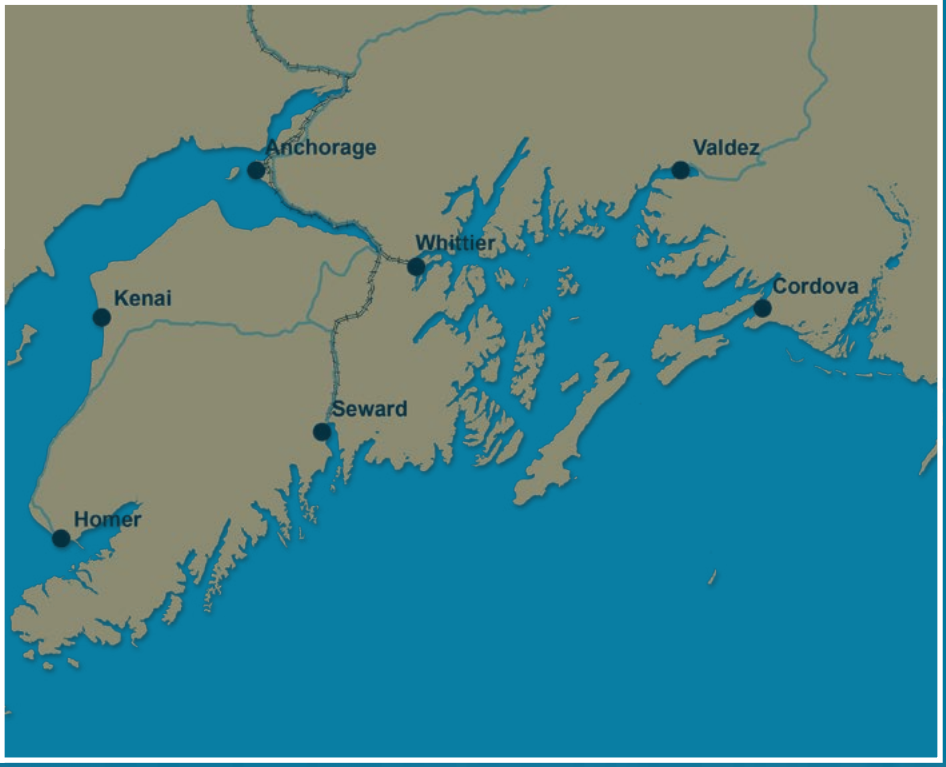
June 2015

The Economic Impact of the Seafood Industry in Southcentral Alaska



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McDowell GROUP

Prepared for
Alaska Salmon Alliance
"Working for Alaska's Salmon Future Today"
ALASKA SALMON ALLIANCE

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Table of Contents

Executive Summary

The Alaska Salmon Alliance commissioned McDowell Group to analyze the economic impact of the commercial seafood industry in Southcentral Alaska and the region's communities. The scope of work includes analysis of economic impacts associated with commercial fishing, seafood processing, hatchery operations, government functions related to Alaska's commercial fisheries, and the broad range of businesses and organizations providing goods and services to the state's seafood industry. Key findings are summarized below.

Key Findings

- The seafood industry directly employed 10,840 people in Southcentral Alaska during 2013. This total includes resident commercial fishermen and processing workers, hatchery employees, and commercial fisheries management-related staff who worked in the region.[1]
- Two-thirds of the workforce were year-round Southcentral residents (7,660 people).
- In addition to these employment figures, approximately 1,000 fishermen who were not Southcentral residents participated in regional commercial salmon fisheries during 2013. These and other nonresident commercial fishermen are excluded from this report's total employment and income statistics at a local or regional level.
- Direct employment in the Southcentral seafood industry is the equivalent of 4,810 full-time (FTE) jobs. Including secondary (multiplier) impacts, the industry accounted for 8,130 FTE jobs in 2013.

Southcentral Seafood Impacts, 2013

Employment	
Resident Commercial Fishermen	5,730
Processing Workers	4,590
Hatchery/Mgmt. Workers	520
Total Direct Workers	**10,840**
Direct FTE Jobs	4,810
Secondary FTE Jobs	3,320
Total FTE Jobs	**8,130**
Labor Income ($Millions)	
Resident Commercial Fishermen	$162
Processing Workers	61
Hatchery/Mgmt. Workers	25
Total Direct Labor Income	**$247**
Secondary Labor Income	$164
Total Estimated Labor Income	**$411**

Note: Totals may not sum due to rounding.
Source: McDowell Group estimates, based on ADF&G, DOLWD, NMFS, industry interviews, and other primary sources.

- The Southcentral seafood industry accounted for an estimated $247 million in direct labor income during 2013. Multiplier impacts generated an additional $164 million in regional labor income, bringing the total seafood industry-related labor income to $411 million.
- Commercial seafood generated $1.2 billion in total economic output in Southcentral Alaska in 2013. This figure includes $685 million in first wholesale value of seafood products and $501 million in gross value added to the region through secondary impacts.

[1] The term "resident" refers to individuals who reside in the region year-round, or within a specific community if labeled "local resident."

- The seafood industry benefits and is affected by many communities in Southcentral Alaska:
    - The Anchorage/Mat-Su economy includes $149 million in labor income and 2,880 FTE jobs, as a result of the seafood industry in 2013.
    - Local economies in Cordova, Homer, and the Kenai region each received more than $50 million in total annual labor income. More than 1,000 FTE jobs in each community/area are linked to the seafood industry.
    - Both major processors are expanding in Valdez, and Seward is adding new capacity to service large vessels. The community of Whittier, in addition to hosting a processing plant, is a key part of the region's transportation network. Over 100 million pounds of seafood products passed through Whittier in 2013 destined for Anchorage port facilities or Lower 48 markets.
- Southcentral was home to 2,168 active commercial permit holders in 2013, each acting as a small business and having the same impact in the economy as other independent locally-owned businesses. The region has 35 primary shore-based seafood processing plants and three non-profit salmon hatchery associations, which enhance pink, keta, coho, and sockeye salmon runs.
- A total of 20 Southcentral communities had collective gross fishing earnings exceeding $1 million in 2013. Southcentral resident commercial fishermen grossed a total of $314 million in 2013 (including estimated revenue from tendering fish).
- Salmon is the foundation of the region's seafood industry, accounting for 85 percent of total first wholesale value of seafood produced in Southcentral. Sockeye and pink salmon are the most important species in commercial salmon fisheries.
- Commercial fisheries in Cook Inlet and Prince William Sound accounted for the majority (57 percent) of gross fishing earnings, but Southcentral residents also have a significant presence in commercial fisheries outside the region.
- Commercial fisheries create hundreds of millions of pounds of backhaul for regional cargo carriers. This backhaul lowers the cost of living for all Southcentral residents by offsetting northbound freight rates. It is conservatively estimated that seafood backhaul saves Southcentral households at least $70 per year.

Direct Seafood Industry Employment in Southcentral Communities, Number of Workers, 2013

Community or Sub-Area	Skippers	Crew	Processing	Hatchery/Gov.	Total Direct
Anchorage/Mat-Su Area	724	1,499	1,010	210	3,430
Cordova	298	321	1,050	140	1,810
Homer	455	631	170	20	1,280
Kenai Region	486	718	910	100	2,210
Seward	41	107	520	1	670
Valdez	28	74	610	30	740
Other Communities	136	211	330	15	690
Total	**2,168**	**3,561**	**4,590**	**520**	**10,840**

Notes: Does not include commercial fishermen who participate in regional fisheries but reside outside of the region. With the exception of commercial fishermen, figures are rounded and may not sum.
Source: McDowell Group estimates based ADF&G, NMFS, DOLWD, and industry interviews.

Introduction

The Alaska Salmon Alliance contracted with McDowell Group to analyze the seafood industry's economic impact in Southcentral Alaska. This report quantifies the direct, indirect, and induced economic effects of the commercial seafood industry in Southcentral as a whole, and examines impacts at community or sub-region level for seven areas in the Southcentral region. Analyses of the industry's impact on the shipping sector and a profile of salmon harvests by user group is also included in this report.

Study Purpose and Scope of Work

The purpose of this report is to illustrate the economic reach of the seafood industry in Southcentral Alaska and identify the connections it has with other sectors of the economy, infrastructure, and public agencies in the region. The analysis focuses on the commercial seafood industry and does not include impacts associated with recreational, charter, or subsistence fisheries.

Detailed profiles for the following six Southcentral communities and sub-regions are included in this report:

- Anchorage/Mat-Su Region (encompassing all communities within the Municipality of Anchorage and Matanuska-Susitna Borough)
- Cordova
- Homer
- Kenai Region (including the communities/areas of Clam Gulch, Kalifornsky, Kasilof, Kenai, Nikiski, Ninilchik, Soldotna, and Sterling)
- Seward
- Valdez

These profiles characterize local seafood industry activities, its total economic impact, the relative size of those impacts, and the asset value of the industry in each community. While historical data is included in the report, it primarily focuses on 2013 as a baseline for the analysis as this was the most recent year for which complete data was available.

Data Sources

To conduct the analyses McDowell Group gathered published and unpublished, non-confidential data from several state and federal agencies. Data from government agencies included fishing industry participation, processing employment, residency (employment and earnings), gross fishing earnings, wholesale value, and employment/earnings for other sectors (where available).

In addition to data collection, McDowell Group conducted interviews with industry representatives, managers of support sector businesses, and community leadership, and distributed surveys to both the processing and fishing industry representatives. Information gathered in the interviews and surveys was used to develop

estimates of the volume of seafood freight moving within and out of the region, fishing business expenditures, the value of fishing assets, and the extent of local seafood industry impacts.

An enormous amount of seafood industry data is collected by government agencies for fisheries management purposes, including information on harvest value, harvest volume, participation, and other metrics. However, data is not available for crew labor income or permit holder profits. Likewise, government agencies do not collect data on the spending patterns of fishermen and processors. In the absence of such data, the study team relied on interviews with industry participants, established economic models, and previous McDowell Group research to develop estimates of labor income in the commercial fishing sector. Fishing labor income estimates are made for permit holders and crew members, with the assumption that crew members reside in the same community/area as the permit holders (a necessary assumption as crew earnings and participation in specific fisheries are not tracked by government agencies).

Notes about Methodology

Most figures cited in this report come directly from the data sources referenced above. Where data was incomplete or unavailable due to confidentiality constraints, estimates were made based on the best available information.

Indirect and Induced Economic Impact Analysis

McDowell Group has developed a proprietary seafood industry economic impact model based on fishing activity data from federal/state sources, wholesale production data, commercial fishing license and participation data, processing employment, commercial vessel registration, industry payments to government agencies (taxes, fees, etc.), extensive industry interviews, IMPLAN multipliers, and state/federal employment data. This model was created to estimate the regional, statewide, and national economic impact of the seafood industry for projects commissioned by the Alaska Seafood Marketing Institute and the Alaska Salmon Alliance. McDowell Group collaborated extensively with staff from ADF&G, NMFS, and AKFIN to compile a large collection of industry data that serves as the model's foundation. These individuals spent a considerable amount of time – mostly free of charge – providing data and explaining the important details about these data. Model development would not have been possible without their cooperation and expertise.

Secondary impacts associated with the seafood industry were estimated by modeling spending patterns for fishermen, processors, hatcheries, and fishery management agencies. IMPLAN software and Bureau of Economic Analysis data were used to translate spending into estimates of indirect labor income generated by the industry for a particular area/region. Indirect labor income estimates were based on an average of the current and past years' harvest and production to avoid over or under estimating indirect impacts due to years where production values were relatively high or low. A conservative range of multipliers was applied to capture additional indirect and induced impacts. The economic model and methods employed were designed to avoid overestimating the impact of nonresident fishermen and processing workers.

MEASURING EMPLOYMENT IN THE SEAFOOD INDUSTRY

Comparing employment in the seafood industry to other industries is problematic due to the highly seasonal nature of most fisheries and the absence of employment reporting requirements. Commercial fishermen are not typically included in most published employment statistics because, unlike most employers, they are not required to submit quarterly reports to the Alaska Department of Labor and Workforce Development for purposes of unemployment insurance payments. Measuring the number of fishing and processing workers is straightforward as data is readily available by area and residency. The total worker count (total participation) includes the number of permit holders who made landings, the number of commercial crew licenses purchased (by area of residence), and the number of processing workers employed during a calendar year. There is a small amount of double-counting, where a processing worker also participated in commercial fisheries during the same year. In 2011, about 550 fishermen out of 31,800 (1.7 percent statewide) also worked in processing plants.[2]

Employment for most industries in Alaska (including seafood processing) is reported as either the number of average monthly or average annual full and part-time jobs. Previous McDowell Group studies developed comparable measures of employment in the seafood industry by estimating the total time permit holders and crew are engaged in activity related to commercial fishing, including preparation time spent in advance of fishing, the duration of each fishery opening, and time spend post-fishing on maintenance and other related tasks required to maintain commercial fishing vessels and gear, and in general participate in Alaska's commercial fisheries. While this is the most accurate approach for developing commercial fishing employment estimates that are comparable with other industries, the time and resources required are beyond the scope of this study.

The Alaska Department of Labor and Workforce Development has published average monthly employment estimates for the commercial fishing industry, but employment is only credited for months when landings are made. Those estimates are conservative because they do not include pre- and post-season work.

For purposes of this study McDowell Group used an alternative approach for developing measures of fishing employment that are more comparable with other sectors. By dividing total labor income from fishing and processing for a particular area by the average wage/salary earnings for private sector workers in the region, a "full-time equivalent" employment measure was developed. The calculation effectively translates labor income into a count of average private sector jobs, and provides a better measure of employment relative to other industries than total seafood industry participation (in terms of workers). It is also helpful to have an FTE or annual equivalent employment measure for summing direct employment with indirect and induced employment, which is typically measured in terms of average monthly employment.

It should be noted that this definition of FTE is a departure from the norm. Typically, measures of FTE jobs are based on the number of hours spent working in a job over the course of a year. The U.S. Governmental Accountability Office (GAO) defines FTE employment as the number of total hours worked divided by the maximum number of compensable hours in a full-time schedule as defined by law (with an annual total of approximately 1,650 hours for one FTE job). Data regarding the number of hours worked in commercial fishing is not available so calculating FTE by this definition is not possible.

[2] Cannon, Jack; Warren, Joshua. *Alaska's Fishermen – Harvests, earnings, and their other jobs.* Alaska Economic Trends. Department of Labor and Workforce Development. November 2012. p9.

Abbreviations, Acronyms and Glossary

Abbreviations and Acronyms

ADF&G	Alaska Department of Fish and Game
BEA	Bureau of Economic Analysis
BSAI	Bering Sea and Aleutian Islands region
CFEC	Commercial Fisheries Entry Commission, a division of ADF&G
CDQ	Community Development Quota (groups)
CIAA	Cook Inlet Aquaculture Association
DOLWD	Alaska Department of Labor and Workforce Development
DCCED	Alaska Department of Commerce, Community, and Economic Development
FTE	Full-time equivalent
IFQ	Individual Fishing Quota
NMFS	National Marine Fisheries Service
NPFMC	North Pacific Fishery Management Council
PWS	Prince William Sound
PWSAC	Prince William Sound Aquaculture Association
QCEW	Quarterly Census of Employment and Wages (DOLWD employment data)
VFDA	Valdez Fisheries Development Association

Glossary of Terms

This report uses a collection of terms and assumptions to explain the economic impact of the seafood industry in Southcentral Alaska. These terms are defined below to help readers gain a better understanding of the findings and subject matter.

Alaska Seafood Industry - The Alaska seafood industry is comprised of the commercial fishing, seafood processing, salmon hatcheries, and government agencies involved in commercial fishery management, enforcement, and related administrative functions.

Direct Impact - Economic activity (jobs, income, and output) directly related to harvesting, processing, salmon hatcheries, or fishery management.

Ex-vessel Value – Total value of payments made to fishermen by processors for raw product, plus the round-weight equivalent value of product sold directly to other buyers by fishermen.

First Wholesale Value – Value of processed product sold by seafood processors to buyers.

Full-Time Equivalent (FTE) Job – For purposes of this report, FTE jobs refer to the number of "average" jobs created by a given amount of labor income. FTE jobs in commercial fishing, seafood processing, and salmon hatcheries were calculated by dividing labor income by the average wage/salary earnings (based on DOLWD's

QCEW average monthly employment) for the Southcentral private sector ($49,396 in 2013). Government FTE jobs were based on a similar average wage/salary calculation for state or federal workers.

Indirect Impact - Economic activity resulting in the study area from direct business spending.

Induced Impact - Economic activity resulting in the study area from direct and indirect household spending.

Labor income – Refers to combined estimates of commercial crew members' earnings and the net earnings of permit owners after operating expenses. Commercial fishing labor income also includes estimates of net earnings and crew earnings resulting from tendering activities. Labor income from commercial fishing was estimated based on interviews with fishermen and historical gross earnings by community/area. Other labor income figures refer to estimated or actual cash wages, salaries, and bonuses earned by workers, not including the value of benefit payments.

Resident – Unless otherwise noted, the term "resident" refers to people who are residents of the area in question. For example, commercial fishing resident figures for the community of Homer refers to people who claimed residency in Homer on crew or commercial fishing permit applications. Specific residency data was not available for other direct workers (processing, hatcheries, or government agencies). As a result, processing workers and other direct workers who were Alaska residents are assumed to reside in the area in which they work. Salmon hatchery and government employees are also assumed to be residents of the area in which they work.

Secondary Impacts – The combined impacts of indirect and induced effects.

Skippers – Commercial fishing permit holders who actively fished their permits.

Regional Economic Impact of the Seafood Industry in Southcentral Alaska

The commercial seafood industry has a major presence in Southcentral Alaska. Over 20 communities in the region receive significant economic benefits from the industry, impacting the lives of tens of thousands of regional residents. Southcentral is an important production region but it also serves as Alaska's primary hub for shipping, supplies, CDQ group corporate management, fishery management activities (in addition to Southeast), banking, and research functions.

Regional Economic Impact of the Seafood Industry

The seafood industry directly employs 10,840 people in Southcentral Alaska, including 7,660 regional residents.[3] In total, industry participants earned an estimated $247 million in annual labor income in 2013.

Commercial fishing created an estimated $162 million in labor income for 5,732 skippers and crew in 2013. This level of labor income is consistent with a full-time equivalent of approximately 3,280 average private sector jobs. The processing sector employed 4,590 workers (or about 1,240 FTE jobs) who earned $61 million in labor income in 2013. Although nonresidents account for more than half of the processing sector workforce, Southcentral has a higher percentage of resident processing workers and features more companies owned by regional residents than other areas in the state. Salmon hatcheries and fishery management functions are essential parts of the industry, together they employ more than 500 workers and create 300 FTE jobs.

Including estimates of FTE commercial fishing and seafood processing employment, in total, the seafood industry accounted for 8,130 jobs and $411 million in labor income in Southcentral Alaska in 2013. This includes 3,320 jobs and $164 million in labor income created in other sectors as a result of seafood industry-related business and household spending.

Economic Impact of the Seafood Industry on the Southcentral Economy, 2013

	Numbers of Workers	Full-Time Equiv. Employment	Labor Income ($Millions)
Seafood Industry (Direct Impacts)			
Commercial Fishing (Residents only)	5,729	3,280	$162
Seafood Processing	4,590	1,230	61
Hatcheries & Fishery Management	520	300	25
Economic Impacts			
Direct (Industry Functions)	**10,840**	**4,810**	**$247**
Indirect (Business Spending)	-	**1,390**	**69**
Induced (Household Spending)	-	**1,930**	**95**
Total Economic Impacts	**10,840**	**8,130**	**$411**
Fisheries Taxes Paid to Local Government			**$4,570,000**

Notes: All employment figures (except commercial fishing workers) have been rounded, as result total employment figures may not sum. Commercial fishing labor income figures include estimated income from tender vessels owned by local residents.
Source: McDowell Group estimates based on ADF&G, DCCED, DOLWD, IMPLAN, NMFS, and industry interviews.

[3] These figures do not include commercial fishermen who participate in regional fisheries but reside outside of the region.

The Anchorage/Mat-Su area, which includes all communities within the Municipality and Borough, has the largest level of seafood industry employment (FTE of 2,880) and income ($149 million) despite being farthest removed from the region's fisheries. Anchorage/Mat-Su has a much larger population than other Southcentral communities and is the state's primary hub for goods and services. Cordova, Homer, and Kenai all have employment of over 1,000 FTEs as a result of the seafood industry. Seafood accounts for a major portion of the local economy in Cordova and Homer. Seward and Valdez host relatively fewer (FTE) seafood jobs, as a result of a smaller resident fishing fleet. However, both communities offer significant potential for growth within the industry, as described later in this report.

Seafood Industry Impact on Southcentral Employment, by Sub-Area, 2013

	Employment (FTE jobs)			Labor Income ($Millions)		Population
	Direct	Secondary	Total	Direct	Total	Total
Anchorage/Mat-Su Area	1,540	1,330	2,880	$83	$149	396,800
Cordova	930	540	1,470	46	73	2,300
Homer	980	700	1,670	48	83	5,100
Kenai Region	600	430	1,030	30	51	37,400
Seward	250	140	390	12	19	2,500
Valdez	260	80	340	13	17	4,100
Other Communities	250	100	340	15	19	15,200
Total	**4,810**	**3,320**	**8,130**	**$247**	**$411**	**463,400**

Note: Figures have been rounded and the sub-areas do not include all communities in the Southcentral region.
Source: McDowell Group estimates and DOLWD population estimates (rounded).

The seafood industry created $1.2 billion of economic output in Southcentral Alaska during 2013. The first wholesale value of all seafood produced by Southcentral processors was $685 million (the basis for direct economic output, which includes ex-vessel value earned by fishermen and the value added by processors). Secondary impacts added an estimated $501 million in output.

Economic Output from Southcentral Seafood Industry, in $Millions, 2013

Ex-Vessel Value of Southcentral Fisheries	Value Added by Processors	Economic Output Generated in Region by Secondary Impacts
$252	$432	$501

Total Economic Output: $1.2 billion

Source: ADF&G (COAR) and McDowell Group estimates.

Seafood Industry's Role in the Southcentral Economy

Southcentral Alaska's economy is large, generating 231,000 jobs and labor income in excess of $12 billion in 2013.[4] The oil and gas industry, the military, and Anchorage's role as a hub for transportation, goods, and services are the foundation of its economy. Southcentral accounts for just 13 percent of the Alaska seafood industry's total ex-vessel value (statewide total of $2.0 billion in 2013), but its regional impact is more significant. Overall, the seafood industry directly creates an estimated 2.8 percent of Southcentral private sector labor earnings.

Seafood is a "basic sector" industry in that its products are (primarily) exported outside the region. Basic sectors are crucial because they bring new money into an economy, stimulating additional jobs and other economic activity. Defining total basic sector activity is difficult because many industries and companies bring some new money into the economy. Seafood accounted for 2.7 percent of total Southcentral private sector employment in 2013.

Seafood Industry and the Southcentral Economy, 2013

	Employment	Labor Earnings ($Millions)	Labor Earnings as Pct. of Private Sector
Private Sector			
Seafood[1]	4,800	$247	3%
Oil and Gas[2]	12,200	1,317	15%
Other Mining[2]	800	58	1%
Construction, Utilities & Telecom.	15,500	1,154	13%
Manufacturing (excl. seafood processing)	2,800	136	2%
Trade	28,600	976	11%
Transportation	12,800	860	10%
Financial Activities	9,400	500	6%
Professional and Business Services	22,600	1,372	16%
Health and Educational Services	32,200	1,438	16%
Accommodations and Food Services	19,500	408	5%
Other Private Sectors	9,400	312	4%
Private Sector Total	**170,400**	**$8,777**	-
Government			
Local	17,000	$871	-
State	13,700	739	-
Federal (Civilian)	9,400	708	-
Federal (Military)	15,900	852	-
Government Total	**56,100**	**$3,169**	-
Total Southcentral Economy	**226,700**	**$11,946**	-

[1] Includes estimates of fishermen earnings, employment figures have been converted to FTE jobs.
[2] Represents a count of workers who reside in Southcentral and worked in the industry, as well as "nonresident" workers who worked in the industry in Southcentral during 2013.
Note: Employment figures are rounded, as a result totals may not sum. Labor earnings do not include proprietor profits or worker benefits.
Source: McDowell Group estimates based on DOLWD and seafood industry research.

