFEC data.

Table A-4. Detailed Catch and Earnings Estimates for King Cove Permit Holders by Permit Type, 1995-2002

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Crab Fisheries								
Dungeness Crab using pot gear vessels under 60 ft. in the Alaska Peninsula Area								
Permits Held	-	-	1	-	-	-	1	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Dungeness Crab using pot gear vessels 60 ft. or over in the Alaska Peninsula Area								
Permits Held	-	-	-	-	-	-	-	1
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
King Crab using pot gear vessels under 60 ft. in the Bering Sea Area								
Permits Held	-	2	1	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
King Crab using pot gear vessels under 60 ft. in the Bristol Bay Area								
Permits Held	-	-	-	-	1	1	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
King Crab using pot gear vessels 60 ft. or over in the Bering Sea Area								
Permits Held	8	6	4	3	1	-	-	-
Permits Fished	8	6	4	3	-	-	-	-
Pounds	64,959	122,331	121,138	51,274	-	-	-	-
Revenue	237,113	326,361	315,815	106,736	-	-	-	-
King Crab using pot gear vessels 60 ft. or over in the Bristol Bay Area								
Permits Held	-	4	4	4	7	6	5	4
Permits Fished	-	4	3	3	5	5	5	4
Pounds	-	139,781	80,343	116,020	211,038	148,647	134,075	100,063
Revenue	-	563,036	262,319	305,364	1,322,366	711,145	644,744	618,668
King Crab using pot gear vessels 60 ft. or over in the Dutch Harbor Area								
Permits Held	-	-	-	-	-	-	-	1
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Miscellaneous Crab using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	1	-	-	-	-	-	-	-
Pounds	62,298	-	-	-	-	-	-	-
Revenue	170,697	-	-	-	-	-	-	-
Tanner Crab using pot gear vessels under 60 ft. in the Alaska Peninsula Area								
Permits Held	-	-	-	-	-	-	25	-
Permits Fished	-	-	-	-	-	-	19	-
Pounds	-	-	-	-	-	-	85,445	-
Revenue	-	-	-	-	-	-	121,489	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Tanner Crab using pot gear vessels 60 ft. or over in the Bering Sea Area								
Permits Held	7	4	4	4	3	5	4	3
Permits Fished	7	4	3	3	2	5	3	2
Pounds	422,120	403,958	1,190,501	2,232,270	1,157,890	575,288	228,494	241,795
Revenue	1,029,391	566,939	938,114	1,261,233	1,138,206	1,068,645	354,336	333,995
All Crab Fisheries using all gears combined in All Areas Combined								
Permits Held	16	16	14	11	12	12	35	9
Permits Fished	16	14	10	9	7	10	27	6
Pounds	549,377	666,070	1,391,981	2,399,564	1,368,928	723,935	448,014	341,858
Revenue	1,437,201	1,456,336	1,516,248	1,673,333	2,460,572	1,779,790	1,120,569	952,663
Halibut Fisheries								
Halibut using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	33	21	12	7	7	7	5	2
Permits Fished	19	14	9	6	7	6	4	1
Pounds	92,582	87,010	120,664	94,997	154,939	174,781	114,542	19,830
Revenue	172,817	171,323	243,379	85,191	280,258	402,980	214,285	40,027
Halibut using longline vessels under 60 ft. in the Statewide Area								
Permits Held	-	12	16	10	8	8	9	10
Permits Fished	-	7	8	7	5	7	9	9
Pounds	-	32,813	61,211	59,633	62,564	72,821	149,401	223,700
Revenue	-	64,609	123,463	53,968	113,178	167,667	278,062	451,532
All Halibut Fisheries using all gears combined in All Areas Combined								
Permits Held	33	33	28	17	15	15	14	12
Permits Fished	19	21	17	13	12	13	13	10
Pounds	92,582	119,823	181,875	154,630	217,503	247,602	263,943	243,530
Revenue	172,817	235,932	366,842	139,159	393,436	570,647	492,347	491,559
Herring Fisheries								
Herring Roe using gillnets in the Bristol Bay Area								
Permits Held	3	2	2	1	-	-	-	-
Permits Fished	1	1	-	-	-	-	-	-
Pounds	41,143	17,706	-	-	-	-	-	-
Revenue	17,858	7,112	-	-	-	-	-	-
Herring Roe using gillnets in the Security Cove Area								
Permits Held	3	2	2	1	-	-	-	-
Permits Fished	-	1	-	-	-	-	-	-
Pounds	-	9,772	-	-	-	-	-	-
Revenue	-	3,831	-	-	-	-	-	-
Herring Roe using purse seines in the Alaska Peninsula Area								
Permits Held	6	9	4	4	4	4	3	1
Permits Fished	3	-	-	-	-	-	-	-
Pounds	57,797	-	-	-	-	-	-	-
Revenue	11,906	-	-	-	-	-	-	-
Herring Roe using purse seines in the Bristol Bay Area								
Permits Held	7	11	9	4	5	5	4	1
Permits Fished	2	6	5	3	2	3	1	-
Pounds	135,378	378,930	603,800	381,612	452,710	405,017	396,467	-
Revenue	56,182	133,383	67,022	59,150	77,866	38,072	28,149	-
Herring Roe using purse seines in the Kodiak Area								
Permits Held	-	-	-	-	-	-	-	-
Permits Fished	-	1	1	-	-	-	-	-
Pounds	-	126,485	88,294	-	-	-	-	-
Revenue	-	132,809	15,981	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Herring Food/Bait using gillnets in the Alaska Peninsula Area								
Permits Held	-	-	-	-	-	-	1	-
Permits Fished	-	-	-	-	-	-	1	-
Pounds	-	-	-	-	-	-	26,344	-
Revenue	-	-	-	-	-	-	6,586	-
Herring Food/Bait using purse seines in the Alaska Peninsula Area								
Permits Held	1	1	2	2	2	2	1	1
Permits Fished	-	1	2	-	1	1	-	-
Pounds	-	134,482	195,421	-	144,071	115,678	-	-
Revenue	-	21,921	37,325	-	35,153	23,136	-	-
All Herring Fisheries using all gears combined in All Areas Combined								
Permits Held	20	25	19	12	11	11	9	3
Permits Fished	6	10	8	3	3	4	2	-
Pounds	234,318	667,376	887,515	381,612	596,781	520,695	422,811	-
Revenue	85,946	299,056	120,329	59,150	113,019	61,207	34,735	-
Demersal Shelf Rockfish Fisheries								
Demersal Shelf Rockfish using longline vessels under 60 ft. in the Southeast Area								
Permits Held	-	-	-	1	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Demersal Shelf Rockfish using mechanical jigs in the Southeast Area								
Permits Held	-	-	-	1	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Demersal Shelf Fisheries using all gears combined in All Areas Combined								
Permits Held	-	-	-	2	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Groundfish Fisheries								
Groundfish using hand trolls/handlines in the Statewide Area								
Permits Held	-	-	-	1	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Groundfish using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	13	5	1	1	1	1	1	1
Permits Fished	1	1	-	-	-	-	-	-
Pounds	14,190	54,128	-	-	-	-	-	-
Revenue	2,691	13,884	-	-	-	-	-	-
Groundfish using longline vessels under 60 ft. in the Statewide Area								
Permits Held	-	4	2	-	-	-	1	1
Permits Fished	-	1	-	-	-	-	-	-
Pounds	-	16,182	-	-	-	-	-	-
Revenue	-	6,141	-	-	-	-	-	-
Groundfish using mechanical jigs in the Statewide Area								
Permits Held	6	4	4	3	2	3	11	10
Permits Fished	3	1	-	1	-	-	4	5
Pounds	50,668	12,633	-	15,089	-	-	68,897	267,486
Revenue	12,525	2,989	-	2,580	-	-	16,966	58,243