[4] Labor income figure does not include benefits.

Numerous other industries in Southcentral Alaska benefit from the seafood industry, such as the marine support, shipping, restaurant, lodging, trade, and research sectors. Including direct and multiplier effects of the industry, seafood accounted for an estimated 3.4 percent of total labor income in the Southcentral economy in 2013.

The Seafood Industry in Southcentral Alaska

The Southcentral region plays a critical role in Alaska's seafood industry. Regional fisheries accounted for 13 percent of total statewide ex-vessel value in 2013, but the impact of the industry is much greater due to the region's population and position as a transportation and shipping hub. As the state's major population center, Southcentral is home to thousands of residents who participate in the industry both inside and outside the region. Fisheries in southwestern Alaska, which make up the bulk of the state's seafood resource value, have a strong connection to businesses and government agencies based in Southcentral.

Six of Alaska's top fishing 20 ports (by landed value) were located in Southcentral Alaska in 2013. The region featured 20 communities with total gross resident fishing earnings greater than $1 million. Although Homer, Cordova, Seward, Kenai, and Valdez are the region's primary fishing ports, earnings from the industry impact many more communities in Southcentral Alaska.

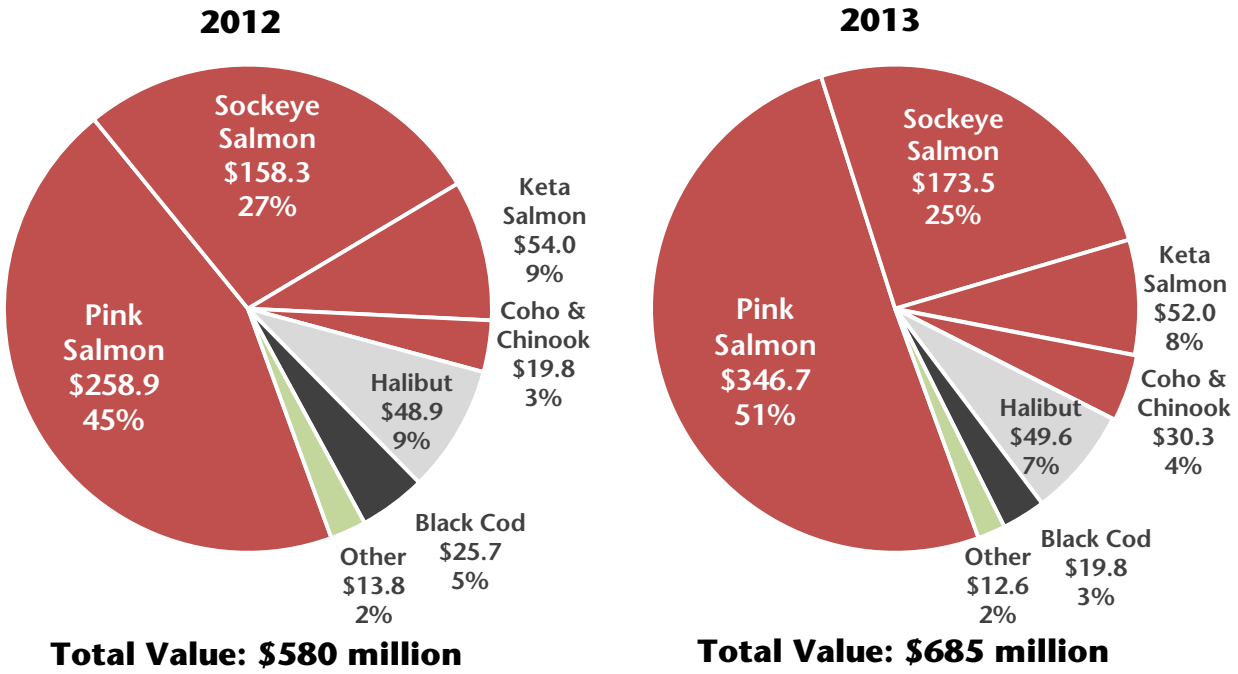
Southcentral Resident Commercial Fishing Earnings, by Community, 2013

Community	Gross Resident Fishing Earnings in $Millions	Gross Earnings Per Capita	Alaska Community Rank by Total Gross Earnings
Homer	$83.1	$16,196	2
Anchorage	60.1	200	4
Cordova	56.8	24,686	5
Wasilla	20.0	2,391	10
Seward	11.8	4,746	13
Kenai	10.0	1,385	16
Soldotna	6.7	1,565	20
Kasilof	6.0	10,163	21
Valdez	5.4	1,313	23
Anchor Point	3.8	1,884	26
Fritz Creek	2.8	1,408	31
Delta Junction	2.8	2,565	32
Palmer	2.8	464	33
Seldovia	2.7	11,214	34
Sterling	2.3	393	37
Ninilchik	1.9	2,264	42
Nikolaevsk	1.8	6,478	44
Clam Gulch	1.4	7,023	49
Willow	1.1	536	54
Nikiski	1.0	226	57

Source: McDowell Group estimates based on CFEC gross earnings of permit holders by area of residence and DOLWD population estimates.

Salmon made up 85 percent of total first wholesale value of seafood produced in Southcentral, on average, during 2012-2013. Halibut and black cod accounted for 13 percent while other species (primarily pacific cod and pollock) accounted for the remaining 2 percent.

First Wholesale Value of Southcentral Seafood Production by Species, in $Millions, 2012-2013



Source: ADF&G (COAR).

Commercial Fishing

Southcentral Alaska is home to nearly a third (32 percent) of all Alaska resident commercial fishermen. Its 2,168 active permit holders grossed $308 million in 2013, accounting for 38 percent of all Alaska resident gross fishing income. Overall, commercial fishing directly accounted for 3,280 FTE jobs and $162 million of labor income for Southcentral residents.

Southcentral Resident Commercial Fishermen Employment and Earnings, 2013

	Number of Fishermen			FTE	Earnings ($Millions)	
Area of Residence	Captains	Crew	Total	Jobs	Labor Income	Gross
Anchorage/Mat-Su Area	724	1,499	2,223	1,050	$52.0	$107.5
Cordova	298	321	619	630	31.0	56.8
Homer	455	631	1,086	920	45.4	83.1
Kenai Region	486	718	1,204	330	16.5	29.3
Seward	41	107	148	140	6.9	11.8
Valdez	28	74	102	70	3.4	5.4
Other Communities	136	211	347	140	6.6	13.9
Total	**2,168**	**3,561**	**5,729**	**3,280**	**$161.8**	**$307.8**

Source: ADF&G, NMFS, DOLWD population estimates, and McDowell Group estimates.

Gross fishing earnings are the foundation of economic activity generated by the industry. Since 2010, gross earnings for Southcentral fishermen have been relatively high, exceeding $260 million in each year. The 2013 season brought high sockeye prices and a record pink salmon harvest, leading to the highest gross earnings ever (in nominal terms). Nevertheless, secondary jobs created by the industry are generally stable over time tracking average gross earnings of current and recent years.

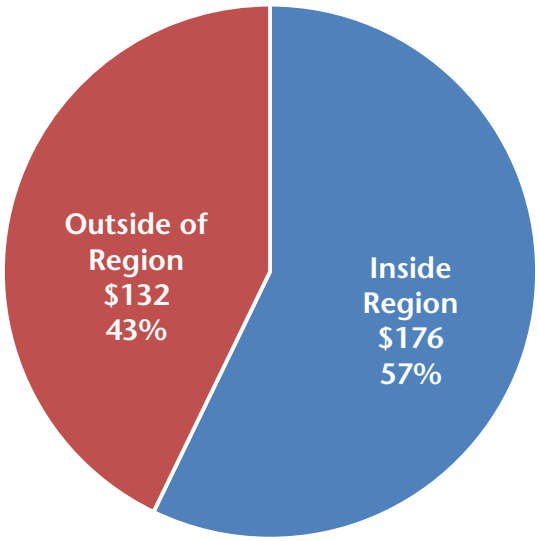
Southcentral Resident Employment and Earnings from Commercial Fishing, 2010-2013

	2010	2011	2012	2013
Commercial Fishermen	5,592	5,890	5,854	5,729
Skippers (Active Permit Holders)	2,088	2,187	2,146	2,168
Commercial Crew Members	3,504	3,703	3,708	3,561
FTE Jobs	3,030	3,510	3,070	3,280
Estimated Labor Income ($Millions)	$150	$173	$152	$162
Gross Earnings ($Millions)	$260	$299	$286	$308

Note: Figures have been rounded and may not sum to the total figure.
Source: McDowell Group estimates based on NMFS and ADF&G data.

The majority of Southcentral fishermen's income is earned in regional fisheries, but participation in fisheries outside the region also plays a big part in total gross earnings. Fishermen earned 57 percent of their gross fishing earnings in regional fisheries in 2013, while fisheries in other parts of Alaska accounted for 43 percent. Salmon fisheries accounted for 67 percent of Southcentral resident ex-vessel earnings in 2013. Groundfish species, IFQ fisheries for halibut and black cod, and crab accounted for 16 percent, 10 percent, and 4 percent, respectively.

Southcentral Resident Fishermen, Gross Earnings by Source, in $Millions, 2013



Fisheries/Species	Gross Earnings ($Millions)	Pct. of Total
Groundfish	$50	16%
Halibut & Black Cod	32	10
Crab	13	4
Salmon – Purse Seine	102	33
Salmon – Driftnet	83	27
Salmon – Setnet	21	7
Salmon Total	**$206**	**67%**

Note: Figures will not sum due to rounding. The table does not include all species.
Source: CFEC and McDowell Group estimates.

**THE APPENDIX CONTAINS HISTORICAL DATA ON THE REGIONAL COMMERCIAL FISHING SECTOR.*

Seafood Processing

The Southcentral seafood processing sector employed an estimated 4,590 workers in 2013 and paid out $61 million in wages. The sector accounted for 1,230 FTE regional jobs in 2013. Alaska residents – the vast majority of whom live in Southcentral Alaska – accounted for 31 percent of the workforce and earned 39 percent of total processing wages. Southcentral processors accounted for 21 percent of total statewide processing employment and 14 percent of total wages and salaries.

Employment and Earnings in the Southcentral Seafood Processing Sector, by Area, 2013

	Number of Workers	Total Wages ($M)	Resident Workers	Resident Wages ($M)	FTE Jobs	Number of Plants
Anchorage/Mat-Su	1,010	$16.8	630	$13.6	340	7
Cordova	1,050	15.1	120	3.3	310	6
Homer	170	1.8	100	1.3	40	5
Kenai	910	10.3	310	4.8	208	10
Seward	520	5.4	130	1.8	110	3
Valdez	610	8.8	70	1.9	180	3
Other Communities	330	2.8	50	*N/A*	40	1
Total	**4,590**	**$60.9**	**1,410**	**$20.3**	**1,230**	**35**

Source: DOLWD and McDowell Group estimates.

Salmon Hatcheries and Fishery Management

Southcentral is home to three non-profit salmon hatchery associations: the Cook Inlet Aquaculture Association (CIAA), Prince William Sound Aquaculture Association (PWSAC), and Valdez Fisheries Development Association VFDA). These groups are based in Kenai, Valdez, and Cordova, but have additional operations or active projects near other Southcentral communities/areas including Anchorage, Cooper Landing, Eklutna, Gulkana, Kachemak Bay, Matanuska-Susitna Borough, Seward, and Whittier.

Salmon hatcheries generate a substantial volume of pink, chum, and sockeye salmon for all user groups (commercial, sport/charter, and personal-use). However, salmon hatchery operations are primarily funded by the seafood industry through cost recovery harvests (which are sold to seafood processors) and salmon enhancement taxes levied on commercial fishermen. Salmon derbies are major events for sport and charter fishermen. Southcentral hatchery associations provide pink and coho salmon for derbies in Seward, Valdez, and Whittier, and sockeye for personal use dipnetting near Homer.

CIAA and VFDA are also involved in habitat enhancement and monitoring efforts. These projects aim to improve salmon production in lakes suffering a loss of salmon habitat and those beset by invasive species. Funding for these projects comes from a range of public grants, but CIAA does fund part of the projects directly.

Through hatchery funding, the seafood industry supports salmon production and regional conservation which benefits thousands of sport and personal-use fishermen. Salmon hatcheries employed an estimated 200 workers and paid out roughly $4 million in labor income in 2013, creating 85 FTE jobs.

Southcentral Salmon Hatcheries and Fishery Management, Employment and Earnings, 2013

	Number of Workers	FTE Jobs	Estimated Labor Income ($Millions)
Salmon Hatcheries			
Cook Inlet Aquaculture Association (CIAA)	52	19	$1.0
Prince William Sound Aquaculture Association (PWSAC)	120	50	2.5
Valdez Fisheries Development Association (VFDA)	30	16	0.8
Total Salmon Hatcheries	**202**	**85**	**$4.3**
Fishery Management & Enforcement (Gov. Agencies)			
ADF&G	208	140	$13.3
NMFS (including NPFMC and Observers)	77	52	4.4
Other Agencies	28	24	2.7
Total Direct Government	**313**	**216**	**$20.3**

Source: McDowell Group estimates based on industry interviews and agency operations reports.

Southcentral hosts many state and federal fishery management activities. ADF&G employs over 200 workers in the region tied to the seafood industry. The majority of these jobs are located in Anchorage and the Kenai sub-region, although the Department also has a significant number of staff in Cordova. The National Marine Fisheries Service directly creates an estimated 50 FTE fisheries-related jobs and $4.4 million in the Southcentral region. Other state and federal agencies, such as NOAA enforcement and the Alaska Department of Environmental Conservation, which interact directly with the seafood industry, create about 25 jobs. Most government workers involved in fishery management, regulation, and enforcement hold full-time jobs capable of supporting families, making them an important part of the regional economy.

Southcentral Seafood Industry Assets

The combined asset value of Southcentral's seafood industry is conservatively estimated at $766 million, as of 2013. These assets include limited entry permits, IFQ quota, commercial vessels, gear, processing plants (and associated land), processing equipment and related plant assets, and other assets used for commercial fishing activities. McDowell Group compiled these estimates from CFEC's permit value database, IFQ pricing data and quota ownership logs, local government assessment rolls, and interviews with boat sellers, fishermen, and processors.

Estimated Value of Selected Seafood Industry Assets, in $Millions, 2013

Community	Fishing Assets Held by Residents	Value of Seafood Processing Plants	Combined Asset Value
Anchorage/Mat-Su Area	$221.7	$6.3	$228.0
Cordova	139.1	17.5	156.6
Homer	179.8	4.9	184.7
Kenai Region	73.3	17.1	90.4
Seward	38.7	12.0	50.7
Valdez	13.3	6.3	19.6
Other Communities	36.2	*N/A*	36.2
Total	**$702.1**	**$64.1**	**$766.2**

Note: Figures have been rounded and may not sum to the total figure.
Source: McDowell Group estimates based on industry interviews and local government assessment rolls.

Five of the region's six communities and sub-regions have seafood asset values exceeding $50 million, and three have asset values exceeding $100 million. Processors in Valdez, the community with the least amount of industry assets, have expansion plans which will increase the value of seafood assets in coming years.

The vast majority (92 percent) of regional seafood assets are held by resident fishermen. The commercial fishing industry in Southcentral includes 2,167 active permit holders, who are all also small business owners. The average asset value of each resident commercial fishing permit holder is $238,000.

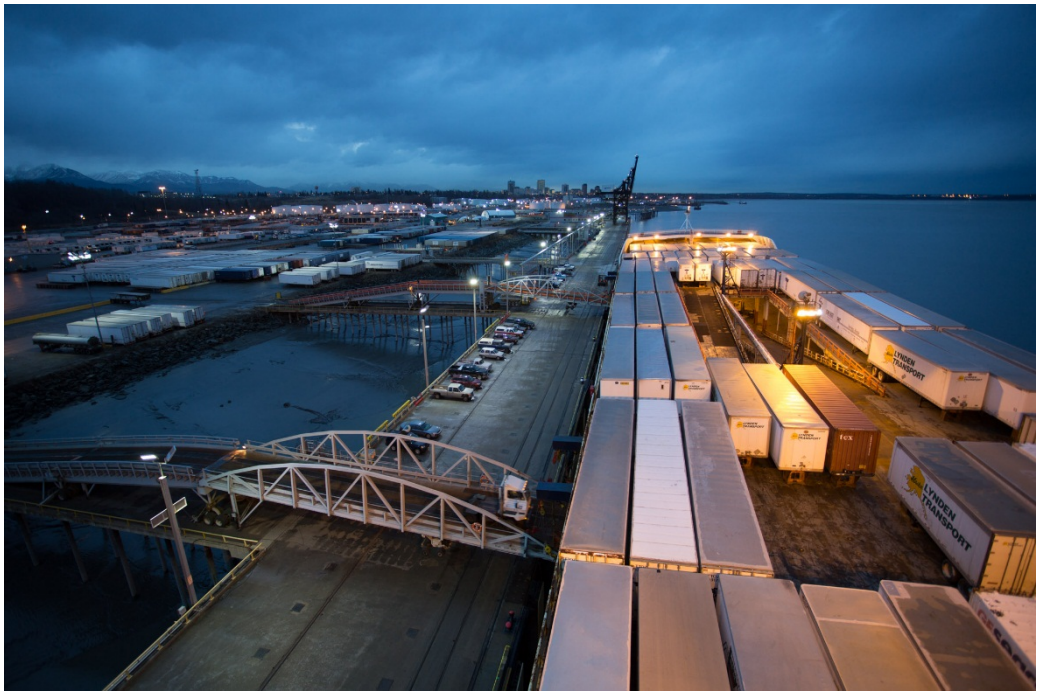
This industry asset valuation should be regarded as a conservative estimate, since the value of processing plants on the open market is likely higher than the combined assessed value of property and McDowell Group estimates about operating asset values. None of Alaska's major processing companies are publicly held, so information regarding the fair market value of processing plants is not readily available. Additionally, the sale of Alaska seafood processing plants is relatively rare. However, Trident Seafoods' purchase of the Westward seafood plant in Kodiak last year provides an example of the possible difference between market value and assessed value of processing plants. Trade press reported that Trident Seafoods paid $37 million for the plant. The total 2014 assessed value of all land and property owned by Westward Seafoods in the City of Kodiak was $7.2 million. However, it cannot be assumed that the same relationship between market value and assessed value would be similar for all processing plants in Southcentral Alaska.

In addition, dozens of local support sector businesses and fishery management agency buildings would likely add significantly to the total asset value, but estimating the value of those assets and their dependence on the seafood industry is beyond the scope of this analysis.

Western Alaska's CDQ groups hold significant assets which are generally not reflected in these totals (though some vessels may be included in the data as "Southcentral" fishing assets, depending on which address is used on their vessels' registration). The groups' combined net assets, as of 2013, were valued at $978 million and have grown substantially over the past 15 years. Prior to 2000, the groups' combined net assets were less than $100 million. Although this equity is held by western Alaska residents, these organizations are poised to play a pivotal role in the seafood industry's future. Those activities will primarily be coordinated from central offices in the Anchorage/Mat-Su region.

Community Impact Profile: Anchorage/Mat-Su

The Anchorage/Mat-Su region includes the Municipality of Anchorage and the Matanuska-Susitna Borough. In 2013, the region was home to 54 percent of Alaska's population and is the state's primary transportation and economic hub.



Loading containers onto a 900-foot Totem Ocean Trailer Express (Totem Ocean) container ship at the Port of Anchorage (Photo credit: Totem Ocean).

With limited harbor facilities, virtually no shore-based seafood landings, and relatively little processing activity, the region's interaction with the seafood industry is unlike most other Alaska communities. However, the Anchorage/Mat-Su region is home to a significant number of permit holders, crew members, maritime support services, financial institutions, CDQ headquarters, and regulatory bodies that impact the region and the state's seafood industry.

Local Economic Impact of the Seafood Industry

It is estimated that Alaska's seafood industry supported approximately 2,900 jobs and $149 million in labor income in the Anchorage/Mat-Su economy in 2013 (including direct and secondary effects). The industry directly employs 3,440 workers who reside in Anchorage/Mat-Su either year-round or seasonally (including approximately 3,060 year-round residents, the most of any sub-region/community in the state).

The local economy benefits substantially from resident fishermen who bring their earnings back to the area and by supporting seafood industry needs in western and Southcentral fisheries (which had a combined first wholesale value of $3.8 billion in 2013). For example, a Mat-Su diesel mechanic may be hired to repair a fishing boat in the Bering Sea, a local boat-builder may construct vessels used in Bristol Bay or Cook Inlet salmon fisheries, or a fisheries biologist from Anchorage may oversea crab harvests in Norton Sound. This economic

activity circulates through the local economy and supports additional economic activity as the mechanic, boat-builder, and biologist spend money locally.

Economic Impact of the Seafood Industry in Anchorage/Mat-Su, 2013

	Numbers of Workers	Full-Time Equiv. Employment	Labor Income ($Millions)
Seafood Industry (Direct Impacts)			
Commercial Fishing	2,223	1,050	$52.0
Seafood Processing	1,010	340	$16.8
Mgmt. & Other Government	210	150	$14.1
Economic Impacts			
Direct (Industry Functions)	**3,440**	**1,540**	**$82.9**
Indirect (Business Spending)	-	**450**	**$22.0**
Induced (Household Spending)	-	**890**	**$43.9**
Total Economic Impacts	**3,440**	**2,880**	**$148.8**
Local Fisheries Taxes Received (2013)			**$181,800**

Notes: All employment figures (except commercial fishing workers) have been rounded, as result total employment figures may not sum. Commercial fishing labor income figures include estimated income from tender vessels owned by local residents.
Source: McDowell Group estimates based on ADF&G, DCCED, DOLWD, IMPLAN, NMFS, and industry interviews.

Role of Alaska Seafood Industry in Local Economy

Including direct and secondary effects, Alaska's seafood industry accounts for about 0.9 percent of all labor income earned in the Anchorage/Mat-Su economy and about 1.2 percent of total employment.[5] The Anchorage/Mat-Su economy is large and well-diversified with total labor income of roughly $16 billion.

Comparing these Anchorage/Mat-Su seafood impacts to other local industries or well-known employers provides perspective. In direct terms, the seafood industry employs a similar number of Anchorage/Mat-Su residents as the University of Alaska system (not including student workers) and creates roughly the same amount of labor income as the "Arts, Entertainment, and Recreation" sector in the region.

Aside from jobs and income, the seafood industry and local businesses also serve another key role in the economy: providing Alaska seafood to local residents and visitors. The Anchorage/Mat-Su area hosts hundreds of eating and drinking establishments, many of which feature high-quality Alaska seafood on their menu. Grocers, such as the popular New Sagaya markets in downtown and midtown Anchorage, offer a wide selection of Alaska seafood. These businesses and the work of thousands of other Alaskans afford local residents easy access to Alaska seafood.

Photo credit: The Bridge Restaurant.

[5] Compared to regional labor statistics from the Bureau of Economic Analysis.

Commercial Fishing Sector

The Anchorage/Mat-Su region is home to 2,223 residents directly involved in commercial fishing, including 724 permit holders and 1,499 crew members. Labor income earned by these fisherman totaled an estimated $52 million in 2013 (including estimated labor income from tendering).[6] Gross fishing earnings accruing to permit and quota owners from before expenses equaled $107.5 million.

Total assets held by Anchorage/Mat-Su resident fisherman is estimated at $222 million. The 819 limited-entry permits held by area residents were valued at approximately $80 million in 2013, while halibut and black cod IFQs had a value of $37 million. Fishing vessels and associated gear such as nets, pots, and other assets had a total estimated value of $105 million.

Commercial Fishing Sector in Anchorage/Mat-Su, 2013

Employment	
Active Permit Owners	724
Crew Members	1,499
Total Resident Commercial Fishermen	**2,223**
Estimated FTE Jobs	**1,052**
Resident Earnings ($Millions)	
Estimated Labor Income (Permit Owners and Crew)	$52.0
Gross Earnings of Resident Permit/Quota Owners	$107.5
Estimated Asset Value Held by Local Resident Fishermen ($Millions)	
Limited Entry Permits	$80.4
IFQ Quota Shares (as of December 2013)	$36.6
Fishing Vessel Value, Gear, and Misc.	$104.7
Total Asset Value Held by Resident Commercial Fishermen	**$221.7**

Notes: Labor income figures include estimated income from tender vessels owned by local residents.
Totals may not sum due to rounding.
Source: McDowell Group estimates based on ADF&G and NMFS data; and industry interviews.

Fisherman from the Anchorage/Mat-Su region are active in nearly all commercial fisheries across the state. Areas outside of Southcentral Alaska accounted for 53 percent of permits fished by Anchorage/Mat-Su residents, and 65 percent of gross fishing earnings in 2013.

Active Permits and Gross Earnings by Anchorage/Mat-Su Residents, 2013

Area of Fishing Activity	Anchorage Residents	Mat-Su Residents	Total	Gross Earnings
Southcentral Fisheries				**In $Millions**
Cook Inlet and PWS Setnet Fisheries	95	35	130	$3.6
Cook Inlet and PWS Driftnet Fisheries	63	55	118	8.9

[6] McDowell Group interviewed tender owners and processors regarding the nature of tendering costs and income. These findings were applied to the number and breadth of tender ownership by community/area, based on to the CFEC commercial vessel database. Estimated income from tendering is a relatively small component (4%) of overall estimated Southcentral fishing income.

Cook Inlet and PWS Seine	22	3	25	12.4
Halibut & Black Cod (All Regions, Statewide Permit)	72	44	116	5.3
Southcentral Total	**252**	**137**	**389**	**$30.1**
Other Alaska Fisheries				
AYK, Bristol Bay, AK Peninsula, and Kodiak Setnet	130	42	172	$4.6
Bristol Bay and AK Peninsula Salmon Driftnet	97	50	147	11.0
BSAI and GOA Groundfish	15	16	31	20.8
Kodiak and Chignik Salmon Seine	20	7	27	9.5
BSAI and Kodiak Crab	7	2	9	6.7
Other	27	17	44	2.1
Other Alaska Fisheries Total	**296**	**134**	**430**	**$54.8**
Total – All Commercial Fisheries	**548**	**271**	**819**	**$85.0**

Note: Due to differences in how groundfish landings are compiled not all gross earnings could be included, as a result these data do not cover all Anchorage/Mat-Su gross earnings.
Source: CFEC.

Gillnet fisheries, including both setnet and driftnet, comprised 70 percent of all active permits. This is consistent with anecdotal reports of many fisherman in the region having income from both commercial fishing and another source; potentially at a higher rate than other regions in Alaska. The cost of purchasing a basic gillnet operation is low compared to other commercial fisheries. Gillnetting offers the possibility for many residents to maintain an "off-season" career and fish in the summer. Nevertheless, many gillnet fishermen do rely on salmon and other commercial fisheries for all or most of their annual income.

**THE APPENDIX CONTAINS HISTORICAL DATA ON THE ANCHORAGE/MAT-SU COMMERCIAL FISHING SECTOR*

LIFE AS A COMMERCIAL FISHERMAN IN ANCHORAGE/MAT-SU: BRUCE GABRYS, F/V BLUE CHIP II

Bruce Gabrys and his family have fished in Cook Inlet for more than 30 years. Active in both salmon driftnetting and halibut longlining, he works as a Certified Public Accountant in the off-season. Many of his clients are also fishermen who take advantage of both his experience in commercial fishing and tax law. Bruce lives in Eagle River and maintains a home on the Kenai Peninsula that is used to support his family's fishing efforts.

Gabrys fishes with a 42' fiberglass boat named the Blue Chip II which was built in Alaska. Bruce's two daughters and son fish with him during the salmon season. Asked what fishing meant for his family, Bruce stated, "Fishing has allowed our family to work together; something which is rare today. Our kids have put themselves through college with money they earned fishing and my daughter recently bought a drift permit. What other industry allows for that?"

Bruce's fishing operation includes Eagle River where he lives, to Kasilof where Bruce and his wife own a home, to Homer where he homeports his boat. In a typical year his fishing operation spends more than $120,000 on expenses in these and other communities in Southcentral Alaska. Nearly 60 businesses received payment from Bruce in 2013 for fuel, groceries, hotels, supplies, equipment, and other expenses.

Seafood Processing Sector

Even though the Anchorage/Mat-Su area is some distance from commercial fishing grounds, at least seven local businesses import Alaska seafood via truck or air cargo. These companies process a variety of Alaska seafood for markets in Alaska, throughout the United States, and internationally. Nearly all types of Alaska seafood are processed locally, including salmon from all over the state, crab from the Bering Sea, halibut and cod from the Gulf of Alaska, shrimp from Southeast, and scallops from Kodiak. Like other regional processors, employment at these facilities fluctuates seasonally, typically increasing during the summer salmon season and falling in the winter.

Several local processors sell their products to local restaurants and grocery stores. These processors and their buyers provide Anchorage/Mat-Su residents and visitors easy access to high-quality Alaska seafood; a significant benefit for residents and visitors that is sometimes taken for granted.

Seafood processors with production or offices in Anchorage/Mat-Su and local seafood wholesalers employed roughly 1,000 workers and paid $16.8 million in wages and salaries in 2013. On an FTE-basis, area processors and seafood distributors directly accounted for 340 jobs.

Seafood Processing Sector in Anchorage/Mat-Su, 2013

Local Companies (with processing facilities)	7
Employment	
Resident Workers Working in Anchorage/Mat-Su	630
Nonresident Workers Working in Anchorage/Mat-Su	370
Total Workers	**1,010**
FTE Employment in Anchorage/Mat-Su	**340**
Earnings ($Millions)	
Resident Wage and Salaries	$13.6
Nonresident Wage and Salaries	$3.3
Total Wage and Salaries	**$16.8**
Estimated Industry Asset Value ($Millions)	
Land and Buildings	$5.4
Equipment and Misc. Assets	$0.9
Total Industry Asset Value	**$6.3**

Notes: Seasonal workers who did not earn the majority of their 2013 annual Alaska earnings in seafood processing are not included in these figures. Employment data may include companies categorized as seafood wholesalers who also process seafood. Resident estimates apply to Alaska residents of any community, based on PFD applications. Asset values were not available for all companies. Asset value data refers to a partial list of companies with both production facilities and support operations in Anchorage. Totals may not sum due to rounding.

Source: McDowell Group estimates based on ADF&G, DOLWD, and Municipality of Anchorage Finance Department data.

The majority of processing workers in Anchorage are Alaska residents. Alaska residents earned 81 percent of local wages and salaries paid out in 2013, significantly higher than the statewide average of 38 percent. Eleven

processing and wholesale companies (that also buy/process fish from fishermen) maintain offices in Anchorage/Mat-Su that support local production or operations elsewhere in the state. Regardless of the occupation, all employees of these processing companies are included in the employment data referenced in this section.

The following seafood processing companies have production facilities and/or offices in the Anchorage/Mat-Su region. In addition, the Alaska Department of Fish & Game shows 65 additional companies that act as catcher-sellers (or similar type of operation).

10th & M Seafoods
Aquatech
Alaska Wild Kenai Salmon
Alaska Sausage & Seafood
Alaska Smoked Salmon and Seafoods
Aleutia (office)
Atka Pride Seafoods (APICDA, office)
Bering Fisheries (office)
Bering Pacific Seafoods (office)
Coastal Villages Seafoods (office)
Copper River Seafoods
Favco
Great Pacific Seafoods
Great Ruby Fish Company (office)
Kwikpak Fisheries (office)
New Sagaya Wholesale
New Sagaya Markets
Polar Seafoods (office)
Smoked Alaska
St. Paul Fishing Company (Wasilla office)
Togiak Seafoods (office)
Wild Alaska Salmon Products
Yamaya Seafoods

CDQ Groups in Anchorage/Mat-Su Region

In 1992 the North Pacific Fishery Management Council established the Community Development Quota (CDQ) Program to encourage economic growth in western Alaska. Approximately 10 percent of the annual harvest for many of the fisheries in the Bering Sea/Aleutian Island (BSAI) region are allocated to six nonprofit groups that represent 65 communities in a region stretching from the Seward Peninsula and out the Aleutian Chain. In 2013, Alaska's six CDQ groups generated $828 million in revenue and held net assets worth $978 million.[7]

Every CDQ group has staff and offices in Anchorage or Mat-Su, where workers and the CDQ groups spend money locally indirectly generating jobs for other local residents. It is estimated that CDQ groups employ approximately 90 people and paid out $7.9 million in labor income in the Anchorage/Mat-Su area in 2013, based on information compiled from CDQ annual reports and websites. Much of the CDQ staff located in Anchorage are employed in upper management and professional positions which pay above average salaries.

With the six CDQ groups owning all or a portion of nearly 100 fishing vessels active in the BSAI region, some local maritime service and supply businesses benefit from their fishing activity. It is also likely a number of local resident crewmembers, captains, permit holders, and quota owners are connected with CDQ vessels. Anchorage/Mat-Su is also a key hub for materials and services needed to support CDQ processing operations

[7] CDQ group 2013 annual reports, figures compiled by McDowell Group.

and community development programs. Including multiplier impacts, it is estimated that CDQ groups created a total of total of 276 FTE jobs and $13.6 million in labor income for the Anchorage/Mat-Su economy in 2013.

Seafood Industry Support Sector

The Anchorage/Mat-Su area is home to a variety of other private and public organizations connected to the seafood industry. Major support sectors are summarized in this section and a table of selected local support companies and organizations is provided below.

Seafood Industry Support Businesses, Organizations, and Facilities in Anchorage/Mat-Su

Transportation and Logistics	
Ted Stevens International Airport	Port of Anchorage
ACE Air Cargo	Alaska Airlines
Alaska Marine Lines	Carlile Transportation Systems
Cathay Pacific Airways	Commodity Forwarders Inc.
Delta Airlines	Federal Express
Grant Aviation	Glenn Air
Horizon Lines	Japan Airlines
Korean Air Cargo	Lynden Inc.
Minn Alaska	Movers Inc.
Northern Air Cargo	Pen Air
Ravn Alaska/Connect	Samson Tug & Barge
Sleipner Transport	Sourdough Express
Sun Country Airlines	Totem Ocean Trailer Express
United Airlines	United Parcel Service
Retail Trade, Fuel, Services, Storage, and Rental Services	
Alaska Industrial Supply	Alaska Packaging
Alaska Rubber & Supply	Alaska Net & Supply
B&J Commercial & Sporting Goods	Cummins Northwest
Delta Western Fuel	Donalson
FishEx	Kathy's Net Loft and Gear Supplies
LFS - Anchorage	NC Machinery
Petro 49, Inc.	Polar Marine
Redden Marine Supply	United Rentals
Manufacturing, Boat Building, and Materials	
Alaska Foam	Arctic Paws (Yummy Chummies)
Hylite Fabrication (Butte/Palmer)	Reynolds Marine
Taco Loco	Tri Jet Manufacturing (Palmer)
CAC Alaska (Fiberglass/Plastics)	Fiberlay (Fiberglass)
Greatland Welding and Machine (Palmer)	Seattle-Tacoma Box Company
Fishery Management, Information, Research, Conservation, Regulatory, and Advocacy	
AIS, Inc. (Observers)	AK Dept. of Environmental Conservation

Alaska Department of Fish & Game	Alaska Journal of Commerce
Alaska Marine Conservation Council	AK Maritime Prevention/Response Network
Alaska Salmon Alliance	Aleutians East Borough
Aleutians East Borough	Anchor Marine Insurance
At-Sea Processors Association	Bering Sea Fishermen's Association
Fisheye Consulting	Marine Advisory Program (AK Sea Grant)
McDowell Group	National Marine Fisheries Service (NOAA)
Northern Economics	North Pacific Fisheries Mgmt. Council
World Trade Center Alaska	North Pacific Research Board
Saltwater, Inc.	Terrasond
Banking, Finance, Legal, Boat Brokers, and insurance	
Alaska Boat Brokers	Alaska Marine Law
Alaska Service Agency (Insurance)	AK Commercial Fishing & Agriculture Bank
First National Bank of Alaska	Key Bank
Northrim Bank	Wells Fargo

TRANSPORTATION: AIR CARGO, MARINE CARGO, TRUCKING, AND FREIGHT FORWARDING

Anchorage is a key transportation hub for the Alaska seafood industry. Whether shipped by air from Bristol Bay to Anchorage International Airport, barged from Kodiak to the Port of Anchorage, trucked to the Port from Cordova through Whittier, or shipped up from Homer for custom processing, a significant portion of Alaska's seafood production flows through Anchorage.

Air Cargo

Ted Stevens Anchorage International Airport is used to transport finished seafood products to customers around the world and move seafood around the state for further processing. Typically reserved for the high-end markets - winter king salmon, Copper River and Cook Inlet Sockeye, live king crab, etc. - seafood is shipped to both domestic and international markets.

Alaska Airlines's "Salmon Thirty Salmon II" (Photo credit: Alaska Airlines.)

Using air transportation, local businesses bring seafood to the area for further processing. An example of this is Great Pacific Seafoods shipping salmon from Kotzebue to Anchorage for processing. Because air shipment is the most expensive way to move seafood, processors will often try to add as much value as possible through smoking or special packaging.

While the United States Postal Service, United Parcel Service, FedEx, and Alaska Airlines all ship seafood by air through Anchorage, with Alaska Airlines shipping the most annually. In 2013, the airline shipped 24.5 million pounds of Alaska seafood to cities in the U.S. and beyond, including 1 million pounds of Copper River salmon.[8]

Marine Cargo

Anchorage port facilities shipped out 168 million pounds of Alaska seafood in 2013.[9] That's nearly 4,000 containers of product.[10] Most seafood products shipped out of Anchorage is transported to Seattle aboard Totem Ocean or Horizon Lines container ships where it is either held in cold storages or shipped on to international and domestic markets. Moving this substantial volume of seafood through the supply chain creates hundreds of jobs in Alaska and the Lower 48.

Although seafood is a small component of the overall volume crossing the docks at the Port of Anchorage, it is still an important segment. Most seafood product is frozen, which requires reefer (refrigerated) containers to maintain a low temperature, which generates more gross revenue per pound for shippers. The vast majority of freight handled at the Port of Anchorage is incoming, northbound freight. Anytime shippers can find "backhaul" product, it allows them to offer more competitive rates for shipments in both directions. In this way, southbound freight – such as seafood – helps lower the cost of living in Alaska, particularly in rural, coastal areas.

Totem Ocean's M/V Midnight Sun passing by Anchorage (Photo credit: Totem Ocean).

Representatives of Totem Ocean Trailer Express (Totem Ocean) were interviewed to understand how seafood freight impacts their operations in Anchorage. "Seafood is an important market segment for Totem Ocean as our company is based upon northbound shipments to Alaska… anything that comes from Alaska southbound is considered special. Seafood accounts for about 10 percent of our southbound lift," says Renata Benett, Market Research Manager for Totem Ocean. "Our division employs 30 people in the Anchorage office who

[8] http://www.undercurrentnews.com/2014/05/19/alaskas-first-copper-river-salmon-lands-in-seattle/

[9] Army Corps of Engineers Waterborne Cargo Data, does not include any of the 254 million pounds of outgoing shipments classified as "Other Manufacturing Products."

[10] Assuming 40' container with an average net weight of 42,000 pounds.

direct operations and handle sales/billing. In addition, other subsidiaries of Saltchuk Resources, such as Carlile Transportation, Northern Air Cargo, and Delta Western, have significant operations in the region or Alaska as a whole which are supported to varying degrees by the seafood industry."

Trucking

Trucking is typically the most flexible way to transport seafood products (if possible) and falls into two main categories:

- **Lower 48:** Seafood is trucked from Alaskan communities directly to wholesale and retail customers in the lower 48. Driving around-the-clock with two drivers allows a shipment of seafood to arrive in Seattle in approximately two days or Chicago in less than three days.
- **Between communities:** Seafood is transported using trucks between communities during the pre-processing and post-processing stages. Anchorage does not receive direct commercial seafood landings, so all of the estimated 4,000 containers of seafood shipped via marine cargo must be transported by truck to Anchorage before it exits the region. In addition, over 1 million pounds of seafood product is trucked from processing plants to local customers.

Aves Thompson, Executive Director of the Alaska Trucking Association, points out that the seasonal increase in seafood transportation offers truckers a way to stay busy as the construction season on the North Slope comes to an end. "Every year in the spring as work on the Slope slows down, processors and fisherman need fish moved. It really offers a nice balance that keeps people working."

GOVERNMENT: FISHERY MANAGEMENT AGENCIES

State and federal regulatory bodies have offices in the Anchorage/Mat-Su area. Government agencies employed an estimated 210 workers in Anchorage/Mat-Su as a direct result of seafood industry activities, directly generating $14 million of labor income in 2013. Seafood-related government jobs - particularly federal jobs - tend to provide higher-than-average wages, good benefit packages, and year-round employment.

One of the most significant state departments is the Alaska Department of Fish and Game (ADF&G) which oversees fisheries taking place in state waters (generally inside three miles from the coastline). ADF&G's Commercial Fisheries Division employed 96 individuals in Anchorage in 2013, including 67 full-time positions, 2 part-time positions, and 27 seasonal

2013 NPFMC Meeting (Photo credit: Alaska Journal of Commerce)

positions.[11] With average monthly wages ranging from $3,377 for seasonal workers to $5,686 for full time workers, an estimated $5.8 million in wages were paid to ADF&G Commercial Fisheries Division employees in 2013. No employees are located in the Mat-Su Borough. In addition, the Department of Environmental Conservation employs a few workers in Anchorage who deal with processing plant permitting and regulatory measures.

Seafood-related federal government employees in Anchorage earned an estimated $5.2 million in labor income in 2013. The National Marine Fisheries Service (NMFS) employs approximately 25 workers at the NMFS Anchorage office. The North Pacific Fishery Management Council (NPFMC) is tasked with the conservation and management of fisheries in federal waters in Alaska. The NPFMC is responsible for allocating harvests and implementing fishery management plans for fisheries. The organization is based in Anchorage and consists of a 15-member council and 15 committees/workgroups made up of people from the industry and government agencies. The council meets five to six times per year. Anchorage hotels typically host two to three meetings per year and draw 150 to 200 participants. The NPFMC maintains a staff of 13 employees.

Government operations supporting Alaska's seafood industry are funded with a mix of industry taxes/fees, state general funds, and other federal revenue sources. A comprehensive analysis of government funding for seafood-related activities is beyond the scope of this study; however, the seafood industry did pay $90 million in taxes, fees, and other payments (not including income taxes) to state and federal government agencies in FY2013 (with the bulk going to state government). Approximately $40 million went to the State of Alaska as unencumbered revenue, while the balance consisted of program receipts and self-assessments. Based on previous McDowell Group research efforts, the cost of funding state government agencies is roughly equal to the amount of revenue collected from the industry. Saltonstall-Kennedy funds, derived from duties on U.S. seafood imports, are also an important funding source for NMFS activities.

OTHER FISHERY RELATED ORGANIZATIONS

Several other organization and companies with an involvement in commercial fishing and general marine research have a presence in the area. These public, private, and non-profit bodies are devoted to scientific research, education, and advocacy. A sample of these groups are detailed below:

- **Alaska Sea Grant (Marine Advisory Program)** provides education, research, and extension services to the seafood industry around the state. The Anchorage-based non-profit organization is funded by the University of Alaska and NOAA and employs 29 workers across the state, including 8 positions in Anchorage.

- **North Pacific Research Board** supports and funds research projects in Alaska that improve management practices and the sustainable use of marine resources. The organization typically funds grants of several million dollars to research projects in Alaska each year and has a local staff of 7 employees.

- **Alaska Fisheries Development Foundation** is a non-profit development foundation based in Anchorage which funds projects aimed at enhancing the value of the seafood industry.

[11] Personal Communication, Alaska Department of Fish and Game, 2/27/15

- **Terrasond** is a small global company based in Palmer which conducts hydrographic and marine geophysical surveys. The company provides marine mapping data for several government agencies.
- **Alaska Ocean Observing System** is a non-profit organization dedicated to marine safety, maritime data, hazard mitigation, and coastal monitoring. The organization works closely with a variety of state, federal, industry, and non-governmental organizations to focus on these goals.

Alaska Sea Grant, North Pacific Research Board, and Alaska Ocean Observing System operate out of the marine science suite at 1007 W. 3rd Ave in downtown Anchorage. Each organization benefits greatly from being based in the same building. In addition, there are numerous partners located within walking distance that draw upon the expertise of these organizations. Those partner companies and agencies are:

- North Pacific Fishery Mgmt. Council
- Alaska Marine Conservation Council
- National Marine Fisheries Service
- U.S. Coast Guard
- The Nature Conservancy
- APICDA (CDQ group)
- NSEDC (CDQ group)
- CVRF (CDQ group)

FINANCING, LEGAL, ACCOUNTING, AND INSURANCE

Anchorage has more than a dozen banks, insurance companies, and law firms that provide services to Alaska's seafood industry. In addition, several public/non-profit organizations are based in Anchorage that provide financing, grants, and insurance to the industry. The greater Anchorage/Mat-Su area is home to 724 active permit holders, the majority of whom use local accounting firms to file taxes.

Most private banks in Anchorage are connected to the seafood industry or the businesses that support it. Wells Fargo, First National Bank of Alaska, Northrim, Key Bank, and others are all active in providing financing. Northrim and First National Bank of Alaska are both headquartered in Anchorage.

The Commercial Fishing and Agriculture Bank (CFAB), Alaska Department of Commerce, Community, and Economic Development, Denali Commission, and Alaska Industrial Export Development Authority all have offices in Anchorage that provide financing and funding options ranging from several thousand to tens of millions of dollars in support of the seafood industry. In addition to supporting activity directly involved in the seafood industry, some of these organizations offer financing for seafood industry support businesses. For example, a boat-builder in Homer may finance a new building to work in or a marine mechanic may finance a mobile workstation that allows them to work on vessels throughout Southcentral.

Public financing through State of Alaska programs is also available for fisherman wanting to purchase vessels, permits, and other fishing related assets. These same programs offer financing for aquaculture and hatchery expansion.

Support Sector Spotlight: Alaska Commercial Fishing and Agriculture Bank (CFAB)

CFAB was founded in 1980 during the Hickel Administration to provide financing to Alaska's commercial fishing sector and agricultural industry. The bank received $32 million in seed money from the State of Alaska, which

it repaid by 1998. Its current loan portfolio is valued at $39 million including 418 loans, most of which were made to resident commercial fishermen. During the past five years, the bank has made over 290 loans totaling more than $45 million to Alaska residents throughout the state.

The bank is located in Anchorage and has a staff that ranges in size from 8 to 12 employees, generating about $800,000 in salaries and benefits per year. CFAB's Board of Directors consists of eight members who hail from around the state.

CFAB's biggest impact stems from the loans it makes to the fishing industry, but its operations also support other jobs in Anchorage and the state as the bank utilizes Alaskan owned businesses for professional services, building maintenance, office supplies, travel, and hotels. In 2007, CFAB purchased its own building and has since paid more than $60,000 in property taxes to the municipality. Over the past five years, the bank has paid out more than $816,000 in state and federal taxes. Charitable donations and scholarship awards in excess of $100,000 have also been given out during this time.

"While it is clear to see by these figures that CFAB has indeed had a strong impact on the local economy, one impact that is not immediately measureable is how many residents have obtained loans from other banks (which also had a positive economic impact) simply because CFAB was an option," says CFAB President Lela Klingert. "Even if fishermen obtain financing elsewhere, it's possible they got their start in the industry with CFAB financing. The presence of CFAB also makes other private lenders more competitive."

HOTEL AND RESTAURANTS

With Anchorage located centrally in the state, conferences and meetings related to fishery management, oceanic research, maritime education, industry development, and other subjects, are often held in the city's hotels and convention centers.

Chef Reuben Gerber of the Captain Cook's Crow's Nest

In 2013, approximately 4,150 people attended 23 events in Anchorage associated with the seafood industry. Asked about the significance of these events to the local hospitality industry, Julie Saupe, President and CEO of Visit Anchorage stated, "All events and meetings, including the many seafood-related events, are an important part the local hospitality business. Particularly those held in winter; traditionally a slower time."