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Groundfish using otter trawls in the Statewide Area								
Permits Held	13	11	9	10	9	9	9	8
Permits Fished	10	9	9	8	9	9	9	7
Pounds	3,049,627	4,580,342	6,210,320	6,362,485	6,848,469	3,707,726	3,474,762	2,594,075
Revenue	526,003	669,373	1,009,479	934,113	1,408,572	1,111,359	768,150	533,677
Groundfish using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	11	17	30	30	23	23	27	17
Permits Fished	9	11	22	20	16	17	19	13
Pounds	611,616	911,247	3,333,243	4,257,192	3,253,909	3,488,148	3,209,812	3,975,669
Revenue	118,209	164,463	633,537	741,942	823,393	1,051,746	795,606	852,248
Groundfish using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	20	16	6	7	6	6	4	2
Permits Fished	17	13	4	4	4	5	4	2
Pounds	2,780,441	2,835,102	3,227,263	2,750,463	1,450,249	1,467,735	1,184,350	806,209
Revenue	519,174	581,220	573,404	434,021	362,877	441,464	289,423	197,617
Groundfish using purse seines in the Statewide Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	1	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Groundfish Fisheries using all gears combined in All Areas Combined								
Permits Held	64	57	52	52	41	42	53	39
Permits Fished	41	36	35	33	29	31	36	27
Pounds	6,506,542	8,409,633	12,770,826	13,385,229	11,552,626	8,663,609	7,937,821	7,643,439
Revenue	1,178,602	1,438,069	2,216,420	2,112,656	2,594,842	2,604,569	1,870,145	1,641,784
Miscellaneous Shellfish Fisheries								
Octopi/Squid using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	7	7	3	1	1	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Octopi/Squid using pot gear vessels 60 ft. or over in the Statewide Area								
Permits Held	5	2	-	-	-	1	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Octopi/Squid using purse seines in the Statewide Area								
Permits Held	1	-	-	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Miscellaneous Shellfish Fisheries using all gears combined in All Areas Combined								
Permits Held	13	9	3	1	1	1	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Sablefish Fisheries								
Sablefish using longline vessels 60 ft. or over in the Statewide Area								
Permits Held	7	6	2	1	-	-	-	-
Permits Fished	-	1	-	-	-	-	-	-
Pounds	-	25,204	-	-	-	-	-	-
Revenue	-	52,480	-	-	-	-	-	-