Seafood Related Events in Anchorage, 2013

Body	Name of Event(s)	Estimated Attendance
Alaska Marine Science Symposium	Alaska Marine Science Symposium	1,200
Alaska State Department of Fish & Game	Board of Fish and Other Meetings	1,025
Alaska Seafood Marketing Institute	2nd Annual Great Alaska Seafood Cook Off and Board Meetings	510
Alaska Fisheries Development Foundation	Symphony of Seafood	350
NMFS - Alaska Region	Arctic Open Water Meeting	240
Alaska Sea Grant	28th Lowell Wakefield Fisheries Symposium	200
North Pacific Fishery Management Council	April Meeting	175
All other events		450
Total Attendance		**4,150**

Source: Visit Anchorage, 2014 and McDowell Group estimates.

OTHER SUPPORT SECTOR BUSINESSES

The region is home to many firms that support the seafood industry throughout the state. Having a diversified economy not focused on a sole industry allows businesses in the area to work for many different types of clients. For example, a welding and diesel engine repair business can work for clients in oil and gas, mining, and commercial fishing. This diversification is in contrast to the smaller communities where businesses may shut down in the winter because of lack of demand.

A common practice for firms engaged in marine repair and maintenance is to have mobile capacities that allow them to either drive to communities on the road system or fly to communities in need of services. Businesses that supply fisherman and their operations often have distribution centers in Anchorage that facilitates quick transportation to locations where supplies are needed. For example, Redden Marine Supply's location in Anchorage is a 14,000 square feet distribution center that allows approximately 15,000 items to be stocked and ready for shipment throughout the state.[12]

Local fabricators in the area often collaborate on different commercial fishing related projects, with each providing components or services to complete, for example, a PWS bowpicker or custom parts needed in the middle of a busy commercial fishing season. Tri Jet Manufacturing, located in Palmer, provides 3D design, waterjet cutting, sandblasting, and other services. Asked to describe Tri Jet Manufacturing, Hans Vogel, the owner, noted the importance of other local businesses, "We have 11 employees at our Palmer location and work for a variety of industries including oil and gas, aviation, maritime, and commercial fishing. We provide custom metal fabrication and coating services to a number of Alaska boat builders; it's really a team effort."

One of the boat builders Tri Jet Manufacturing supplies services to is Hylite Fabrication in Butte, a community located close to Palmer. Delbert Henry, owner of Hylite Fabrication, specializes in building bowpickers used in Alaska's driftnet fisheries. "In addition to other fabrication work," Delbert stated, "We build about two

[12] http://www.reddenmarine.com/anchorage

bowpickers a year with seven employees.[13] We work closely with a variety of other local companies to serve the Alaska commercial fishing fleet."

Discussing the importance of commercial fishing in the Mat-Su area, Palmer's mayor DeLana Johnson remarked, "A wide variety of jobs and economic activity are supported locally from commercial fishing. We have permit and IFQ owners and crewmembers harvesting seafood, local boat builders manufacturing equipment used by these fisherman, and other support companies that receive a portion of revenue from supporting the commercial fishing industry."

Photo credit: Hylite Fabrication.

Organizations throughout the state use Anchorage as a staging area for summer seasonal work. The Prince William Sound Aquaculture Corporation (PWSAC) operates a distribution facility and has administrative offices in Anchorage that support the organization's five salmon hatcheries. The distribution facility moves approximately 2.5 million pounds of supplies annually and PWSAC employs eight full-time administrative employees in Anchorage.[14]

Seafood Industry Assets

Anchorage/Mat-Su resident fishermen and the area's processing companies held an estimated $228 million in assets as of 2013. Anchorage/Mat-Su holds the largest amount of overall industry value among all Southcentral communities.

This asset valuation should be regarded as a conservative estimate, since the value of processing plants on the open market is likely higher than the assessed value of land and property. In addition, dozens of local support sector businesses and fishery management agency buildings would likely add significantly to this total, but estimating the value of those assets and their dependence on the seafood industry is beyond the scope of this analysis.

Estimated Value of Selected Seafood Industry Assets in Anchorage/Mat-Su, in $Millions, 2013

Commercial Fishing Permits, Quota, Vessels, and Misc.	$221.7
Seafood Processing Facilities and Equipment	$6.3
Total Value	**$228.0**

Source: McDowell Group estimates based on industry interviews and assessed property values.

[13] To view a National Fisherman video of Hylite Fabrication: https://www.youtube.com/watch?list=UUvfJnTN_KwcW4UrW6Ah5D6Q&v=cxH_5tAr5PQ

[14] http://pwsac.com/about/hatcheries/ and McDowell Group, *Economic Impact of PWSAC*, 2012.

Company Profile: Great Pacific Seafoods

Great Pacific Seafoods began processing Alaska seafood in 1989, signing a lease on their Whittier facility the day before the Exxon Valdez oil spill. The company overcame the spill and now operates three Southcentral production facilities in Anchorage, Whittier, and Kenai, as well as a buying operations in Kotzebue and Homer.

The company typically employs a peak workforce of 300 workers in Alaska, with most workers spread evenly between its three production facilities. Southcentral residents typically account for 40 to 50 percent of the workforce, though it depends on the location. Anchorage/Mat-Su residents make up about 80 percent of that facility's workforce. Great Pacific's Southcentral plants receive fish from approximately 250 fishermen in Prince William Sound and 50 fishermen in Kotzebue.

Great Pacific's Southcentral operations create secondary economic benefits for airlines, trucking companies, packaging companies, and fuel distributors. "We fly in a couple million pounds of salmon from Kotzebue on Northern Air Cargo. Up until last year, we were the only salmon buyer up there. All that product gets processed in our Anchorage plant before being loaded up on planes or trucks to be shipped out to buyers, mostly in the lower 48. We transport a lot of product via truck within Southcentral as well," explains Great Pacific Seafoods General Manager Roger Stiles. "We are a big customer for Alaska Packaging, who provides our fish boxes, totes, and other packing supplies. We buy a lot of fuel from Shoreside Petroleum as well."

Great Pacific is one of the largest fresh salmon processors in Alaska. Fresh and smoked fillets add the most value to Alaska salmon meat products of all the other major product forms (frozen, H&G). Adding value to the product through filleting and shipping out fresh product increases the wholesale value, which in turn makes prices paid to fishermen more competitive. The company also provides a market for higher value fresh Pacific cod, which they purchase in Homer during the winter and transport to their Anchorage facility where most of it is filleted. "Our cod program is really nice because it provides Southcentral fishermen a high-value market for cod during the salmon off-season. And we maximize the value of those fish, selling fresh milt and frozen roe." says Stiles.

Company Profile: Copper River Seafoods

In 1996, Scott Blake, a fourth generation commercial fisherman, partnered with three other Alaskan fishermen to establish Copper River Seafoods. The primary driver behind the formation of the company was to protect the fishermen of Alaska by ensuring the opportunities they had would be available for the next generation.

Today, Copper River Seafoods, with facilities in Anchorage, Kenai, Cordova, Naknek, Togiak, and Kotzebue, is a professional food manufacturing and marketing firm that provides both economic and resource sustainability for Alaskan fishermen and the State of Alaska.

Copper River Seafood's Anchorage operation is comprised of two separate facilities. A 50,000 square foot processing facility on 1st Avenue is the heart of the company's operations. Nearly every species of fresh and

frozen Alaskan seafood is brought into this facility year-round from the company's primary processing facilities outside of Anchorage and value is added through filleting and portioning. The 1st Avenue processing facility employs 130 year-round employees and an additional 100 seasonal employees in the peak summer salmon season. The company's administration building on 5th Avenue in Anchorage is home to 30 full-time executive and managerial employees and serves as an important home base for workforce development by doubling as a "corporate campus." Through these two facilities Copper River Seafoods contributes heavily to Municipal operations through the payment of property taxes and employment.

Copper River Seafoods offers a variety of workforce development classes related to the commercial seafood industry. Among other goals, such programs support hiring and retention of employees re-entering the workforce after incarceration.

Copper River Seafoods relies heavily on nearly every major transportation entity operating in the Anchorage and Mat-Su areas including the Alaska Marine Highway System, Lynden, FedEx, UPS, and Alaska Airlines. These companies are integral to the day-to-day operations of Copper River Seafoods. In addition, the company hires local information technology subcontractors and an Anchorage lodging facility houses hundreds of seasonal employees on their layovers to and from primary processing facilities throughout the state. Copper River Seafoods also supports retail stores in Anchorage as nearly all of the company's operational supplies such as cookware, provisions, bunk house supplies, building materials, and office supplies are purchased in Anchorage and delivered to the primary processing facilities via the Alaska Marine Highway System or air cargo carriers.

Copper River Seafoods provides Anchorage and Mat-Su residents with a wide variety of Alaska seafood products via local retailers such as 3 Bears, Costco, Sam's Club, Walmart and numerous local restaurants. The company contributes to the Anchorage Food Bank and even donates wild salmon treats to Animal Shelters around the Anchorage/Mat-Su area.

Community Impact Profile: Cordova

Cordova is synonymous with Copper River salmon. The community of 2,300 residents is almost entirely dependent the region's wild and hatchery-enhanced salmon runs. In fact, it is the most seafood-dependent community in Southcentral Alaska. Cordova accounts for just 0.5 percent of the regional population, but the town's resident fishermen captured 20 percent of the total ex-vessel value earned by Southcentral residents.

Local Economic Impact of the Seafood Industry

It is estimated that Alaska's seafood industry directly employed 1,810 workers and supported a total of 1,470 FTE-jobs in Cordova during 2013 (including direct and secondary effects). The industry directly employs approximately 880 local Cordova residents in seasonal or full-time equivalent jobs, or 58 percent of all working age residents. Many indirect and most induced jobs are also held by local residents, some of whom also work in the seafood industry during the summer salmon season.

Although 2013 produced a record pink salmon harvest, the ex-vessel earnings of Cordova resident fishermen was only slightly higher than 2012.

> ***"Virtually every business in Cordova is dependent on the seafood industry.***
>
> ***- Jim Kacsh, Mayor of Cordova***

Roughly 90 percent of Cordova's estimated 1,050 processing workers are seasonal, non-resident hires. These laborers are crucial for the small community which would be unable to process the summer salmon harvest without their labor.

Economic Impact of Seafood Industry in Cordova, 2013

	Numbers of Workers	Full-Time Equiv. Employment	Labor Income ($Millions)
Seafood Industry (Direct Impacts)			
Commercial Fishing (Local Residents)	619	630	$31.0
Seafood Processing	1,050	310	$15.1
PWSAC Hatchery and ADF&G	140	80	$3.8
Economic Impacts			
Direct (Industry Functions)	**1,810**	**930**	**$46.1**
Indirect (Business Spending)	-	**250**	**$12.4**
Induced (Household Spending)	-	**290**	**$14.3**
Total Economic Impacts	**1,810**	**1,470**	**$72.8**
Local Fisheries Taxes Received (2013)			**$1,661,200**

Notes: All employment figures (except commercial fishing workers) have been rounded, as result total employment figures may not sum. Commercial fishing labor income figures include estimated income from tender vessels owned by local residents.
Source: McDowell Group estimates based on ADF&G, DCCED, DOLWD, IMPLAN, NMFS, and industry interviews.

PWSAC is a major economic engine in Cordova. The non-profit salmon hatchery association typically employs about 110 workers in Cordova or the immediate region and provides more than 50 percent of the harvest volume caught in Prince William Sound salmon fisheries in most years.

Local Seafood Resources

Cordova ranked as one of the largest U.S. ports by landed value of seafood in 2013, with 147 million pounds of seafood, worth $91.5 million delivered to Cordova processors. On average, between 2010 and 2013, Cordova ranked 14th among U.S. ports in terms of both ex-vessel value and harvest volume.

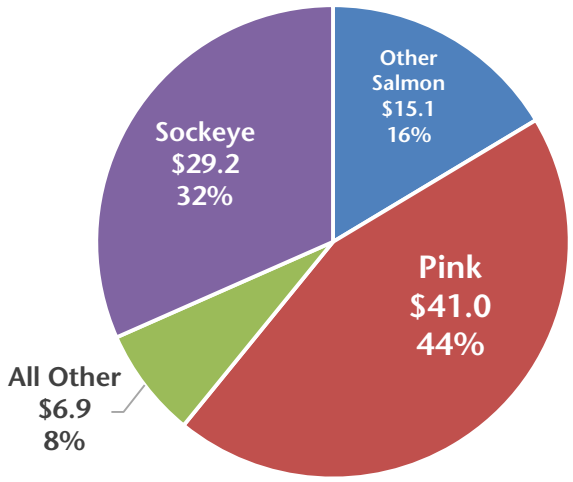
Commercial Seafood Landings to Cordova Processors, 2004-2013

Calendar Year	Ex-Vessel Value ($Millions)	Harvest Volume (Millions lbs.)	U.S. Rank (by Value)	U.S. Rank (by Volume)
2004	$31.8	40.5	20	22
2005	46.5	111.2	10	12
2006	41.8	45.8	14	21
2007	49.9	108.8	11	13
2008	50.4	95.7	10	14
2009	32.8	45.5	19	21
2010	84.3	147.7	5	9
2011	68.3	67.5	15	21
2012	40.0	83.8	27	15
2013	91.5	147.4	7	11
2010-2013 Average	**$71.0**	**111.6**	**14**	**14**

Note: The average of the last four years is used due to the odd-even year pink salmon abundance cycle.
Source: NMFS.

Sockeye and pink salmon are the backbone of the seafood industry in Cordova, accounting for three-quarters of the community's seafood value (in ex-vessel terms), on average, between 2010 and 2013. The 2013 season was a record year for pink salmon harvest. Figures in the chart to the right are averaged between 2012 and 2013 when pink and sockeye salmon accounted for an average of 76 percent of ex-vessel value in Cordova. The remaining three salmon species together accounted for 16 percent of seafood value, and halibut, black cod, and other species account for a combined 6.9 percent of the total ex-vessel value.

Ex-Vessel Value of Cordova Seafood Resources in $Millions, by Major Species, 2012-2013 Average



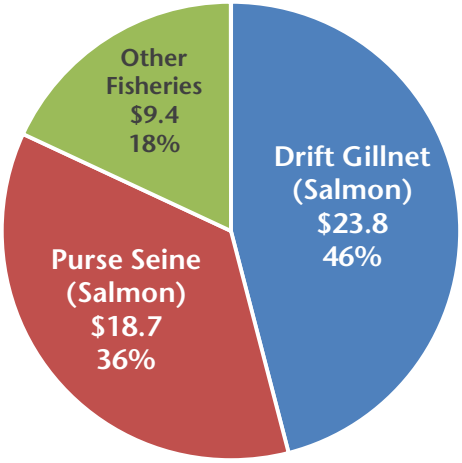
Source: ADF&G.

Commercial Fishing Sector

In 2013, 619 commercial fishermen resided in Cordova. This number includes 298 active permit holders and 321 crew members.

Cordova residents accounted for one-fifth of all gross earnings in the Southcentral commercial fishing sector in 2013. Cordova fishermen earned $56.8 million collectively in 2013 from 400 permits fished. These gross earnings represent 62 percent of the harvest value landed in the community that year. Salmon fisheries provided 90 percent of Cordova resident gross earnings in the fishing sector in 2013, with $50.8 million in earnings for purse seine and gillnet fisheries combined. Approximately half of all Cordova resident earnings from salmon fisheries came from the purse seine fishery, and the rest primarily from the drift gillnet fishery. 2013 marked a record pink salmon harvest. This increase in pink salmon inflated 2013 earnings as well, especially in the purse seine fishery. Earnings are averaged between 2012-2013 in the chart below.

Cordova Resident Fishermen Gross Earnings, by Fishery, in $Millions, Average 2012-2013

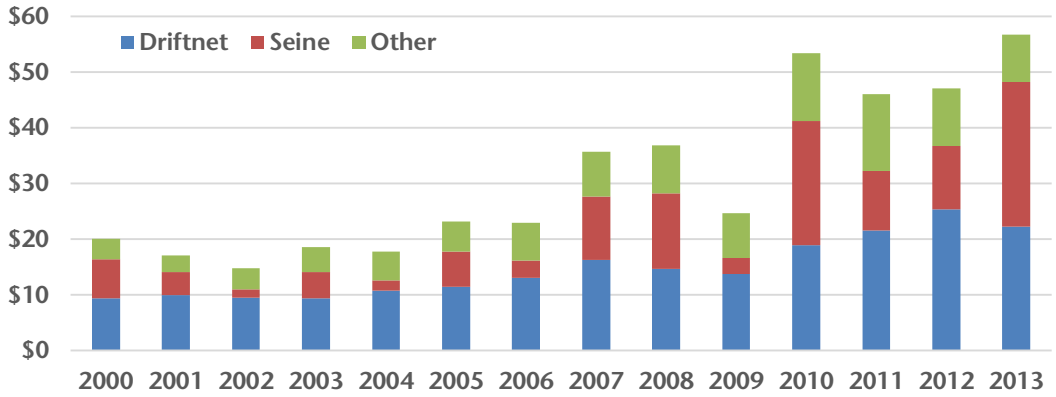


Source: CFEC.

Cordova gillnetters heading out for an opener in 2013.

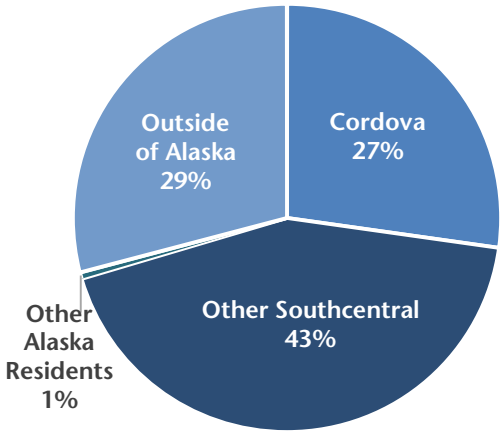
In addition to Cordova residents, many other Southcentral Alaska residents participated in the main purse seine and drift gillnet fisheries fished by Cordova residents. In total, Cordova residents made up 27 percent of the PWS purse seine fishery (S01E), in terms of permits fished. This compares to all other Southcentral communities whose residents made up a combined 43 percent of the fishery. Cordova residents made up 44 percent of the PWS drift gillnet fishery in 2013 in terms of permits fished, while 32 percent of that fishery was made up of residents from other Southcentral communities.

Gross Earnings by Resident Cordova Fishermen, in $Millions, 2000-2013

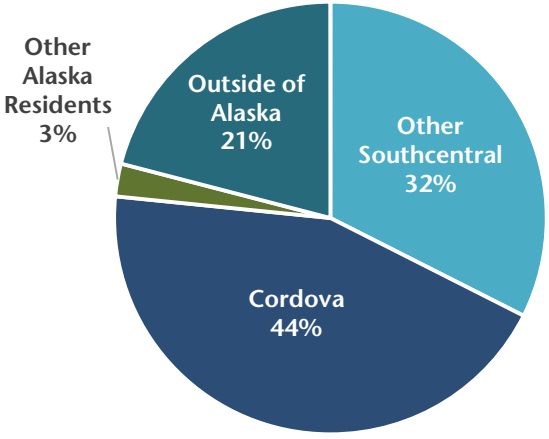


Source: CFEC.

PWS Purse Seine Fishery (S01E) Participation by Residency, Number of Permits Fished, 2013



PWS Drift Gillnet Fishery (S03E) Participation by Residency, Number of Permits Fished, 2013



Source: CFEC

Commercial Fishing Sector in Cordova, 2013

Local Resident Employment	
Active Permit Owners	298
Crew Members	321
Total Resident Commercial Fishermen	**619**
Estimated FTE Jobs	**628**
Resident Earnings ($Millions)	
Estimated Labor Income (Permit Owners and Crew)	$31.0
Gross Earnings of Resident Permit/Quota Owners	$56.8
Estimated Asset Value Held by Local Residents ($Millions)	
Limited Entry Permits	$79.2
Quota Shares	$17.6
Fishing Vessel Value, Gear, and Misc.	$42.3
Total Asset Value Held by Resident Commercial Fishermen	**$139.1**

Notes: Labor income figures include estimated income from tender vessels owned by local residents. Totals may not sum due to rounding.
Source: McDowell Group estimates based on ADF&G data and industry interviews.

COMMERCIAL FISHING FLEET

In 2013, 603 commercial fishing and tender vessels were homeported in Cordova. Most of these were gillnetters or seiners. Over half of the Cordova commercial fishing fleet (382 vessels in 2013) measures between 28 and 35 feet in length, a size that typically indicates the vessel is used for gillnetting. An additional 112 vessels measured less than 28 feet in 2013, a size that often indicates small gillnetters or setnet skiffs. Larger vessels in the fleet include 97 vessels between 36 and 59 feet. Most of these longer vessels are seiners. In addition, 6 vessels measure between 60 and 99 feet, a size frequently associated with longline or pot-fishing boats. Six tenders that are not fishing vessels are also homeported in Cordova, as are 101 seine skiffs (these skiffs are not included in the overall commercial fishing vessel count). Cordova residents own over half (58 percent) of the Cordova commercial fishing fleet. Alaska residents from outside of Cordova own 22 percent of the fleet. Non-Alaska residents own the rest of the vessels (20 percent of the fleet).

Cordova's Commercial Fishing Fleet, 2013

Skiffs (under 28')	112
28' to 35'	382
36' to 49'	53
50' to 59'	44
60' to 99'	6
Tenders	6
Total Commercial Fishing and Tender Vessels	**603**

Note: Based on self-reported homeport designation on CFEC vessel registration. This count does not include 101 seine skiffs.
Source: McDowell Group Alaska Marine Vessel Database.

**THE APPENDIX CONTAINS HISTORICAL DATA ON CORDOVA'S COMMERCIAL FISHING SECTOR*

LIFE AS A COMMERCIAL FISHERMAN IN CORDOVA

Ken Jones, a 23-year old Cordova fisherman, started seining on his dad's boat at eight-years old. A few years later while in high school he purchased a PWS seine permit and a boat. Jones found a seine net under a tarp in a friend's yard, spent $2,000 on a seine skiff, and started fishing for himself.

Ken Jones' F/V Serenity (Image: JCB Photography, Ken Jones).

Today he owns two fishing vessels in Cordova - a new 50-foot seiner and a gillnetter that keep him busy salmon fishing from May through October. He also longlines black cod and crews in the spring herring seine fishery.

Living year-round in Cordova, Ken and his fishing operation spend significant amounts of money in the community. "Depending on the year, I spend $200,000 to $500,000 annually in the community. This includes fuel, groceries, crew shares, parts, and other expenses. I hire mechanics, welders, net-builders, electricians, and other local businesses to keep my boats in shape."

Mariculture Operations in Cordova

Jim Aguiar is the sole owner and operator of Eagle Shellfish Farm located in Simpson Bay (seven miles north of Cordova). The farm grows market-sized oysters and supplies 10 to 12 percent of the seed for the entire state. The farm is expanding, but had 1.2 million oysters as of mid-2014.[15] Aguiar hires help at times during the season, but it is essentially a one-man operation. Aguiar has become a valuable resource for other aspiring shellfish farmers in the state, readily sharing information about how to run a successful shellfish farm in rural Alaska.


Jim Aguiar from the Eagle Shellfish Farm (Image: Cordova Times).

Seafood Processing Sector

Five primary processing companies operate six facilities in Cordova, along with a number of smaller operations and catcher-seller companies. Local seafood processors employed an estimated 1,050 workers in 2013, likely

[15] Yeager, Ben, *The High Priest of Alaska Oysters*, Cordova Times, August 14, 2014.

the most of any prior season. With Trident Seafoods expanding its housing facilities, this number may rise in coming years. Processors paid out an estimated $15 million in wages and salaries. The majority of Cordova's processing jobs are filled by seasonal, nonresident laborers. The combination of a relatively small population, large salmon resource, and substantial number of local fishermen, make it necessary to import processing labor for the busy summer salmon season.

Plants and other property/assets owned by processing companies are valued at $17.5 million, based primarily on City of Cordova assessed property valuations. However, the actual market value is likely much higher given that the port routinely produces over $200 million of processed product each year.

Seafood Processing Sector in Cordova, 2013

Processing Companies	5
Processing Plants	6
Estimated Employment	
Resident Workers	120
Nonresident Workers	930
Total Workers	**1,050**
Est. Average Monthly Employment	**310**
Estimated Wage and Salaries ($Millions)	
Resident Wage and Salaries	$3.3
Nonresident Wage and Salaries	$11.8
Total Wage and Salaries	**$15.1**
Estimated Industry Asset Value ($Millions)	
Land and Buildings	$15.1
Equipment and Misc. Assets	$2.4
Total Industry Asset Value	**$17.5**

Notes: Seasonal workers who did not earn the majority of their 2013 annual Alaska earnings in seafood processing are not included in these figures. Employment data may include companies categorized as seafood wholesalers who also process seafood. Resident estimates apply to Alaska residents of any community, based on PFD applications. Totals may not sum due to rounding.

Source: McDowell Group estimates based on ADF&G, DOLWD, and City of Cordova data; and industry interviews.

Processing employment data is not specifically available from public sources because Cordova is part of the Valdez-Cordova Census Area. Although Cordova meets the threshold for confidentiality, the Alaska Department of Labor could not disclose employment data without violating confidentiality restrictions for other plants in Valdez and Whittier. McDowell Group interviewed processing companies and used landings and census area employment data to provide a reasonable estimate of processing employment in Cordova.

Cordova's seafood processing and fish buying sector includes the following companies in addition to several other individual direct marketers:

Primary Processors
Alaska Wild Seafoods
Copper River Seafoods
Ocean Beauty Seafoods
Prime Select Seafoods
Trident Seafoods

Secondary Processors, Direct Market, & Retail
Copper River Fish Market
Copper River Flats Finest
Copper River Caviar & Fish Co
Gulkana Seafoods Direct
Pedicord Brokerage Company
Potter's Own Fine Fish
Wild By Nature, LLC

Seafood Industry Support Sector

Cordova is a regional center for seafood industry support services. Five economically important regional salmon hatcheries, all operated by Prince William Sound Aquaculture Corporation (PWSAC), are headquartered in Cordova. PWSAC hatcheries generate substantial economic impacts throughout much of Alaska. Cordova also supports essential infrastructure for marine service activity, including general boat and equipment maintenance, repairs, and boat building. Also, other professional services important to commercial fishermen, such as financing institutions, are located in the community.

PRINCE WILLIAM SOUND AQUACULTURE CORPORATION SALMON HATCHERIES

PWSAC is a private non-profit corporation, headquartered in Cordova. The organization works to optimize salmon production in Prince William Sound. PWSAC administration offices are located in Cordova. PWSAC also owns a distribution center in Anchorage designed to consolidate and distribute supplies for remote hatchery sites via Whittier.

The organization operates four remote hatcheries in Prince William Sound and one inland on the Gulkana River. All five species of salmon are currently produced through PWSAC operations. The returning salmon benefit commercial, sport, personal use, and subsistence fisheries throughout Southcentral Alaska.

- The Armin F. Koernig Hatchery is located about 90 air miles west of Cordova. Six on-site year-round staff and up to 12 seasonal staff operate the facility.
- The Wally Noerenberg Hatchery, the largest salmon production facility in North America is located approximately 20 miles east of Whittier. Eight on-site year-round staff and 30 seasonal staff operate the facility.

- The Cannery Creek Hatchery approximately 40 miles east of Whittier. Six on-site, year-round staff and 14 seasonal staff operate the facility.
- Main Bay Hatchery is located approximately 40 miles southwest of Whittier. Six on-site, year-round staff and 8 seasonal staff operate the facility.
- Gulkana Hatchery is located 250 miles northeast of Anchorage and 177 miles south of Fairbanks on the Richardson Highway. Four on-site, year-round staff and 16 seasonal staff operate the facility.

PWSAC employs about 120 workers each year in its five hatcheries and spends roughly $10 million annually on operational costs, capital costs, and payroll.[16] A 2012 McDowell Group study found that PWSAC commercial fishermen in the PWS region collectively earned annual average gross revenues of $48.3 million per year harvesting PWSAC salmon between 2007 and 2011. Labor income (net of expenses) for permit holders and crew during those years was estimated at $25.1 million annually. The same study estimated that PWSAC salmon generated jobs for 1,111 permit holders and crew, on average, between 2007 and 2011. In addition, PWSAC salmon also created jobs for an estimated 911 workers per year in seafood processing and an annual average of $12.9 million in labor income in Alaska.[17]

PWSAC is currently wrapping up major projects funded through recent State of Alaska investment in deferred maintenance in all state-owned hatcheries.

Marine Support Services

Cordova is home to the greatest number of local vessels and marine service providers in the Prince William Sound region. Marine support infrastructure in the community includes a 150-ton marine travel lift that is co-located with a shipyard, a small boat harbor with capacity for 727 vessels from 24' to 70' in length, two tidal grids (with 160 and 180-ton capacity), a wash-down pad and wash-down water treatment.[18] The lift has expanded the breadth of work that may be performed in Cordova, such as sand blasting, painting, and repairs that, prior to acquiring the lift, had to take place out of town.

Cordova Marine Support Infrastructure

Travel Lift Capacity (Tons)	150
Other Haul-out Capacity (Tons)	250, 90
Tidal Grid Capacity (Tons)	160, 180
Harbor slips available	727
Wash-down Pad	Yes
Wash-down Water Treatment	Yes

Note: Cordova also provides a wash down pad and wash down water treatment.
Source: McDowell Group Marine Infrastructure Database.

[16] Spending figure does not include debt service payments.
[17] *Economic Impact of the Prince William Sound Aquaculture Corporation.* McDowell Group. October 2012.
[18] *Trends and Opportunities in the Alaska Maritime Industrial Support Sector.* McDowell Group. September 2014.

Shoreside Petroleum operates a commercial fueling dock in Cordova. Also, marine repair, surveying, boat building, supplies, storage, construction, and communication services are available in the community. While the summer fishing season is particularly busy in Cordova, there is significant off-season economic activity related to boat repairs/maintenance and gear maintenance, such as net hanging and mending services.

Seafood Industry Support Businesses and Facilities in Cordova

Research and Education	
Alaska Sea Grant	Prince William Sound Science Center
Transportation and Logistics	
ACE Air Cargo	Alaska Airlines
Alaska Marine Lines	Alaska Marine Response
Cordova Air Service	Cordova Transport
Samson Tug & Barge	-
Retail Trade, Fuel, Services, Storage, and Rental Services	
Bayside Storage	Club Speed Wash
LFS - Cordova	NAPA/Anchor Parts
Nichol's Backdoor Store	North Tech
Old Town Enterprises	Plumbline
Prince William Marina, LLC	Redden Marine Supply
Seaman's Hardware	Shipyard Rental, LLC
Shoreside Petroleum	-
Marine Repair, Surveying, and Boat Building	
Alpine Diesel	Cordova Outboard and Auto Parts
Harbor Hydraulics	Peterson Welding & Machine
Tirrell Marine Surveyors	Webber Marine & Mfg.
Fishery Management, Marine Safety, Enforcement, and Advocacy	
Alaska Department of Fish & Game	Copper River/PWS Marketing Association
Cordova District Fishermen United	U.S. Coast Guard
Permit Sales, Banking, and Finance	
Copper River Boat and Permit	Ronald O. Goodrich Company

Source: McDowell Group Marine Infrastructure Database and local interviews.

Communication companies, community transportation services (such as taxis), utility companies, lending institutions, and others are also important aspects of the Cordova fishing sector, an industry that pervades nearly every aspect of life in Cordova.

GOVERNMENT: ALASKA DEPARTMENT OF FISH AND GAME

ADF&G employs 32 workers out of its Cordova office, of which 30 are involved in commercial fishery management activities. The office includes 8 full-time commercial fisheries division staff and 2 other full-time staff. Other employees are seasonal hires who count fish in remote areas and compile data for the Department. ADF&G paid out an estimated $1.8 million in labor income to local workers in 2013.

Seafood Industry Assets

Cordova's seafood industry held an estimated $157 million in assets as of 2013. Cordova ranks third among Southcentral communities in overall industry asset value. An asset value of $157 million is significant for a community the size of Cordova; the city has the largest per capita seafood industry asset value of any Southcentral community by a wide margin. The value of seafood assets in Cordova conservatively amounts to $68,100 for every local resident (of any age).

Estimated Value of Selected Local Seafood Industry Assets, in $Millions, 2013

Commercial Fishing Permits, Quota, Vessels, and Misc.	$139.1
Seafood Processing Facilities and Equipment	$17.5
Total Value	**$156.6**

Source: McDowell Group estimates based on industry interviews and City of Cordova property assessments.

This asset valuation should be regarded as a conservative estimate, since the value of processing plants on the open market is likely higher than the value of land and property assessed by the city. In addition, dozens of local support sector businesses would add several million to this total, but estimating the value of those businesses and their dependence on the seafood industry is beyond the scope of this analysis.

Company Profile: Trident Seafoods

Trident Seafoods – the largest seafood company in the United States – operates two processing facilities in Cordova. The company employs up to 560 workers in Cordova during the summer salmon season, including 40 employees who work at the plants year-round. Trident provides room and board as well as air fare for seasonal hires, most of whom come from out of state. Community officials report Trident has plans to expand its housing facilities in Cordova, likely increasing the workforce of Cordova's largest employer.

The Cordova plants produce canned salmon (skinless/boneless, half-pound, and 1-lb. cans), fresh and frozen H&G and fillets, and various byproducts (including salmon oil). Together, the two plants can process up to 1.8 million pounds of salmon per day, or 75,000 pounds per hour. Products made in Cordova by Trident are sold at grocery outlets, club stores, and restaurants around the world.

Community Impact Profile: Homer

Fishing, both commercial and sport, is the foundation of Homer's economy, which is primarily driven by the seafood and visitor industries. Homer and the seafood industry benefit from the city's well-developed marine support sector that provides products and services to nearly 500 commercial fishing vessels based in Homer but also attracts small to mid-sized commercial boats from around the state.

Local Economic Impact of the Seafood Industry

It is estimated that Alaska's seafood industry directly employed 1,280 workers and supported a total of 1,670 FTE-jobs in Homer during 2013 (including direct and secondary effects). The industry directly employs approximately 1,230 local Homer residents in seasonal and full-time equivalent jobs. Most indirect and induced jobs are also held by local residents, some of whom work in the seafood industry during the summer salmon season.

Homer's marine service sector supports approximately 225 FTE-jobs. A total of 487 commercial fishing vessels homeport in the city, but other vessels come from Seldovia, Kenai, Seward, Valdez, and even Bristol Bay to have repair and maintenance work done in Homer. In addition, several Homer companies build fishing boats and manufacture fishing gear which are used by commercial fishermen around the state.

Economic Impact of Seafood Industry in Homer, 2013

	Numbers of Workers	Full-Time Equiv. Employment	Labor Income ($Millions)
Seafood Industry (Direct Impacts)			
Commercial Fishing (Local Residents)	1,086	920	$45.4
Seafood Processing	170	35	$1.8
ADF&G Commercial Fisheries Div.	20	20	$1.2
Economic Impacts			
Direct (Industry Functions)	1,280	**980**	**$48.4**
Indirect (Business Spending)	-	**350**	**$17.2**
Induced (Household Spending)	-	**350**	**$17.2**
Total Economic Impacts	**1,280**	**1,670**	**$82.8**
Local Fisheries Taxes Received (2013)			**$54,300**

Notes: All employment figures (except commercial fishing workers) have been rounded, as result total employment figures may not sum. Commercial fishing labor income figures include estimated income from tender vessels owned by local residents.
Source: McDowell Group estimates based on ADF&G, DCCED, DOLWD, IMPLAN, NMFS, and industry interviews.

Local Seafood Resources

Homer generally ranks between 30th and 50th in the U.S., in terms of ex-vessel value of landed seafood product. Homer was the 5th largest port in Southcentral in 2013, by value, and 15th overall in Alaska. Fishermen landed an average of 14.1 million pounds of product worth $38.4 million between 2010 and 2013.

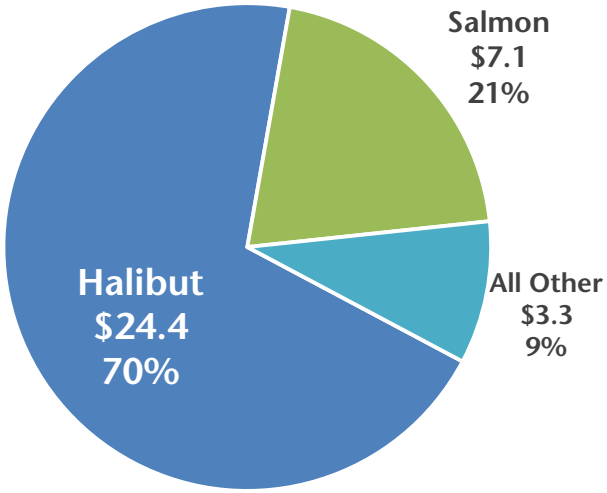
Commercial Seafood Landings to Homer Processors, 2004-2013

Calendar Year	Ex-Vessel Value ($Millions)	Harvest Volume (Millions lbs.)	U.S. Rank (by Value)	U.S. Rank (by Volume)
2004	$37.1	18.1	16	42
2005	35.9	17.9	20	37
2006	40.2	15.6	18	44
2007	47.8	15.8	14	41
2008	6.4	4.0	75	77
2009	43.1	20.2	12	37
2010	56.1	19.9	14	36
2011	41.7	13.9	28	52
2012	30.1	12.3	33	57
2013	25.6	10.3	46	66
2010-2013 Average	**$38.4**	**14.1**	**30**	**53**

Notes: Due to different data sources and methodology, these landings figures may not match similar data collected from ADF&G.
The average of the last four years is used due to the odd-even year pink salmon abundance cycle.
Source: NMFS.

In most years, Homer is the first- or second-largest halibut port in the state, backing up its claim as the "halibut fishing capital of the world." The premium whitefish species accounted for 70 percent of Homer landings in 2013, while salmon accounted for 21 percent. Black cod and other species accounted for 9 percent (not including farmed shellfish species).

Ex-Vessel Value of Homer Seafood Resources in $Millions, by Major Species, 2013



Source: ADF&G.

Commercial Fishing Sector

The commercial fishing industry directly employed 1,086 Homer residents in 2013, or 34 percent of all working age residents. Homer residents grossed $83.1 million from commercial fishing in 2013, and earned an estimated $50.0 million in labor income resulting in 993 FTE local resident commercial fishing jobs. Each of Homer's 455 active permit holders represents a locally-based small business. These businesses had an estimated asset value of $180 million in 2013, or about $395,000 per active permit holder.

Commercial fishing is a vital part of Homer's economy. Homer ranked second among all Alaska communities (after Kodiak) in terms of total gross fishing earnings by local residents. On a per capita basis, it ranked 5th in 2013 for communities with more than 1,000 people.

Commercial Fishing Sector in Homer, 2013

Employment	
Local Resident Permit Owners (Active)	455
Local Resident Crew Members	631
Local Resident Commercial Fishermen	**1,086**
Estimated Resident FTE Jobs	**920**
Local Resident Earnings ($Millions)	
Estimated Labor Income (Permit Owners and Crew)	$45.4
Gross Earnings of Resident Permit/Quota Owners	$83.1
Estimated Asset Value Held by Local Residents ($Millions)	
Limited Entry Permits	$61.3
Quota Shares	$40.2
Fishing Vessel and Gear Value	$78.3
Total Fishing Asset Value Held by Local Residents	**$179.8**

Notes: Labor income figures include estimated income from tender vessels owned by local residents.
Totals may not sum due to rounding.
Source: McDowell Group estimates based on ADF&G data and industry interviews.

Homer's resident fishing fleet is a diversified group with many participating in multiple fisheries. Most of their earnings comes from landing fish in other communities. All halibut and black cod landings - much of which is likely landed in Homer - accounts for only 15 percent of their total gross earnings. Homer fishermen are very active in Southcentral driftnet and seine fisheries. Overall, Southcentral fisheries accounted for 60 percent of local resident gross earnings in 2013. Homer fishermen are also active in southwestern Alaska fisheries. Fisheries outside of Southcentral provided 40 percent of local resident gross earnings in 2013. Whether the income comes from regional or other Alaska fisheries, this activity provides significant benefits for the local and regional economies.

Active Permits and Gross Earnings by Fishery Area, Homer Residents, 2013

	Permits Fished	Pct. of Gross Earnings
Southcentral Regional Fisheries		
Cook Inlet and PWS Setnet Fisheries	17	1%
Cook Inlet and PWS Driftnet Fisheries	187	18
Cook Inlet and PWS Seine	39	26
Halibut & Black Cod (All Regions, Statewide Permit)	183	15
Southcentral Regional Total	**426**	**60%**
Other Alaska Fisheries		
AYK, Bristol Bay, AK Peninsula, and Kodiak Setnet	23	1%
Bristol Bay and AK Peninsula Salmon Driftnet	95	11
BSAI and GOA Groundfish	79	6
Kodiak and Chignik Salmon Seine	18	11
BSAI and Kodiak Crab	10	7
Other	37	4
Other Alaska Fisheries Total	**262**	**40%**
Total – All Commercial Fisheries	**688**	**-**

Source: CFEC.

COMMERCIAL FISHING FLEET

In 2013, 487 commercial fishing vessels were homeported in Homer. Most vessels are driftnetters or seiners that are also equipped to fish with longline, pot, or jig gear. Homer residents account for about two-thirds of all commercial fishing vessels homeported in the community (332 vessels) while 106 other Southcentral residents also keep their boats in Homer (22 percent). Other Alaska residents and nonresidents account for the remaining 11 percent (55 vessels).

Homer's Small Boat Harbor, AMHS dock, and deep-water dock.

Homer's Commercial Fishing Fleet, by Vessel Size, 2013

Skiffs (under 28')	46
28' to 35'	210
36' to 49'	180
50' to 59'	37
60' to 99'	9
100' to 200'	5
Tenders	6
Total Commercial Fishing and Tender Vessels	**487**

Note: Based on self-reported homeport designation on CFEC vessel registration. This vessel count does not include 90 seine skiffs.
Source: CFEC Commercial Vessel Database, compiled by McDowell Group.

Homer's Commercial Fishing Fleet, by Vessel Owner, 2013

	Vessels	Pct.
Homer Resident	332	68%
Other Southcentral Resident	106	22
Other Alaska Resident	17	3
Nonresident	38	8

Note: Based on self-reported homeport designation on CFEC vessel registration. This vessel count does not include 90 seine skiffs.
Source: CFEC Commercial Vessel Database, compiled by McDowell Group.

**THE APPENDIX CONTAINS HISTORICAL DATA ON THE HOMER COMMERCIAL FISHING SECTOR*

LIFE AS A COMMERCIAL FISHING FAMILY IN HOMER: THE LAUKITIS FAMILY

The Laukitis family lives in Homer and participates in fisheries from Bristol Bay, to the Bering Sea and Gulf of Alaska. The family's two daughters, Teal and Claire, went "fishin' for tuition" in high school and paid their way through college. They both chose to return to Alaska and continue to fish salmon and halibut after graduating. The family runs two boats; one boat works seasonally with family members aboard and the other fishes year round in areas around the state.

The family fishing business got its start setnetting in False Pass 25 years ago. The Laukitis's have wintered in Homer for about 15 years, but travel to where the fish are during the summer. They usually have at least one boat in Homer in the winter for maintenance and shipyard work. Like many fishermen in Homer, they may fish all over the state, but bring their income back to their local community. The family is very engaged in the local community and the Alaska seafood industry. Buck was President of North Pacific Fisheries Association (a fisheries trade group). In addition, he is involved in the North Pacific Fishery Management Council and the Alaska Seafood Marketing Institute. Buck and his wife Shelly also sit on several local boards and volunteer organizations; all in addition to coaching hockey during the winter.

Teal and Claire are home grown advocates for the seafood industry and run the aptly named Salmon Sisters apparel business featuring original designs inspired by Alaska's seafood industry and nautical traditions

(http://aksalmonsisters.com/). "They are young Alaskans who take pride in what they do for a living and who want their generation to continue to participate in sustainable fisheries. Their business resonates because people know that healthy fisheries on well managed renewable resources produce healthy vibrant communities. That is what everyone wants, but they have a unique way of sending those messages to the world. I guess Shelly and I get to say we raised the "Alaska Salmon Sisters" which, of course, we are proud of," says Buck.

Emma Laukitis and Claire (Laukitis) Neaton picking salmon (Image: Scott Dickerson Photography).

Buck explains the continuing evolution of the family's fishing business, "We are transitioning from 25 years of salmon fishing in the False Pass fishery to seining salmon in Prince William Sound (Valdez and Cordova). We still fish for halibut and cod out around False Pass and the boat fishes all the way out to Adak. We still have the 58' F/V Stanley K but are building a new steel 58' boat this year. My daughter Claire and her husband Peter want to fish for a living, so we are in it for the long haul, and we want to have the best equipment." Claire and Peter sell shares of their catch through a direct market business called the Morshovoi Fish Company (http://morshovifish.com/). The Laukitis family employs captains and crew from Homer, Kenai Peninsula Borough, Anchorage, and other areas of the state. Most of the crew are Alaska residents.

The impact of the family's fishing business is significant. "Just one boat pays out over $500,000 a year in crew shares; then add $500,000 in boat expenses for fuel, bait, maintenance and repairs, supplies, insurance, equipment, etc. One fisherman's expenses is another member of the community's income," says Buck.

"Homer is a major small boat port with potential for more marine support work. We are not centered around a major cannery like most coastal communities, but there are many successful small businesses here. I feel like many times commercial fishermen are taken for granted in Homer, but there is still a great deal of potential for Homer's fishing industry and marine trades businesses to grow."

SHELLFISH MARICULTURE IN HOMER

The Kachemak Bay area has 18 shellfish farms and two nurseries. Most local shellfish farmers sell their product through the Kachemak Bay Shellfish Growers Co-op, which operates an online marketplace in addition to a retail outlet in Homer. The area accounts for the majority of Southcentral's 600,000 pounds of oyster

production. Mariculture production is not included in Homer's gross fishing earnings or in regional ex-vessel value figures.

SOUTHCENTRAL'S "RUSSIAN FLEET"

In 1968, a group of Russian-American's relocated from Oregon to the Kenai Peninsula where they founded the town of Nikolaevsk (15 miles north of Homer). Other families followed during the ensuing years. Many of the original settlers and those that followed were fishermen, a tradition many of their descendants carry on to this day. It is estimated that the Kenai Peninsula includes about 225 Russian-American fishermen, plus another 30 fishing families in the Anchorage/Mat-Su area. Most fishermen in the group are "full-time" commercial fishermen, participating in southwestern Alaska fisheries in addition to regional fisheries. In addition to salmon fisheries, the group has a large presence in the Gulf of Alaska longline cod fishery and many also participate in IFQ fisheries.

F/V Alaskan Legacy, owned by Alexander Reutov and designed/built by Yakov Basargin (Image: Alaska Salmon Alliance).

The first settlers had to be resourceful and that trait continues to be a common theme with the group today. Homer is the homeport for most boats in the "Russian" fleet. Fishermen and their family members often work together to overhaul, upgrade, or maintain fishing vessels. The group has developed iconic fiberglass boat designs which are produced by three boat builders in Homer: Freddy's Marine, Ivan Basargin, and Yakov Basargin. Boats are often designed to participate in multiple fisheries, allowing their owners to maximize their investment. These enterprises create local jobs by subcontracting with other local shops and sourcing materials from local vendors. Smaller gillnetters (e.g. "bowpickers") start out around $190,000 while larger gillnet combo boats are often priced at $325,000 to $450,000. Purse seine combo boats, like the one pictured above can range from $2 million to more than $3 million.

Seafood Processing Sector

Five seafood processing companies operate processing plants and buying stations in Homer. Homer's primary processors employed an estimated 170 workers in 2013, generating an estimated $1.8 million in labor income, and accounting for 35 FTE jobs. In addition, 45 fishermen are licensed as direct-to-market companies.