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Sablefish using longline vessels under 60 ft. in the Statewide Area								
Permits Held	-	2	2	-	-	1	-	-
Permits Fished	-	2	1	-	-	1	-	-
Pounds	-	68,379	16,017	-	-	22,624	-	-
Revenue	-	141,666	36,972	-	-	51,364	-	-
Sablefish using mechanical jigs in the Statewide Area								
Permits Held	-	-	-	1	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Sablefish using pot gear vessels under 60 ft. in the Statewide Area								
Permits Held	-	-	2	-	-	-	-	-
Permits Fished	-	-	1	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
All Sablefish Fisheries using all gears combined in All Areas Combined								
Permits Held	7	8	6	2	-	1	-	-
Permits Fished	-	3	2	-	-	1	-	-
Pounds	-	93,584	16,017	-	-	22,624	-	-
Revenue	-	194,147	36,972	-	-	51,364	-	-
Salmon Fisheries								
Salmon using drift gillnets in the Alaska Peninsula Area								
Permits Held	14	13	11	11	10	10	9	9
Permits Fished	14	14	11	10	9	9	9	8
Pounds	1,586,555	893,147	976,644	811,446	707,842	946,891	701,234	618,021
Revenue	1,346,377	613,653	752,299	621,918	641,673	590,206	210,206	170,731
Salmon using drift gillnets in the Bristol Bay Area								
Permits Held	-	-	1	1	1	2	2	-
Permits Fished	-	-	1	1	1	1	1	-
Pounds	-	-	27,157	23,890	54,370	52,818	47,610	-
Revenue	-	-	24,691	27,378	45,059	34,896	19,268	-
Salmon using hand trolls/handlines in the Statewide Area								
Permits Held	-	-	1	-	-	-	-	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Salmon using purse seines in the Alaska Peninsula Area								
Permits Held	34	34	33	33	32	32	27	27
Permits Fished	34	31	25	24	22	23	20	15
Pounds	22,082,406	4,908,200	4,666,724	9,463,778	11,691,415	5,829,353	6,040,684	5,083,378
Revenue	5,936,908	1,269,500	1,491,812	2,545,118	3,518,905	1,722,654	830,588	655,015
Salmon using purse seines in the Kodiak Area								
Permits Held	-	-	-	-	-	1	1	-
Permits Fished	-	-	-	-	-	-	-	-
Pounds	-	-	-	-	-	-	-	-
Revenue	-	-	-	-	-	-	-	-
Salmon using set gillnets in the Alaska Peninsula Area								
Permits Held	7	11	11	11	9	8	10	10
Permits Fished	9	12	12	11	9	11	9	8
Pounds	819,548	403,884	565,086	747,152	753,406	785,930	537,896	472,104
Revenue	570,309	201,749	411,285	443,468	567,514	441,715	181,591	175,737