Seafood Processing Sector in Homer, 2013

Primary Processing Plants or Buying Stations	5
Estimated Employment	
Total Workers	170
Full-Time Equivalent	35
Estimated Earnings ($Millions)	
Total Wage and Salaries	$1.8
Estimated Industry Asset Value ($Millions)	
Land and Buildings	$4.2
Equipment and Misc. Assets	$0.7
Total Industry Asset Value	**$4.9**

Notes: Seasonal workers who did not earn the majority of their 2013 annual Alaska earnings in seafood processing are not included in these figures. Employment data may include companies categorized as seafood wholesalers who also process seafood. Totals may not sum due to rounding.

Source: McDowell Group estimates based on ADF&G, DOLWD, and Kenai Peninsula Borough Assessing Department data; and industry interviews.

Homer's seafood processing and fish buying sector includes the following primary processing companies in addition to other individual direct marketers:

Primary Processors in Homer

The Auction Block
Coal Point Seafood Company
The Fish Factory
Icicle Seafoods (buying station)
Kachemak Bay Seafoods

Seafood Industry Support Sector

Homer is the largest Southcentral port for commercial fishing vessel repair, building, and maintenance. The community offers a broad range of companies and infrastructure capable of servicing commercial fishing vessels.

Marine Support Services

Homer's harbor features 920 reserved moorage slips, 6,000 linear feet of transient moorage space, two large docks, a fish dock equipped with eight cranes, and two tidal grids. In addition, an ice plant, gear storage yard, and cold storage facility are located adjacent to Homer's boat harbor. Fishermen and other boat owners also utilize two private boat yards (the Northern Enterprises Boat Yard and the Homer Boat Yard). Vessels up to 70 tons can be hauled out with a travel lift, while the steel boat grid can accommodate vessels up to 120' (which are less than 200 tons).

Homer Marine Support Infrastructure

Travel Lift Capacity (Tons)	70
Other Haul-out Method Capacity (Tons)	20
Tidal Grid Capacity (Tons)	50, 200
Harbor slips available	920
Wash-down Pad (at private yards)	Yes
Wash-down Water Treatment (at private yards)	Yes

Source: McDowell Group Infrastructure Database and City of Homer.

Homer's marine support sector is broad and well developed. The community has five boat builders, over a dozen repair and maintenance specialist companies, a seine net manufacturer, a marine apparel manufacturer, multiple marine insurance agencies, and a major permit/boat broker. The seafood industry creates approximately 225 FTE jobs in Homer's marine support sector and 125 other indirect FTE jobs. In addition, Homer's marine support sector also benefits from the large number of pleasure, sport fishing, and sightseeing boats based in Homer. A list of local seafood industry support businesses is provided below.

Seafood Industry Support Businesses in Homer

Transportation and Logistics	
Span Alaska	Alaska Coastal Freight
Alaska Marine Lines	FedEx
Retail Trade and Fuel	
Kachemak Gear Shed	Spenard Builders Supply
NOMAR	Alaska Sign Express
Marine Services of Alaska	Home Run Oil Company
Petro Marine Services	Ulmer's Drug and Hardware
South Central Radar	Alaska Ice & Bait
Eagle Enterprises	-
Marine Repair, Fishing Gear Manufacturing, Boat Building/Haulout, and Other Services	
Bulletproof Nets	Freddy's Marine Boatworks
Smokey Bay Boatworks	Sloth Boats
Northern Enterprises Boat Yard	Homer Boat Yard
Yakov Basargin (Boat Builder)	Ivan Basargin (Boat Builder)
Mt. Riser Construction	Mike Stockburger (Shrinkwrap)
In Demand Marine	Kachemak Marine Haul Out
Desperate Marine	Gary Squires (Pots/paint)
Anderson Glass Repair	Marine Services of Alaska
Lakeshore Glass	Homer Steel Fabricators
Advanced Propellor AK	West Coast Propellor
Bay Weld Boats	Country Welding
Custom Welding	D&D Welding
Full Power (Electrical Sales/Service)	Liberty Electric

Woodworth Electric	OK Services (Machine Shop)
Ivan Martinson	Zack's Foam
Marine Mechanical Solutions	C&C Diving and Salvage
Edgewater Marine Surveyors	Rocky Point Survey
Fishery Management, Marine Safety, Enforcement, and Associations	
Alaska Department of Fish & Game	U.S. Coast Guard
North Pacific Fisheries Association	Kenai Peninsula College – Kachemak Campus
Permit Sales, Banking, and Insurance	
Alaska Boats & Permits	1st Alaska Insurance
Homer Insurance Center	Malone Insurance Agency
First National Bank of Alaska	Wells Fargo

Source: Homer Marine Trades Association and McDowell Group.

HOMER'S BOAT BUILDING AND MARINE TRADES SECTOR

Homer's boat builders construct more small-to-medium size fishing boats than any other Alaska community. Featuring at least five boat builders and dozens of marine trade/service providers, local boatyards upgrade existing boats and build high-quality gillnet, longline, and seine vessels. Typically constructed with fiberglass or steel, commercial fishing boats built in Homer are tailored to meet the unique demands of fisheries in southcentral and southwest Alaska. After a boat is built, the fishing vessel can be completely outfitted in Homer without making an expensive run to Puget Sound. Demand for new fishing vessels built in Homer is a direct result of increasing salmon prices and ex-vessel values over the past decade. The State of Alaska and the seafood industry has invested tens millions of dollars in product development, quality improvement, and marketing during that time.

F/V Sea Prince, a 58' seiner built in 2012 at Freddy's Marine in Homer for Kasilof resident Robert Nelson.

AIRBAG HAULOUTS FLOAT GROWTH FOR HOMER'S MARINE SUPPORT SECTOR

Local entrepreneur Earl Brock has brought a new heavy-vessel haulout service to Homer using a method that dates back millennia. Brock Salvage and Sales is using specially designed air bags and a tractor to roll large vessels up the Homer Spit beach where they can be worked on by local tradesmen. The new service allows Homer to support larger vessels than its current lifts can handle and saves fishermen time and money by eliminating the need for expensive service runs to Kodiak, Ketchikan or

Hauling out a landing craft in Homer using airbags.

Puget Sound for service. Homer's Harbormaster Bryan Hawkins is excited about what the service means for the community, "It serves our fleet, attracts new customers, and it supports a growing industry (marine trades) in this community. I'm glad they can figure out how to do this."

Brock had fifteen haulouts scheduled, as of February 2015, and completed over a dozen Homer beach haulouts in 2014 – a testament to the demand for the new service.[19]

GOVERNMENT: ALASKA DEPARTMENT OF FISH & GAME

The Alaska Department of Fish and Game's Commercial Fisheries Division employs 10 full-time employees and 10 seasonal workers. The Division paid an estimated $800,000 in labor income in 2013, creating 15 FTE jobs. In addition, ADF&G's other divisions employ 23 additional workers, most of whom work with sport fishery management. Commercial fishery management activities are considered a direct impact, as these functions are necessary for sustainable fisheries. However, ADF&G operations create their own secondary impacts in Homer and the region.

Seafood Industry Assets

Homer's seafood industry held an estimated $185 million in assets as of 2013. Homer ranks second among Southcentral communities in terms of overall seafood industry asset value, and is second to Cordova on a per capita basis with an industry asset value of $36,000 per resident. Dozens of local support sector businesses would likely add more than $10 million to this total, but estimating the value of those businesses and their dependence on the seafood industry is beyond the scope of this analysis.

Estimated Value of Selected Seafood Industry Assets in Homer, in $Millions, 2013

Commercial Fishing Permits, Quota, Vessels, and Misc. (Owned by Local Residents)	$179.8
Seafood Processing Facilities and Equipment	$4.9
Total Value	**$184.7**

Source: McDowell Group estimates based on industry interviews and City Property Values.

Local Spotlight: Homer Marine Trades Association

The Homer Marine Trades Association is the only trade association in Alaska representing maritime support sector companies. The Association is just three years old but has grown quickly to encompass over 70 local companies which provide marine products and services. The group was formed so companies could pool their marketing resources but has also become active in workforce development efforts for maritime careers.

Virtually all its member companies employ local or regional residents. Together they fill a key role in the industry and the economy, servicing hundreds of boats each year. Whether a sole proprietor or a larger company, these local businesses buy many goods and services from local or other Southcentral businesses. Matt Alward, owner

[19] Information for this section came from a February 2015 Alaska Business Monthly article entitled *Homer Beach Haulout: New entrepreneur brings ancient knowledge to Kachemak Bay*, written by Naomi Klouda.

of Bulletproof Nets, is Vice President of the Association. He believes there is a bright future in the marine trades industry, but acknowledges that business tied to the commercial fishing industry is cyclical. "It comes in waves depending on the value of fish. There was a lot of seiners looking to upgrade their operations from 2008 to 2013 but it backed off a bit last year when prices for pink salmon fell. It's similar with the gillnet fleet. The last few years were pretty good but the outlook for sockeye prices isn't very good, so that probably means less business for the support companies. However, there's always going to be a need for skilled tradespeople and that's an aspect many of our members are struggling with. It's hard to find good talent," says Alward, who is also on the Alaska Maritime Workforce Development Plan advisory committee.

Northern Enterprises Boatyard (Image: Homer Tribune).

"The Association provided a six-series class for high school students covering various marine trades. We have members teach 45 minute classes on everything from navigation to maintenance to creating a legal agreement with a skipper. It's a way to introduce younger people to the industry and show them how they can make a good living right here in their own backyard. We also held an eight-series course at the college that is more advanced. These were two hour classes on eight different subjects taught by our members designed to give people information on the types of skills required in the industry, the types of jobs available, and provide enough of a background so they understand how to get started in maritime career. We are planning on doing similar courses in the future." Alward notes that many young Alaskans don't consider these jobs as options or know what kind of careers are out there. "We want to give them the information and background so they can capitalize on the opportunities in front of them if fishing, or repair work, or other marine jobs are something they're interested in. A lot of the maritime sectors need more skilled workers and it would be ideal if we can train Alaskans to fill those jobs."

> *"A lot of maritime sectors need more skilled workers and it would be ideal if we can train Alaskans to fill those jobs."*
>
> Matt Alward (Association Vice President)

Community Impact Profile: Kenai

This chapter focuses on the communities of Clam Gulch, Kalifornsky, Kasilof, Kenai, Nikiski, Ninilchik, Soldotna, and Sterling, collectively referred to as the "Kenai" region for the purposes of this report. Together, these communities have 37,400 residents, making it the fourth-largest region in Alaska behind Anchorage, the Mat-Su Borough, and Fairbanks.

Kenai's seafood industry relies primarily on sockeye salmon caught in upper and central-district Cook Inlet fisheries. These districts account for the majority of Cook Inlet's setnet and driftnet activity. Kenai's processing sector is diverse and is not dominated by one or two plants. Due to its location on the road system and the region's proximity to Anchorage/Mat-Su, many fishermen also sell their catch directly to wholesale customers or consumers. Several processors located outside the region (in Anchorage and Homer) buy salmon from the Kenai area. In addition, there are hundreds of commercial fishermen who live in Kenai but participate in fisheries outside of Cook Inlet and bring those earnings home with them.

Local Economic Impact of the Seafood Industry

It is estimated that Alaska's seafood industry directly employed 2,230 workers and supported a total of 1,030 FTE jobs and $51 million in labor income in the Kenai region during 2013 (including direct and secondary effects). The industry directly employs approximately 1,630 local area residents in seasonal and full-time equivalent jobs, or about 7 percent of all working age residents. The industry contributed nearly $1.2 million in fisheries tax revenue to the Kenai Peninsula Borough and local City governments in the region during 2013. Borough tax revenues are shared between all communities on the peninsula, but the Kenai region receives a significant share of these funds.

Economic Impact of Seafood Industry in Kenai Region, 2013

	Numbers of Workers	Full-Time Equiv. Employment	Labor Income ($Millions)
Seafood Industry (Direct Impacts)			
Commercial Fishing (Local Residents Only)	1,224	335	$16.5
Commercial Fishing (Non-local Residents)	1,080	270	$13.4
Seafood Processing	910	210	$10.3
CIAA Hatchery and ADF&G	100	55	$2.9
Economic Impacts			
Direct (Industry Functions)[1]	**2,230**	**600**	**$29.7**
Indirect (Business Spending)	-	**180**	**$8.9**
Induced (Household Spending)	-	**250**	**$12.4**
Total Economic Impacts	**2,230**	**1,030**	**$51.0**
Local Fisheries Taxes Received by City of Kenai/Soldotna, and Kenai Peninsula Borough (2013)			**$1,224,600**

[1] The direct worker count figure does not include commercial fishermen who are not residents of the Kenai region.
Notes: All employment figures (except commercial fishing workers) have been rounded, as result total employment figures may not sum. Commercial fishing labor income figures include estimated income from tender vessels owned by local residents.
Source: McDowell Group estimates based on ADF&G, DCCED, DOLWD, IMPLAN, NMFS, and industry interviews.

Role of the Seafood Industry in Local Economy

The oil and gas industry is Kenai's largest basic sector industry, accounting for 1,660 jobs and $174 million in labor income.[20] The visitor and seafood industries are the next largest basic sectors. Both sectors rely heavily on the local salmon resource.

Basic sector industries, like oil/gas, seafood, and tourism are key economic drivers because they bring new money into an economy. This makes them fundamentally different than sectors like retail and many service-related sectors. Although these other sectors are necessary parts of any economy, they primarily rely on business drawn from local residents. The size of these non-basic sectors is mostly a function of basic sector activity, population, and geographic location rather than economic drivers which can create significant growth.

Kenai Region Economy, Estimated Employment and Labor Income, 2013

Sector	Employment	Labor Income ($Millions)
Private Sectors		
Oil/Gas/Mining	1,660	$174
Seafood Industry[1]	**600**	**30**
Accommodations, Recreation & Sightseeing	610	30
Other Manufacturing	370	33
Construction, Waste Mgmt. & Utilities	2,120	132
Trade & Transportation	3,200	120
Health Care & Social Assistance	2,500	128
Other Private Sector Service Sectors	4,250	171
Total Private Sector	**15,310**	**$818**
Government	3,160	284
Total Kenai Economy	**18,460**	**$1,102**

[1] Direct impacts only, does not include fishermen who reside outside the area but fish in local fisheries.

Note: These data have been estimated by McDowell Group using BEA employment data for the Kenai Peninsula Borough and seafood industry analysis completed for this project. In order to break down BEA data and incorporate the seafood analysis, some employment figures have been adjusted from an average monthly average to a full-time equivalent basis. As a result, employment figures tend to be slightly lower than those provided by BEA. Employment and labor income figures are rounded, as a result totals may not sum.

Source: McDowell Group estimates, based on BEA employment data (non-seafood figures).

Local Seafood Resources

Sockeye is the dominant species in Cook Inlet salmon fisheries, typically accounting for more than 75 percent of the total landed value. The Kenai region ranked 31st in the U.S. in terms of landed seafood value and 32nd by volume. The volume and value of seafood landed in the Kenai region has increased substantially since the mid-to-late 2000s.

[20] Oil/gas/mining labor figures only include workers who are employment in this sector in the area and does include local residents who may be employed by the industry in other parts of Alaska.

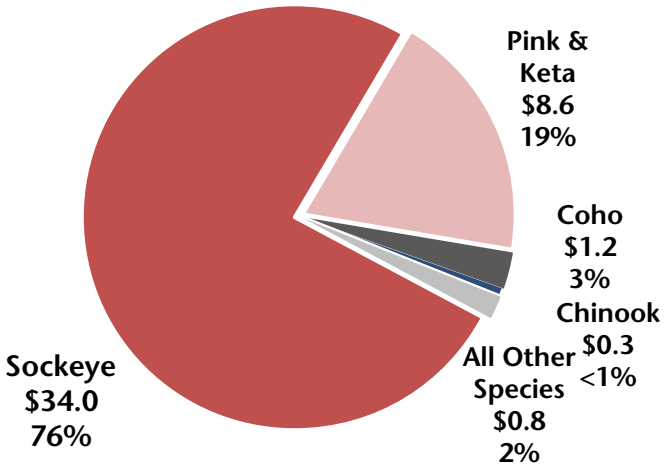
Commercial Seafood Landings in Kenai, 2004-2013

Calendar Year	Ex-Vessel Value ($Millions)	Harvest Volume (Million lbs.)	U.S. Rank (by Value)	U.S. Rank (by Volume)
2004	$16.3	21.8	47	36
2005	16.6	15.9	46	42
2006	10.5	11.7	60	50
2007	11.1	11.0	58	50
2008	10.9	10.4	57	53
2009	11.5	12.2	57	51
2010	25.1	21.2	34	34
2011	40.7	31.2	29	32
2012	29.9	28.4	35	31
2013	40.1	35.6	26	29
2010-2013 Average	**$34.0**	**29.1**	**31**	**32**

Notes: Due to different data sources and methodology, these landings figures may not match similar data collected from ADF&G.
The average of the last four years is used due to the odd-even year pink salmon abundance cycle.
Source: NMFS.

Sockeye typically make up three-quarters or more of the ex-vessel value landed in the local region. Kenai processors also bring in a several million pounds of product from other Southcentral ports and north/west Alaska. For example, Pacific Star Seafoods, Snug Harbor Seafoods, and Copper River Seafoods buy fish from in Seward, Homer, and Whittier, and transport it via truck to plants in Kenai. Pacific Star also flies in Yukon River salmon to be processed and frozen in Kenai. Complete data on fish brought into Kenai from other areas is not reflected in the following graph, but would further increase the production value of local processors.

Ex-Vessel Value of Seafood Landed in Kenai by Species, in $Millions, 2013



Source: ADF&G.

Commercial Fishing Sector

The Kenai region encompasses the vast majority of Cook Inlet driftnet and setnet fishing activity. These fisheries include a high percentage of local and regional residents, but many Kenai residents also participate in fisheries outside of Cook Inlet. In fact, the gross earnings of Kenai fishermen (active permit holders) is split almost equally between Cook Inlet salmon fisheries and fisheries outside the region. In some cases, local fisherman may live in Kenai but fish elsewhere in the Alaska or may participate in Cook Inlet salmon fisheries and earn additional income from other fisheries.

Photo credit: Kenai Peninsula Fishermen's Association.

The Kenai region was home to 1,204 (active) commercial fishermen in 2013, meaning about 6 percent of the region's working age resident population directly participated in Alaska commercial fisheries. The Kenai region had 486 active resident permit holders and 718 local resident crew members in 2013.

Commercial Fishing Sector in Kenai Region, 2013

Employment	
Local Resident Permit Owners (Active)	486
Local Resident Crew Members	718
Total Active Permit Owners in Local Fisheries	946
Estimated Crew Members in Local Fisheries	1,240
Local Resident Commercial Fishermen	**1,204**
Estimated Commercial Fishermen in Local Fisheries	**2,190**
Estimated Total FTE Jobs in Local Fisheries	**430**
Estimated Resident FTE Jobs	**330**
Local Resident Earnings ($Millions)	
Estimated Labor Income (Permit Owners and Crew)	$16.5
Gross Earnings of Resident Permit/Quota Owners	$29.3
Estimated Asset Value Held by Kenai Region Residents ($Millions)	
Limited Entry Permits	$28.8
Quota Shares	$14.7
Fishing Vessel Value, Gear, and Misc.	$29.8
Total Asset Value Held by Local Residents	**$73.3**

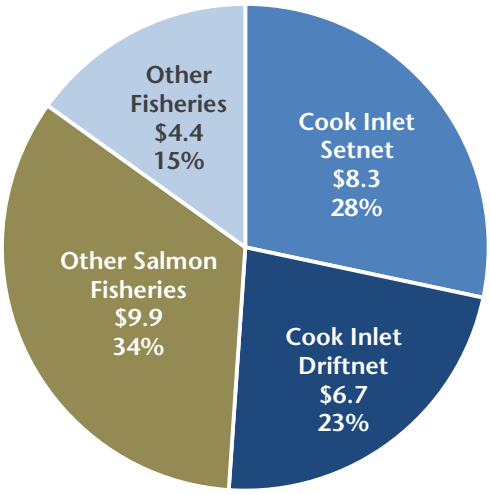
Notes: Labor income figures include estimated income from tender vessels owned by local residents.
Totals may not sum due to rounding.
Source: McDowell Group estimates based on ADF&G data and industry interviews.

Cook Inlet setnet and driftnet salmon fisheries account for most of the commercial fishing activity in the Kenai region. These fisheries employ approximately 2,200 people, consisting of 946 permit holders and an estimated 1,240 crew members. Nearly three-quarters of Cook Inlet salmon fishermen live in Kenai or other Southcentral communities, with 43 percent of Cook Inlet setnet and driftnet fishermen residing in the Kenai region and 30 percent residing in other Southcentral Alaska communities.

KENAI RESIDENT GROSS FISHING EARNINGS BY SOURCE

Local resident commercial fishermen grossed $29.3 million in 2013, earning an estimated $19.5 million in labor income (after accounting for fishing expenses). The average local resident permit holder grossed $60,229 in 2013. Kenai region residents earned about half (51 percent) of their 2013 gross earnings in local Cook Inlet setnet and driftnet salmon fisheries, while the other half was earned in fisheries occurring outside the Kenai region. Many fishermen living in Kenai and other Southcentral communities fish in Bristol Bay. Some fishermen keep their boats in the Bay, but many transport them over land via the Williamsport Road to Lake Illiamna. The Illiamna Transportation company, a small, family-owned business based in Pedro Bay, hauled 60 boats back and forth over the road in 2014.[21] Other Alaska salmon fisheries provided 34 percent of local resident permit holders gross earnings while other fisheries – primarily for halibut, black cod, and Pacific cod – accounted for the remaining 15 percent.

Kenai Resident Gross Fishing Earnings, by Fishery, in $Millions, 2013



Source: ADF&G.

KENAI REGION: A MIX OF FULL-TIME AND PART-TIME FISHERMEN

Commercial fishing opportunities in the Kenai region primarily consists of two months during the summer salmon season. As a result, local commercial fishermen often supplement their income with other full-time or "side" jobs during the spring, fall, and/or winter, or income from other fisheries. A recent analysis of KPB residents who fished in the Cook Inlet setnet and driftnet fisheries during 2011 revealed 36 percent of these active permit holders held other wage-and-salary jobs at some point during the year.[22] Self-employment is not considered wage-and-salary employment, so the actual figure could be slightly higher; however, DOLWD data suggests more than 60 percent of KPB resident fishermen (crew and active permit holders) who fish in Cook Inlet relied on commercial fishing for their sole source of income in 2011.

Photo credit: Alaska Salmon Alliance.

[21] http://peninsulaclarion.com/news/2015-06-20/by-road-lake-and-river-boats-make-their-way-to-bristol-bay

[22] *Cook Inlet and Set Net Salmon Fisheries (Prepared for Alaska Salmon Alliance).* Northern Economics. June 2013.

Crew members would be more likely to hold other jobs than permit owners. Some crew members participate in fisheries to earn extra income, for adventure, or to help out family members. Then there are those who are known as "professional" crew, primarily men who fish on multiple boats and fisheries during a year. It is not uncommon for professional crew members to fish in the Bering Sea (Bristol Bay), Gulf of Alaska, and Inside Passage waters all in the same year. Professional crew members rarely have the time or need to work in wage-and-salary jobs for any significant period of time between fisheries.

Local Commercial Fishing Fleet

The Kenai region fleet consists primarily of driftnet boats and setnet operations that harvest salmon from Upper and central Cook Inlet waters. Kenai region residents account for 43 percent of total participation in these fisheries and other Southcentral residents account for 30 percent. Overall, these fisheries feature a relatively high percentage of resident participation, which is a result of the fisheries' proximity to Alaska's major population base. Out-of-state residents account for 21 percent of the fisheries' combined participation.

Kenai's Commercial Fishing Fleet, Fishermen Fishing Permits, 2013

Cook Inlet Driftnetters	500
Kenai Region Residents	143 (29%)
Other Southcentral Residents	133 (27%)
Other Alaska Residents	87 (17%)
Out-of-State Residents	137 (27%)
Cook Inlet Setnetters	446
Kenai Region Residents	232 (52%)
Other Southcentral Residents	152 (34%)
Other Alaska Residents	4 (1%)
Out-of-State Residents	58 (13%)
Total Commercial Fishing Vessels in Region	**946**
Kenai Region Resident Fishermen in Other Fisheries	**111**

Source: CFEC Commercial Vessel Database.

Not all Kenai resident commercial fishermen participate in Cook Inlet salmon fisheries; however, these other fishermen are an important economic driver in the region. A total of 111 fishermen fished permits in other fisheries. Some fish in other Southcentral fisheries and some fish outside of the Southcentral region. These fishermen tend to gross more than local setnetters and driftnetters, averaging $128,994 in gross fishing revenue and accounting for 49 percent of all gross fishing revenue earned by Kenai residents in 2013.

Photo credit: Alaska Salmon Alliance.

**THE APPENDIX CONTAINS HISTORICAL DATA ON THE KENAI REGION COMMERCIAL FISHING SECTOR*

LIFE AS A COMMERCIAL FISHERMAN IN KENAI: ERIK HUEBSCH, F/V WILLIWAW

Erik Huebsch has fished for salmon in Cook Inlet his whole life, starting first at his family's setnet site and eventually purchasing a driftnet boat and permit. He has been driftnetting for 32 years and now fishes from the F/V Williwaw, a 36' fiberglass sternpicker. Erik and his wife Catherine are year-round residents of Kasilof, and fish every summer with assistance from one deckhand, typically a resident of the Kenai Borough.

Erik estimates he spends more than $20,000 annually in support of his fishing efforts. This spending flows to many local businesses: groceries come from the Soldotna Fred Meyer, aluminum needed for boat projects comes from Alaska Steel (Kenai), Alaska Industrial Hardware (Kenai) is relied upon for miscellaneous parts and supplies, and the Kachemak Gear Shed is where Erick gets fishing supplies. Other local businesses provide a variety of supplies and services needed to maintain Erik's fishing operation.

Asked about the importance of commercial fishing to his family and the community Erik stated, "We are a commercial fishing family in a fishing community. My wife and I have fished together for many years. With our combined efforts and year-round attention to the business we can make a good living. All the money we make and spend circulates throughout our community and the Kenai Peninsula Borough to a wide variety of businesses."

Erik Huebsch's Cook Inlet Gillnetter, the F/V Williwaw.

Seafood Processing Sector

The Kenai region includes 10 processing plants and 5 buying stations. In addition, at least 38 fishermen sell their catch (and others' catch, in some cases) as catcher/sellers. These fishermen are not included in processing employment statistics, but do often process their catch or hire out processing from local plants.

Salmon Processing Plants on the Kenai River.

Seafood processing plants in the Kenai region employed an estimated 910 workers in 2013 and paid $10.3 million in wage and salaries. Alaska residents accounted for about a third of processing employment and nearly half of processing wages/salaries. Kenai processing plants and related assets have a combined assessed (market) value of $17.1 million. Although,

given that the first wholesale value of fish produced in Kenai often exceeds $100 million, the true market value is likely higher.

Seafood Processing Sector in Kenai Region, 2013

Processing Plants in Kenai Region	10
Regional Buyers with Plants outside Greater Kenai	5
Catcher/Sellers and Direct Marketers	38
Employment (In-Region Plants)	
Resident Workers	310
Nonresident Workers	600
Total Workers	**910**
Est. Average Monthly Employment	**210**
Earnings ($Millions)	
Resident Wage and Salaries	$4.8
Nonresident Wage and Salaries	$5.5
Total Wage and Salaries	**$10.3**
Estimated Industry Asset Value ($Millions)	
Land and Buildings	$14.4
Equipment and Misc. Assets	$2.7
Total Industry Asset Value	**$17.1**

Notes: Seasonal workers who did not earn the majority of their 2013 annual Alaska earnings in seafood processing are not included in these figures. Employment data may include companies categorized as seafood wholesalers who also process seafood. Resident estimates apply to Alaska residents of any community, based on PFD applications. Totals may not sum due to rounding.

Source: McDowell Group estimates based on ADF&G, DOLWD, and Kenai Peninsula Borough Assessing Department data; and industry interviews.

The companies listed below have processing plants or fish buying operations in the Kenai region:

Seafood Processors and Buyers in Kenai Region, 2013

Processing Companies with Local Plants		
Alaska Salmon Purchasers (Kenai)	Copper River Seafoods (Kasilof)	Echo Lake Meats (Soldotna)
Fishhawk Fisheries (Kenai)	Great Pacific Seafoods (Kenai)	Inlet Fish Producers (Kenai)
Pacific Star Seafoods (Kenai)	Peninsula Processing (Soldotna)	Snug Harbor Seafoods (Kenai)
Tanner's Fresh Fish (Ninilchik)	-	-
Processing Companies with Plants Outside Kenai Region who Purchase Kenai Fish		
The Auction Block (Homer)	Coal Point Seafood Co. (Homer)	Favco (Anchorage)
The Fish Factory (Homer)	Icicle Seafoods (Seward)	-

Seafood Industry Support Sector

COOK INLET AQUACULTURE ASSOCIATION

The Cook Inlet Aquaculture Association (CIAA) employs 17 full-time workers and typically hires 20 to 60 seasonal workers and interns. CIAA operates salmon hatcheries in Moose Pass and Homer, but its headquarters are located near Kenai. The hatcheries are owned by the State of Alaska and are collectively permitted to incubate 125 million pink eggs, 12.4 million sockeye eggs, and 600,000 coho eggs. In addition, CIAA conducts stocking, monitoring, and habitat projects all over Southcentral Alaska, from the Susitna River north of Anchorage to the Southwestern corner of Cook Inlet and across to Seward.

China Poot Bay Dipnetters (Image Homer Tribune).

CIAA is primarily funded through cost recovery sales to processors and enhancement taxes on commercial fishermen, but its operations benefit all salmon user groups in the region. The association has a coho enhancement project near Seward that provides fish for the town's popular Silver Salmon Derby, resident sport fishermen, and active charter fleet.[23] A sockeye enhancement project in Kachemak Bay provides fish for commercial fishermen and personal use dipnetters. This CIAA project is funded by commercial fishermen.

In addition to salmon enhancement operations, CIAA devotes substantial resources to invasive species impacting local salmon stocks such as Elodea plants and Northern Pike. These invasive species have severely impacted juvenile salmon populations in the Susitna watershed and have been found in lakes and rivers in the Kenai region. Pike are voracious predators of juvenile salmon and are a highly adaptable fish. Pike are suspected of decimating juvenile salmon populations in several lakes which feed the Alexander Creek system. These lakes provide an example of healthy salmon populations which significantly declined as pike populations increased, despite fishery management efforts to restrict salmon harvests. Elodea plants provide prime pike habitat and outcompetes other plants which are more beneficial for salmon.

Invasive species pose a significant threat not just to the commercial fishing sector, but all salmon user groups in the region. CIAA's Northern pike projects are jointly funded a grant from the Alaska Sustainable Salmon Fund and from CIAA's own revenues, most of which come from the commercial seafood industry.

CIAA workers tracking invasive Northern Pike in the Susitna River Basin.

[23] The Seward Chamber of Commerce buys coho smolt from CIAA using proceeds from derby tickets and salmon sales, though it is not clear if these revenues cover all costs associated with smolt production and stocking.

MARINE SUPPORT SERVICES

The Kenai region has more than a dozen businesses that support Cook Inlet fisheries and local processors. Fishermen buy supplies from Donalson and other hardware/auto retailers, but also rely on local repair shops for vessel maintenance and upgrades. A list of industry support businesses are provided on the following page:

Seafood Industry Support Businesses and Facilities in Kenai Region

Trucking Companies		
Lynden		Carlile
Bertoglios		M&P Trucking
Retail Trade, Fishing Gear, Boat Sales, Fuel, Storage, and Rental Services		
Donalson		Alaska Industrial Hardware
Trustworthy Hardware		NAPA
CarQuest		Peninsula Bearing
Petro Marine Services		Doyle's Fuel Service
Jackson Enterprises (Fuel)		Oil & Gas Supply (Hydraulic Supply/Repair)
Ron's Honda Center		A-1 Enterprises
Silvertip Net & Gear		Airport Equipment Rental
Marine Repair, Welding, Surveying, and Boat Building		
ATEC Marine		Kenai Diesel & Marine
Tony's Diesel		Ralph's Marine Service
Gary's Marine/Truck & Battery Warehouse		Inlet Marine & Diesel
Garth Outboard Repair		Aleckson Fabrication
Kenai Welding		Norman's Welding
Mike's Welding		-
Associations, Fishery Management, Harbors, Marine Safety, and Enforcement		
Alaska Department of Fish & Game		Alaska Salmon Alliance
Cook Inlet Reg. Citizens Advisory Council		Kenai Harbor
Kenai Peninsula Fishermen's Association		Ninilchik Harbor
United Cook Inlet Drift Association		U.S. Fish and Wildlife Service
Banking and Finance		
First National Bank of Alaska	Wells Fargo	Key Bank

GOVERNMENT: FISHERY MANAGEMENT AGENCIES

The Alaska Department of Fish and Game has an office in Soldotna. The Soldotna location is responsible for in-region management of commercial and sport fisheries. The office employs 83 people, with 37 employees working in the Commercial Fisheries Division.

The U.S. Fish and Wildlife Service (USFWS) also maintains and office in Soldotna. USFWS conducts habitat and fishery research helping fishery managers maintain a healthy ecosystem for commercial, sport, and subsistence fisheries in the region as well as in western Alaska. The agency's Soldotna office employs approximately 10 people. Although USFWS is not directly involved in fishery management, their research and restoration

programs support Alaska commercial fisheries – the value of which is why government agencies prioritize marine ecosystem productivity.

MATTI'S FARM

Matti's Farm is a nonprofit organization dedicated to raising foster kids in a farm setting. The eventual goal of the organization is to have foster families living in an agricultural community where at-risk children can learn skills such as cooking, carpentry, gardening, and welding. One of the projects making this vision a reality is the production of compost that originates from fish waste. After mixing together fish carcasses and other biomass such as wood chips and soil, the mixture is pushed into long, tall rows for the composting process to begin. The mixture is turned periodically with a skid-steer and can be purchased by the truck load. A wide variety of customers use the mixture including local gardeners and commercial farmers growing peonies.

Fish carcasses left-over from the Kenai River dip-net fishery were initially collected for composting. Today, fish waste from local seafood processors are used. Asked to quantify the amount of compost produced, a volunteer with Matti's Farm said, "Since we have started millions of pounds have been produced." Recent investments in a skid-steer attachment and a bagging machine will increase the amount of compost the group can produce.

Seafood Industry Asset Value

Kenai's seafood industry held an estimated $90.4 million in assets as of 2013. The Kenai region ranks fourth among Southcentral communities/regions in terms of overall seafood industry asset value. This asset valuation of the industry is somewhat conservative, since it does not take into account assets held by support sector businesses or the full enterprise value of Kenai seafood processing companies.

Estimated Value of Selected Local Seafood Industry Assets, in $Millions, 2013

Commercial Fishing Permits, Quota, Vessels, and Misc.	$73.3
Seafood Processing Facilities and Equipment	$17.1
Total Value	**$90.4**

Source: McDowell Group estimates based on industry interviews and City Property Values.

Company Profile: Snug Harbor Seafoods

Snug Harbor Seafoods is owned by local residents Paul and Brenda Dale. The company was founded in 1990 and expanded with the purchase of the Royal Pacific Fisheries plant on Kalifornsky Beach Road in 1999. What began as a small operation in 1990 generating sales of $100,000 to $200,000 has grown into a major business with sales of $25 to $30 million per year. Snug Harbor buys sockeye, Chinook, and coho salmon from Cook Inlet and Prince William Sound fisheries, and buys halibut and black cod from fishermen in Homer and Seward. In addition, the company also sells king crab,

sidestripe shrimp, and razor clams in its retail shop at the plant. The company produces standard products such as frozen headed/gutted fish for wholesale clients and fillets for both retail and wholesale customers but also produces specialty smoked, canned, and jarred products. These specialty products typically add more value per round-weight pound than any other product. Most product is sold to wholesale clients (regional, domestic and export) or retail customers through its online site www.snugharborseafoods.com. Snug Harbor is a key supplier for the region's restaurants, supplying three directly, but more so through its sales to Favco and 10th & M Seafoods in Anchorage which are major distributors for regional restaurants.

Employees at Snug Harbor Seafoods (Photo credit: Alaska Salmon Alliance).

The company typically buys fish from about 480 fishermen in the region. These fishermen participate in setnet, driftnet, seine, and longline fisheries in Cook Inlet, Prince William Sound, and the Gulf of Alaska. Snug Harbor employs about 500 seasonal processing workers and maintains a full-time resident staff of 15. Like other processing plants, its seasonal workforce is a mix of Alaska residents and nonresidents. The Dale's estimate about 40 percent of its seasonal workforce are resident workers.

In addition to creating jobs in the seafood industry, the company indirectly creates jobs in Southcentral Alaska. "Kenai and the greater region benefits greatly from the seafood industry; we impact a broad number of other sectors, including freight carriers, construction-related companies, retailers, rental providers, accountants, and banks, to name a few," explains Paul Dale. "Like other processors, we rely on a number of Anchorage businesses: Alaska Rubber & Supply, Alaska Industrial Hardware, NC Machinery, United Rentals, and Alaska Packaging are some of the companies we do business with, and then there's the freight companies: Lynden, Totem Ocean, Carlile, and Horizon."

Paul and Brenda Dale at their Kenai Plant.

"Commercial fisheries, particularly those in Cook Inlet, are very important for us. We don't have a business without the fishers," notes Dale. "We benefit from many of the region's fisheries but Cook Inlet fisheries are very significant for us. They provide a disproportionate percentage of our profitability because we are located here in Kenai and can specialize in products from that resource, whereas we have more cost operating in other areas. I think commercial fishing is a terrific fit in Cook Inlet. There's such a tremendous sockeye resource here that you need commercial fisheries to maximize the benefit."

Company Profile: Pacific Star Seafoods (E&E Foods)

Pacific Star Seafoods is a wholly-owned subsidiary of E&E Foods, a seafood marketing company based in Seattle, WA. E&E Foods owns subsidiary production facilities in Kenai, Bristol Bay, Yakutat, Seattle, and a floating processor called the Cape Greig. The marketing company also buys about the same amount of fish from other Alaska processors as it runs through its own plants. E&E sells salmon to most major U.S. grocery chains, and is the top supplier of wild Alaska salmon to Whole Foods.

The Pacific Star Seafoods facility is located at Kenai River mouth and includes two other E&E acquisitions in Kenai: the former Salamatof Seafoods plant and Ocean Beauty buying station. Pacific Star employs about 260 workers during peak season. Including the floating processor, companies owned by E&E Foods typically employ 350 workers at peak season in Southcentral. The company typically buys product from 325 Southcentral fishermen.

Washing fish for Pacific Star on the Salamatof beach (Photo credit: Jim Butler).

Despite significant challenges in Kenai, E&E Foods has invested heavily in the region to build capacity. "This is the most competitive area of the state. We have to pay higher prices for fish because anybody with a truck can come and buy fish," says company president Tab Goto. The location and logistical options available in Kenai are good for fishermen and present more options for processors to add value, but also contributed to Ocean Beauty exiting the region. "We have invested very heavily in the Cook Inlet seafood industry, but all the companies and fishermen need a stable environment in order to grow and keep operations going into the future. Without access to the resource, there is no industry."

Goto notes the important role the commercial seafood industry plays in the regional and broader U.S. economy. "All this wonderful fish that we get to catch and process ends up on somebody's plate; either in the region, the lower 48, or overseas. We share the bounty of Alaska with everybody. People love Alaska's fish but they can't all come and get it themselves. No other user groups do this," says Goto.

Pacific Star Seafoods also benefits fishermen in the Yukon River region. Goto explains, "We have flown almost 1.5 million pounds of Yukon River salmon to the Kenai plant over the past two years. Kwikpak Fisheries sells us their excess fish so their fishermen don't have to go on limits. Northern Air Cargo, Lynden Air, and ERA all fly fish for us, plus Alaska Airlines ships over two million pounds of our product out of Yakutat."

Community Impact Profile: Seward

Marine resources are a primary economic driver in Seward's economy. Salmon, halibut, and black cod provide hundreds of local jobs for commercial fishermen, seafood processing workers, sport charter guides, marine service workers, and marine researchers. Seward is home to roughly 150 commercial fishermen and three commercial seafood processing plants.

Although Seward is a major seafood port, its strategic role in marine research, vocational training, and expanding marine support services for the greater Alaska seafood industry is even more important. Research efforts, training programs, and port investments based in Seward will likely benefit the community, the region, and the state for years to come.

Local Economic Impact of the Seafood Industry

Seward's seafood industry supported an estimated 390 FTE jobs and $19.3 million of labor income in 2013, including direct effects and secondary multiplier impacts. This estimate does not include several hundred fishermen who deliver to Seward plants, but does include employment stemming from seasonal, nonresident seafood processing workers. The industry contributed nearly $500,000 in fisheries tax revenue to the City in 2013.

Economic Impact of Seafood Industry on the Seward Economy, 2013

	Numbers of Workers	Full-Time Equiv. Employment	Labor Income ($Millions)
Seafood Industry (Direct Impacts)			
Commercial Fishing (Local Residents Only)	148	140	$6.9
Commercial Fishing (Non-local Residents)	780	650	$33.0
Seafood Processing	520	110	$5.4
Economic Impacts			
Direct (Industry Functions)[1]	**670**	**250**	**$12.3**
Indirect (Business and Related Spending)	-	**80**	**$4.1**
Induced (Household Spending)	-	**60**	**$2.9**
Total Economic Impacts[1]	**670**	**390**	**$19.3**
Local Fisheries Taxes Received (2013)			**$496,700**

[1] The direct worker count figure does not include commercial fishermen who are not residents of the Seward region.
Notes: All employment figures (except commercial fishing workers) have been rounded, as result total employment figures may not sum. Commercial fishing labor income figures include estimated income from tender vessels owned by local residents.
Source: McDowell Group estimates based on ADF&G, DCCED, DOLWD, IMPLAN, NMFS, and industry interviews.

It is estimated that the seafood industry directly employed 280 local residents and directly supported 170 FTE jobs for local residents, in 2013. Multiplier impacts are estimated to have generated an additional 130 FTE jobs for local residents. In total, the seafood industry created an estimated 300 FTE jobs and $15.0 million in labor income for local residents in 2013.

Seafood Industry Impact on Local Resident Employment, 2013

	Direct Impacts	Indirect & Induced	Total Impacts
FTE and Avg. Monthly Jobs	170	130	300
Labor Income (in $Millions)	$8.7	$6.3	$15.0

Source: McDowell Group estimates.

Role of Seafood Industry in Seward's Economy

Seafood and summer visitors are Seward's biggest economic drivers. The impact of tourism is evident to anyone visiting Seward in the summer; however, residents and visitors alike may be surprised to learn that seafood plays a similar-sized role in the economy. In direct terms, seafood is even larger than tourism. However, the two sectors are probably similar in size once specialty retail shops and the Alaska SeaLife Center are considered. Quantifying the impact of tourism in Seward is much more nuanced than in the seafood industry, and outside the scope of this analysis.

A total of 19 percent of Seward's working age residents are estimated to have been directly employed in the seafood industry at some point in 2013. Including multiplier impacts, the industry's total impact on employment in Seward is estimated to be 27 percent, or 390 FTE jobs. This compares favorably to other large employers in Seward, such as the the Spring Creek Correctional Facility (employment: 200), K-12 school system (190), Providence Medical Center (125), Alaska SeaLife Center (105), and AVTEC (70).

The seafood industry contributes to local tax revenues in several ways. The City of Seward received $497,000 in 2013 as its portion of the fisheries business and landing resource tax. This was equivalent to four percent of total City revenue in 2013. The harbor department is a major revenue generator for the City; however, only a fraction of its $3.4 million in revenue is attributed to commercial fishing. Sales tax on local purchases and property taxes stemming from the industry also create revenue for the City. All told, it is conservatively estimated that the seafood industry accounted for approximately $1.1 million in City tax and fee revenue in 2013, or about 9 percent of total City revenue.

Local Seafood Resources

Seward is one of the top commercial fishing ports in Southcentral Alaska and one of the largest ports in the U.S. (by landed value) despite being farther away from major fisheries than most other ports in the region (such as Cordova, Kenai, Homer, and Valdez). Seward processors bought 84 million pounds of seafood in 2013 worth $70 million, making it the 15th largest port in the U.S. by value.

See historical table of Seward seafood landings on following page.

Commercial Seafood Landings in Seward, 2004-2013

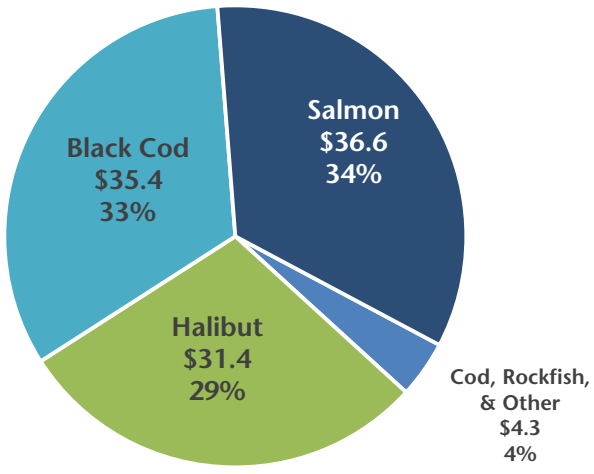
Calendar Year	Ex-Vessel Value ($Millions)	Harvest Volume (Million lbs.)	U.S. Rank (by Value)	U.S. Rank (by Volume)
2004	$43.6	38.6	8	24
2005	52.2	60.5	9	19
2006	51.0	36.8	10	25
2007	50.8	55.0	9	19
2008	23.2	36.5	33	22
2009	33.1	29.3	17	27
2010	69.2	75.4	10	18
2011	76.7	50.0	13	23
2012	62.1	54.0	15	22
2013	69.7	84.3	15	20
2010-2013 Average	**$69.4**	**65.9**	**13**	**21**

Notes: Due to different data sources and methodology, these landings figures may not match similar data collected from ADF&G.
The average of the last four years is used due to the odd-even year pink salmon abundance cycle.
Source: NMFS.

Seward was the state's top black cod port in 2013 and the third-largest largest port for halibut landings due to its location on the road system, proximity to productive Gulf of Alaska waters, and the presence of major buyers. Halibut and black cod accounted for 62 percent of the landed value from 2012 to 2013.

Seward processors also buy a significant volume of PWS pink salmon, purchasing 55 million pounds of salmon in 2013, equivalent to approximately one-fifth of the record PWS pink harvest. Pink salmon harvests tend to vary widely from odd year to even year, which explains most of the variability in Seward's landed volume. Pink salmon and a small volume of other salmon species accounted for 34 percent of the landed value from 2012 to 2013. Pacific cod, rockfish, and other species accounted for the remaining 4 percent.

Ex-Vessel Value of Seafood Landed in Seward by Species, in $Millions, 2012-2013 Average



Source: ADF&G.

Commercial Fishing Sector

Seward is home to 148 resident commercial fishermen, including 41 active permit owners and 107 crew members. The commercial fishing sector created an estimated 138 FTE jobs and $6.9 million in labor income for local residents in 2013. Seward's resident fishermen have considerable fishing assets with an average of $703,600 per permit holder. These fishermen represent more than 40 small businesses that are based in Seward.

Commercial Fishing Sector in Seward, 2013

Employment	
Local Resident Permit Owners (Active)	41
Local Resident Crew Members	107
Local Resident Commercial Fishermen	**148**
Estimated Local Resident FTE Jobs	**138**
Local Resident Earnings ($Millions)	
Estimated Labor Income (Permit Owners and Crew)	$6.9
Gross Earnings of Resident Permit/Quota Owners	$11.8
Estimated Asset Value Held by Local Residents ($Millions)	
Limited Entry Permits	$8.8
Quota Shares	$19.5
Fishing Vessel Value, Gear, and Misc.	$10.4
Total Asset Value Held by Local Residents	**$38.7**

Notes: Labor income figures include estimated income from tender vessels owned by local residents.
Totals may not sum due to rounding.
Source: McDowell Group estimates based on ADF&G data and industry interviews.