	Year							
	1995	1996	1997	1998	1999	2000	2001	2002
Salmon using set gillnets in the Bristol Bay Area								
Permits Held	2	2	3	3	2	2	2	4
Permits Fished	3	2	3	3	3	2	2	2
Pounds	116,684	58,044	22,886	21,669	67,855	41,887	61,253	50,263
Revenue	91,559	44,441	20,953	25,593	56,588	27,432	25,504	24,410
All Salmon Fisheries using all gears combined in All Areas Combined								
Permits Held	57	60	60	59	54	55	51	50
Permits Fished	60	59	52	49	44	46	41	33
Pounds	24,605,192	6,263,276	6,258,498	11,067,935	13,274,889	7,656,879	7,388,678	6,223,766
Revenue	7,945,153	2,129,343	2,701,040	3,663,475	4,829,739	2,816,903	1,267,158	1,025,894
All Fisheries using all gears combined in All Areas Combined								
Permits Held	210	208	182	156	134	137	162	113
Permits Fished	142	143	124	107	95	105	119	76
Pounds	31,988,010	16,219,760	21,506,712	27,388,970	27,010,727	17,835,345	16,461,267	14,452,594
Revenue	10,819,718	5,752,883	6,957,851	7,647,772	10,391,608	7,884,480	4,784,955	4,111,900

Source: Commercial Fishing Entry Commission "Permit and Fishing Activity by Year, State, Census Division, or Alaskan City" from http://www.cfec.state.ak.us/Mnu_Summary_Info.htm; supplemented by Northern Economics, Inc.

Note: If fewer than 4 permits were fished in a given year then the pounds and revenue numbers shown in the table are estimates produced by Northern Economics, Inc. Otherwise the pounds and revenue numbers reflect CFEC data.

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APPENDIX B

**ALEUTIANS EAST BOROUGH
FISHERY RELATED REVENUES**

APPENDIX B

ALEUTIANS EAST BOROUGH FISHERY RELATED REVENUES

Nowhere is the importance of a borough structure in relation to local fisheries dependency more obvious than in the Aleutians East Borough (AEB), where Akutan and King Cove (and Sand Point) are the primary drivers of the fisheries-based portion of the borough economy. While local (community) revenues are discussed in the individual community profiles, the following is a brief description of the interrelationships of revenues within the AEB structure:

- The State of Alaska shares the Fisheries Business Tax (FBT; calculated generally as 3 percent of ex-vessel value) as follows:
 - 1.5 percent goes to the state.
 - 1.5 percent (i.e., one-half of the 3 percent collected) goes to the local governments in whose jurisdiction the processing occurs, which in turn is split 50 percent to the city and 50 percent to the borough.¹
- All of the processing in the AEB takes place within cities in the borough, and therefore the borough shares all of the FBT 50-50 with the city in which the processing occurs. Therefore, the AEB's FBT revenue represents 0.75 percent of the total ex-vessel value processed in the AEB (with the other 0.75 percent [i.e., the other half of the 1.5 percent the State shares with local governments] going directly to the cities). Unfortunately for the purposes of further analysis, information from the AEB indicating species-specific ex-vessel values is confidential and cannot be released.
- In addition to the State FBT, the AEB and each community within the AEB collects local fish taxes of 2 percent, except for Akutan, which taxes at a 1 percent rate. Thus, all processors in the AEB (with the exception of Akutan) pay 5.5 percent of ex-vessel value in taxes, and for Akutan the analogous figure is 4.5 percent. Assuming that roughly 50 percent of the total tax revenue was generated in Akutan and 50 percent in other communities within the AEB, the average fish tax collected in AEB communities is 5 percent of the total ex-vessel value.

It is also important to note that significant impacts through loss of fishery related revenue that could result from fishery management actions would be felt in all AEB communities, not just those communities directly engaged in the fishery. This is the case because communities without major processing plants (Cold Bay, False Pass, and Nelson Lagoon) normally benefit from borough expenditures that are made possible by collection of fishery related revenue in communities with major plants (Akutan, King Cove, and Sand Point). Given that changes in tax revenue resulting

¹ If processing occurs outside of any local government jurisdiction (for example, when a floating processor operates in Beaver Inlet on Unalaska Island), the State of Alaska shares the taxes with all communities in the "unorganized borough" (i.e., all communities in the state outside of organized boroughs). This includes communities such as Unalaska and Adak (and many other communities throughout the state), but not King Cove or others within the AEB.

from changes in crab landing patterns in one community within the borough are directly linked to expenditures in other communities in the borough (for example, a decline in fish tax revenue in King Cove paid to the AEB would impact Nelson Lagoon if it were large enough to necessitate reductions in school expenditures), the borough structure would serve to distribute impacts to communities in a different way than seen in the rest of the region that has no such structure. A recently released report commissioned by the AEB (McDowell Group 2001) underscores the importance of commercial fisheries to the AEB as a whole by noting that seafood industry accounts for approximately 99 percent of the AEB's basic economic employment, 76 percent of all employment, and – through fish taxes – 40 percent of the operating budget for the AEB government. An additional AEB commissioned report regarding groundfish trawling restrictions (Noble 2000) provides additional quantitative detail on borough fisheries engagement as do two recent studies on groundfish related assessments (Northern Economics 2001a, 2001b).

While quantitative data on fish taxes from individual communities within the AEB are subject to confidentiality restrictions, Table B-1 presents direct fish tax revenue data for the borough as a whole for all fisheries. As shown, there is considerable variability from year to year, ranging between \$3 million and \$5 million over the span 1990 through 2004. Because of the limited number of processors for some individual species, it is not possible to break out the relative importance of species for revenues to communities. Table B-2 provides comparative information on the relative contribution of direct fisheries revenue compared to total general fund revenues for the AEB.

Table B-1. Aleutians East Borough Selected Fisheries Related General Fund Revenues (in dollars), Fiscal Years 1990-2004

Fiscal Year	Selected Fishery Revenue Source				Four Source Total
	Borough Raw Fish Tax	State Raw Fish Tax	State Extra-territorial Fish Tax	State Fish Landing Tax	
FY 1990	\$2,004,264	\$1,080,522	\$0	\$0	\$3,084,786
FY 1991	\$2,923,085	\$1,386,428	\$0	\$0	\$4,309,513
FY 1992	\$2,418,881	\$2,392,602	\$0	\$0	\$4,811,483
FY 1993	\$3,083,980	\$1,792,032	\$0	\$0	\$4,876,012
FY 1994	\$2,557,500	\$2,424,754	\$54,877	\$0	\$5,037,131
FY 1995	\$2,340,656	\$1,834,575	\$57,358	\$0	\$4,232,589
FY 1996	\$2,423,460	\$1,179,272	\$61,214	\$0	\$3,663,946
FY 1997	\$2,183,802	\$1,367,815	\$59,745	\$0	\$3,611,362
FY 1998	\$2,236,242	\$989,420	\$97,193	\$135,370	\$3,458,225
FY 1999	\$2,543,559	\$1,212,391	\$92,098	\$97,535	\$3,945,583
FY 2000	\$3,255,513	\$1,132,709	\$108,599	\$33,877	\$4,530,698
FY 2001	\$2,348,939	\$1,409,784	\$127,668	\$17,448	\$3,903,839
FY 2002	\$2,013,524*	\$1,354,864	\$109,530	\$52,311	\$3,530,229
FY 2003	\$2,493,342	\$934,034	\$96,804	\$1,142,840**	\$4,667,020
FY 2004	\$3,065,141	\$1,310,560	\$104,394	\$86,219	\$4,566,314

* The FY 2002 AEB raw fish tax does not include an additional \$217,178 in revenue from Steller sea lion mitigation funds.

** The FY 2003 State fish landing tax figure includes State fish landing tax of \$41,202 and State fish landing tax supplement of \$1,101,638.

Source: Derived from Aleutians East Borough General Fund Statement of Revenues, Expenditures and Changes in Fund Balance - Budget and Actual, summary sheets supplied by AEB staff, October 2002 and December 2004.

Table B-2. Aleutians East Borough Sources of General Fund Revenue and Direct Fishery Revenue as a Percentage of Total General Fund Revenues, FY 2000 - FY 2004

Year	Federal Revenue	State Revenue	Local Revenue	Grand Total Revenue	Direct Fishery Revenue Total*	Direct Fishery Revenue as a Percent of All Revenue
FY 2000	\$126,657	\$1,548,882	\$3,451,889	\$5,127,428	\$4,530,698	88.36%
FY 2001	\$140,489	\$1,785,696	\$2,501,805	\$4,427,990	\$3,903,839	88.16%
FY 2002	\$228,373	\$1,759,939	\$2,339,728	\$4,328,040	\$3,747,407**	86.58%
FY 2003	\$249,616	\$2,499,530	\$2,768,691	\$5,517,837	\$4,667,020	84.58%
FY 2004	\$259,952	\$1,875,905	\$3,460,167	\$5,596,024	\$4,566,314	81.60%

* For this table, "Direct Fishery Revenue" is defined as comprising AEB raw fish tax, State raw fish tax, State extra-territorial fish tax, and State fish landing tax (see Table B-1). It does not include any fisheries influence on other revenue sources.

** FY 2002 Fishery Revenue Total figure includes \$217,178 revenue to the AEB for Steller sea lion impact mitigation.

Source: Derived from Aleutians East Borough General Fund summary reports.

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