Compared to the volume and value of seafood landed in Seward, the amount of fishing earnings accounted for by local residents is relatively small. Slightly less than 17 percent of the harvest value landed in Seward during 2013 was paid to local resident fishermen.

Commercial Fishing Fleet

Seward is the homeport for 67 commercial fishing and tender vessels. Most vessels are owned by Seward residents or other Southcentral residents. Seiners and gillnetters are the most common type of vessel; however, several larger vessels homeport in Seward as well. The expansion of the Seward Marine Industrial Center and the Seward Shipyard could attract more large ships to the community in coming years.

See commercial fishing fleet table on following page.

Seward Commercial Fishing Fleet, 2013

Skiffs (under 28', not including seine skiffs)	7
Gillnetters (28' to 35')	23
Seiners (36' to 58')	26
Other Large Fishing Vessels (over 58')	5
Tenders (not used for commercial fishing)	6
Total Commercial Fishing Vessels	***67***

Note: Based on self-reported homeport designation on CFEC vessel registration.
Source: McDowell Group Alaska Marine Vessel Database.

LIFE AS A COMMERCIAL FISHERMAN IN SEWARD: CORY HARRIS, F/V HUNGRY RAVEN

Cory Harris grew up in Seward and began fishing commercially as a crew member when he was 16 years old. He has owned and operated the F/V Hungry Raven, a 56' seine/longline combo boat, for the past decade. Harris is representative of other local seine/longline fishermen. His experience exemplifies the economic impacts of commercial fishermen in Seward.

"This is a great town. The people are wonderful. I've been fishing out of Seward for 35 years and employ three to four local guys as crew members for longlining, plus those I hire on for the salmon season. As far as a commercial fishing port goes, Seward is in a great location and there's a lot of fish coming through town."

"Those of us who operate out of Seward create business for local companies. Like Raibow, for instance, they're really busy these days, you have to schedule out fiberglass work well in advance. We also buy a lot of stuff here in town. I spent over $6,000 this winter on odds and ends just to keep the boat up, and that's spending at a time of the year when the town is pretty quiet. Plus, local boats employ service providers to work on boats during times of the year when there's not as much going on in town, which is important."

**THE APPENDIX CONTAINS HISTORICAL DATA ON THE SEWARD COMMERCIAL FISHING SECTOR*

Seafood Processing Sector

Seward's seafood processors employed 520 workers and created roughly 110 FTE jobs in 2013. Seward's seafood processing plants employ a significant number of seasonal, nonresident workers. It is estimated that nonresident workers account for roughly 75 percent of the total processing workforce in Seward. However, since residents typically work for much longer periods, Seward residents accounted for a disproportionate share of total processing earnings. It is estimated that Seward's processing plants created roughly 35 FTE jobs for

Alaska residents in 2013 (the majority of whom are assumed to reside in the community). Seward processing employment data is confidential. Local figures were estimated based on a custom data set provided by DOLWD for the collective Seward/Homer area and interviews with local processors.

Seafood Processing Sector in Seward, 2013

Primary Processors	3
Catcher-Sellers, Custom Processors, and Retailers	4
Registered Buyers	3
Estimated Employment	
Total Workers	520
Full-Time Equivalent	110
Estimated Earnings ($Millions)	
Total Wage and Salaries	$5.4
Estimated Industry Asset Value ($Millions)	
Land and Buildings	$8.1
Equipment and Misc. Assets	$3.9
Total Industry Asset Value	**$12.0**

Notes: Seasonal workers who did not earn the majority of their 2013 annual Alaska earnings in seafood processing are not included in these figures. Employment data may include companies categorized as seafood wholesalers who also process seafood. Totals may not sum due to rounding.

Source: McDowell Group estimates based on ADF&G, DOLWD, and City of Seward assessment data; and industry interviews.

Primary processors account for the bulk of Seward's processing employment, but several smaller companies provide processing capacity for both the commercial and sport industry. Processing labor statistics do not make this distinction, but the vast majority of processing employment in Seward is associated with the commercial industry. Seward's seafood processing and fish buying sector consists of the following companies:

Seafood Processors and Major Buyers in Seward

Primary Processors		
Icicle Seafoods	Resurrection Bay Seafoods	Polar Seafoods
Secondary Processors, Custom Processors, Catcher-Sellers, and Local Seafood Retailers		
Captain Jack's Seafood Locker	J-Dock Seafood	
TNT Custom Smoking & Processing	J&R Fisheries (F/V Kruzof)	
Major Registered Buyers		
Copper River Seafoods	Snug Harbor Seafoods	
Dana Besecker	APICDA	

Seafood Industry Support Sector

Seward's seafood industry has a well-developed support sector. Fishermen and processors have access to numerous marine repair services, supply companies, and freight carriers. In addition, the entire state and

seafood industry benefits from AVTEC's training programs and research programs conducted at the Alaska SeaLife Center, Seward Marine Center (UAF), and Alutiiq Pride Shellfish Hatchery. The table below lists companies and facilities that support the local seafood industry.

Seafood Industry Support Businesses and Facilities in Seward

Research and Education		
AVTEC	Alaska SeaLife Center	UAF Seward Marine Center
Transportation and Logistics		
Samson Tug & Barge	Carlile Trucking	
Northstar Terminal & Stevedore Co.	Portage Transport	
Alaska Logistics	SeaTac Marine Services	
Anderson Tug & Barge	Alaska Railroad	
Two Dogs Trucking	City Express (Taxi/Van Service)	
Totem Ocean Trailer Express	-	
Retail Trade, Fuel, Storage, and Rental Services		
Shoreside Petroleum	Seward Ship's Ace Hardware & Marine	
Bay Traders Tru-Value & The Fish House	Helly Hansen	
Spenard Builders Supply	Amerigas Fuel	
Knots So Fast	Resurrection Rental	
Seward Plumbing	Bay Barge Company	
Storage Option	-	
Marine Electronics, Electricians, and Communications		
Communications North	AC Electric	Maddox Electric
Marine Repair, Surveying, and Boat Building		
Vigor Alaska	Catalyst Marine Engineering	
Raibow Fiberglass & Boat Repair	Seward Heavy Industrial Power (Diesel Repair)	
Cool Hand Luke's	Ronald E. Long Marine Surveys	
Storm Chasers Marine Services	-	
Fishery Management, Marine Safety, and Enforcement		
Alaska Department of Fish & Game	National Marine Fisheries Service	
U.S. Coast Guard – Cutter Mustang	UAF Seward Marine Center	
Banking and Finance		
First National Bank of Alaska	Wells Fargo	

AVTEC- Alaska's Institute of Technology

AVTEC is state-run technical school located in Seward serving roughly 1,300 students each year. Operating with a budget of $13 million, the Center employs 82 permanent faculty and staff members and an additional 70 part-time and student workers. Training programs range from 8 weeks to 10 months. Fifty-five percent of AVTEC's students are from Southcentral Alaska.

Nearly all AVTEC programs support Alaska's maritime and commercial seafood industry in some way. The Center plays a key role for the entire state by providing high-quality workers for Alaska's maritime industries, including the seafood industry. AVTEC programs that train workers for positions in the seafood industry, either directly or indirectly, include the following:

Photo credit: AVTEC.

- Professional Mariner and Able Seaman programs
- HAACP training and other seafood processing training programs
- Intro to Nautical Skills and Young Fisherman program
- Industrial Electrician
- Diesel and Heavy Equipment Repair
- Welding
- Refrigeration Repair and Maintenance
- Culinary Programs

SEWARD MARINE INDUSTRIAL CENTER

Seward has a variety of boatyards that serve small, medium, and large vessels. In 2014, the City performed a record 587 boat lifts. At the Small Boat Harbor, the City operates a 50-ton travel lift that delivers boats to private yards near the marina for storage and repairs. The Seward Marine Industrial Center (SMIC) is located on the east side of Resurrection Bay, and creates more than 50 full-time jobs in Seward. The 2014 volume of vessel haul-outs at SMIC was a 33 percent increase over 2013. SMIC encompasses approximately 100 acres of uplands and boat basin. The SMIC features a City-owned boatyard for medium-sized vessels that can be serviced by the City's new 330-ton travel (boat) lift. The City boatyard allows vessel owners and custom repair businesses to perform maintenance operations. The SMIC also hosts Vigor Alaska, which operates the City's 5,000-ton Syncro-lift drydock. The shipyard facility currently contributes over $3.9 million annually to the local economy.[24] These services generate substantial economic benefits as each round-trip on the travel lift represents a vessel repair or upgrade project which averages $67,000 for labor, parts, and

Seward Marine Industrial Center (Image: City of Seward).

[24] *Seward Marine Industrial Center Uplands Operations Analysis (Prepared for the City of Seward).* Northern Economics. April 2009.

materials. Projects utilizing the Syncro-lift are much larger. The majority of these costs are paid to local and regional service providers or supply companies.

Seward also serves as the homeport of the R/V Sikulaq, a newly constructed 261' research vessel owned by the National Science Foundation and operated by the University of Alaska Fairbanks. It is the first ice-capable vessel in the U.S. academic fleet and arrived in Seward with great fanfare in March 2015. The SMIC provides maintenance support for the vessel when in port. In addition to providing service to commercial fishing and research vessels, the expanding facility will be a crucial asset needed to meet increasing demands from the Alaska Railroad Corporation, USCG vessels, oil/gas exploration companies, and shipping vessels operating in Alaska.

OTHER MARINE REPAIR SERVICES

Seward has six companies that provide marine repair service to the commercial fishing fleet, but that fleet is only one component of several business lines for these companies. Marine service providers also work on large vessels at the SMIC and service large numbers of recreational boats that homeport in Seward. It is estimated that the commercial fishing fleet creates approximately 20 FTE jobs for marine service providers in Seward.

Marine Research

Marine research supports 125 jobs in Seward. Most jobs (105) are located at the Alaska SeaLife Center (ASLC). The University of Alaska – Fairbanks operates the Seward Marine Center, which is adjacent to the ASLC and employs 15 faculty and staff researchers plus several visiting students. The Alutiiq Shellfish Hatchery is also located near the ASLC on Railway Avenue, and employs 4 full-time employees and two part-time workers.

Most marine research projects underway in Seward do not directly involve or support the commercial seafood industry. However, many research projects do have significant implications for the commercial seafood industry, such as the king crab enhancement project, research on Steller sea lion mortality, walrus disturbance research in western Alaska, and participation on a sperm whale tagging project in Southeast Alaska. Projects are primarily funded through grants from government agencies, but numerous commercial seafood industry groups also provide funding such as the At-Sea Processors Association, the Pollock Conservation Cooperative, the Alaska Seafood Marketing Institute, and the Alaska Fisheries Development Foundation.

ALUTIIQ PRIDE SHELLFISH HATCHERY

The Alutiiq Pride Shellfish Hatchery (APSH) plays a unique role in the future of Alaska's seafood industry. The facility conducts fishery research projects, raises oyster seed, and carries out shellfish enhancement projects. Operations are funded through grants from state/federal agencies and Native corporations.

Although the organization is relatively small - with a full-time staff of five, two part-time employees, and a payroll of approximately $250,000 – the group's cutting edge research on red and blue king crab enhancement holds great potential. APSH is raising king crab in hopes of starting a program to enhance commercial king crab fisheries. The project has already released two crops of hatchery-reared juvenile crab, with better than expected survival rates. It plans to release 100,000 or more juvenile king crab by 2017 or sooner. In addition, APSH provides up to 20 percent of the state's oyster seed for mariculture operations across the state. Mariculture

is still a cottage industry in Alaska, but there are several efforts underway to increase production and further development in the industry. APSH could play a key role in this future development.

ALASKA SEALIFE CENTER

The Alaska SeaLife Center (ASLC) is a significant economic driver and strategic asset not just for Seward, but the entire state. Like most rural Alaskans, the Center wears several "hats." Many people recognize the facility as a major tourist attraction, bringing in about 150,000 visitors each year who come to view the aquariums and see the Center's numerous marine mammals. ASLC also conducts important marine research projects, including a Steller sea lion surveillance project which has been gathering birthing data at Chiswell Island since 1998. Other people may know ASLC from their award-winning educational programs, which occur at the Center as well as outreach programs that send educators to remote village schools. Finally, the Center also provides wildlife response services for injured or stranded marine mammals.

ASLC visitors playing the interactive fishery management simulation game (Image: ASLC).

In addition, ASLC hosts an interactive "Sustainable Fisheries" exhibit featuring a 21-foot commercial fishing boat replica and a computer game called "ecoOcean" where visitors can simulate fishery management decisions. The exhibit was made possible through funding from the Rasmuson Foundation, the Alaska Seafood Marketing Institute, the Seward Community Foundation, and the University of Alaska Anchorage. "It's been a very popular addition to the center," says ASLC President Dr. Tara Reimer, "Smaller kids love the commercial fishing boat and older visitors really enjoy the ecoOcean game. It's been such a great tool that Jim Murphy from UAA is working on ways to expand the game to use in classrooms as a teaching tool for fishery management."

In addition to providing funding and partnering on research projects, Alaska's seafood industry also provides key inputs which keep the Center running. "The seafood industry is really important for our aquarium operations. The At-Sea Processors Association and Icicle Seafoods donate over 20,000 pounds of pollock and pink salmon each year to feed our animals. This allows them to eat a diet of Alaska seafood, just as they would if they lived in the wild. Icicle's Seward Fisheries plant generously provides cold storage for us as well," says Reimer.

The ASLC receives 80 to 90 percent of its funding from grants, contracts, and visitor spending. In addition, the Center receives over $700,000 each year in donations from private companies and citizens, underscoring the tremendous support the Center has from regional residents.

Seafood Industry Assets

Seward's seafood industry held an estimated $51 million in assets as of 2013. The community ranks fifth in total seafood industry assets among Southcentral community/regions, but is the third highest on a per capita basis with $20,400 in asset value per resident. This asset valuation of the industry is conservative, since it does not take into account assets held by support sector businesses and does not reflect the true market value of seafood processing plants.

Estimated Value of Selected Local Seafood Industry Assets, in $Millions, 2013

Commercial Fishing Permits, Quota, Vessels, and Misc.	$38.7
Seafood Processing Facilities and Equipment	$12.0
Total Value	**$50.7**

Source: McDowell Group estimates based on industry interviews and City of Seward assessed values.

Economic Growth and Seafood: Seward Marine Industrial Center

The Seward Marine Industrial Center (SMIC) recently initiated work on a $65 million expansion project which will add moorage capacity for large vessels, improve freight logistics on Alaska's road system, and significantly improve Seward's ability to service large fishing, tour, cruise, research, oil/gas, and shipping vessels operating in Alaska. Currently the capacity to service large vessels in Alaska and provide offseason moorage in Alaska is relatively limited. Most vessel owners, even those controlled by Alaska companies, send their large vessels to Puget Sound for service and moorage. The cost of fuel and moorage for doing so is substantial.

The SMIC expansion project includes two phases. The first phase involves construction of a breakwater to shelter the shipyard's waterfront and the City's adjacent cargo dock from battering Gulf of Alaska waves that periodically make their way up Resurrection Bay. During the second phase of the project the existing marine basin will be dredged to allow for expanded moorage space for large vessels. The latter phase will upgrade SMIC's current infrastructure and improve upland areas for private development. Funding for phase one, which is estimated to cost $27.9 million, is nearly complete and construction of the breakwater will begin this summer. Phase two funding options include state/federal grants, state port bonds, private investment, and AIDEA funding. Seward's taxpayers have already invested $30 million in bonds to upgrade existing infrastructure, underscoring the community's commitment to the project.

The project is expected to create approximately 200 construction jobs and approximately 69 to 83 additional full-time equivalent jobs in the Seward area.[25] Additional job opportunities for Southcentral residents could follow with each large vessel that moors at the facility. Coastal Villages Regional Fund (CVRF) - the largest of Alaska's six CDQ groups – owns six large commercial fishing vessels, including a 341-foot catcher processor. The CDQ group has expressed interest in homeporting vessels in Seward, if moorage space was made available. Doing so would not only cut fuels costs and travel expenses for CVRF but would allow for better access to fishing jobs for Southcentral residents and/or attract new residents to the region. Currently, the few

[25] *Seward Marine Industrial Center Uplands Operations Analysis (Prepared for the City of Seward).* Northern Economics. April 2009.

Southcentral residents working on these vessels must either fly to Seattle, Kodiak, or Dutch Harbor. Homeporting CVRF vessels in Seward would increase the likelihood that these 100+ jobs would be filled by either new or existing Southcentral residents who could simply drive to and from the SMIC dock.

Expansion and upgrading the SMIC brings obvious benefits to Seward, but it will also create job opportunities for residents of Anchorage, Mat-Su, and other Kenai Peninsula Borough communities. The expansion will provide ongoing economic benefits to the region by reducing leakages stemming from the inability of Alaska ports to meet service and moorage demands of large vessel owners.

In May, Vigor Alaska signed a purchase agreement for the Seward Ship's Drydock facility, which is located adjacent to the SMIC. Shortly thereafter, the City signed off on a transfer of the lease agreement for the facility which extends through 2040. The arrival of Vigor, a large shipyard operator which owns eight other shipyards in the Pacific Northwest and Alaska, is expected to provide significant economic benefits for the community and the region. Company officials stated they intend to invest in the Seward workforce and facility, similar to those made in Ketchikan after the company purchased Alaska Ship and Drydock operations in 2012. Vigor is in the midst of a $130 million-plus expansion at that facility.

Company Profile: Icicle Seafoods (Seward Fisheries Facility)

Icicle Seafoods has operated the Seward Fisheries facility at the north-end of the Seward Harbor since 1978. The plant processes salmon, halibut, black cod, and grey cod and features four canning lines. The company employs up to 350 workers in Seward during the peak months of July and August and employs an average of 120 workers per month. Icicle provides on-site housing to accommodate seasonal workers. Although most workers are seasonal hires the plant employs approximately 30 Seward residents, primarily in managerial, administrative, and higher-skilled technical or production positions. Icicle buys and processes fish from January to November, although its volume and employment fluctuate substantially. It also provides custom processing for buyers, direct-market fishermen, and other retailers in Seward.

Icicle Seafoods is by far the largest processor in Seward, providing a market for hundreds of commercial fishermen participating in seine, gillnet, and longline fisheries. The company and fishermen serviced by the plant spend over $4 million a year in the local economy, indirectly creating jobs in Seward.

Icicle Seafoods Seward Fisheries Plant (Image: Seward Phoenix Log).

Seward's position on the road system, proximity to Anchorage, and access to

substantial seafood resources present opportunities for growth. With an increase in seafood production in Seward comes a need for increased housing and other services to accommodate additional workers. This would lead to jobs in construction, housing management, retail, and other services. Charles McEldowney, Icicle Seafoods plant manager, had this to say about expansion potential at the plant, "We'd like to expand production during the winter months, which would be great for local fishermen. It would also provide more jobs and economic activity for retailers and restaurants who remain open during the tourist offseason. Housing for employees has been a challenge for all seafood processors in Seward and is an issue that would have to be addressed along with any plan for expansion. Ideally, we would like to hire more local residents but the tight housing market and the realities of running a processing plant are a big challenge. Seward needs more affordable housing in the local housing market to support a growing workforce working production job wages."

Community Impact Profile: Valdez

The Valdez economy is largely supported by the oil industry as a result of its location near the Trans-Alaska pipeline terminus, but its seafood industry is quickly becoming another major economic driver. Local processing plants directly create approximately 400 FTE fishing jobs (for locals and non-locals) and employ over 600 processing workers (mostly in seasonal positions). Both major processors in the community have plans for significant expansion in the near-term.

Local Economic Impact of the Seafood Industry

It is estimated that Alaska's seafood industry directly employed 740 workers and supported a total of 340 FTE-jobs in Valdez during 2013 (including direct and secondary effects). Including non-local fishermen who deliver to its plants, the direct seafood workforce exceeds 1,000 people. Seafood generated an estimated $16.7 million in labor income in Valdez during 2013, in addition, non-local fishermen delivering to Valdez plants earned an estimated $16.5 million. The industry contributed about $620,000 in fisheries tax revenue to the City in 2013.

Economic Impact of Seafood Industry on the Valdez Economy, 2013

	Numbers of Workers	Full-Time Equiv. Employment	Labor Income ($Millions)
Seafood Industry (Direct Impacts)			
Commercial Fishing (Local Residents Only)	102	70	$3.4
Commercial Fishing (Non-local Residents)	270	330	$16.5
Seafood Processing	610	180	$8.8
VFDA Hatchery and ADF&G	30	20	$0.9
Economic Impacts			
Direct (Industry Functions)[1]	740	260	$13.0
Indirect (Business Spending)	-	40	$2.1
Induced (Household Spending)	-	35	$1.7
Total Economic Impacts	**740**	**340**	**$16.7**
Local Fisheries Taxes Received (2013)			**$621,600**

[1] The direct worker count figure does not include commercial fishermen who are not residents of Valdez.
Notes: All employment figures (except commercial fishing workers) have been rounded, as result total employment figures may not sum. Commercial fishing labor income figures include estimated income from tender vessels owned by local residents.
Source: McDowell Group estimates based on ADF&G, DCCED, DOLWD, IMPLAN, NMFS, and industry interviews.

Seafood directly employs approximately 180 local area residents and creates an additional 75 FTE jobs in Valdez through multiplier effects (most of which employ local residents). In total, local resident employment created by the seafood industry is equal to roughly 10 percent of the city's working age resident population (not including those living in group quarters).

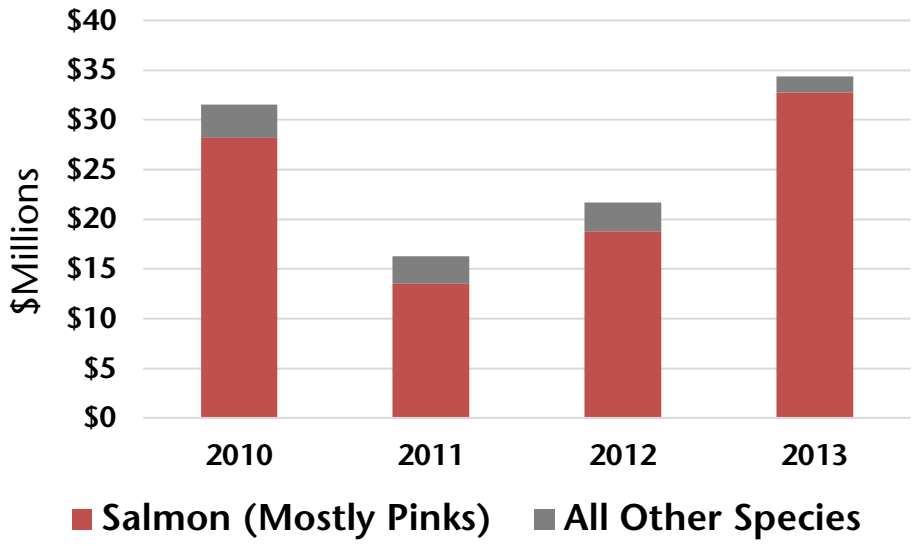
Although local employment created by the seafood industry is significant relative to the city's population, Valdez residents have an opportunity for greater participation. The seafood industry is growing faster in Valdez

than any other Southcentral port as the community has become a key port for PWS pink salmon. Two major processors are expanding operations which will provide residents ample opportunity to work in the processing, fishing, or support sectors. While entry-level seafood industry jobs often entail long hours for relatively low wages (especially for processing line workers), that experience has led to successful careers in the industry for thousands of Alaskans. Further, due to the demographics of the seafood industry and its support sector, there is a significant need to develop younger members of the workforce to eventually replace older workers in upper-level positions.

Local Seafood Resources

Pink salmon is the primary resource for commercial fishermen and processors in Valdez. Pink salmon runs can fluctuate significantly from year to year, making the local seafood industry more volatile than other Southcentral communities. However, 2013 was a strong year and the ex-vessel value of all species delivered to Valdez was nearly $35 million.

Ex-Vessel Value of Seafood Delivered to Valdez, in $Millions, by Major Species, 2010-2013



Source: ADF&G (COAR).

Commercial Fishing Sector

Commercial fishermen landed 68 million pounds of fish (mostly pink salmon) to Valdez processing plants in 2013 worth $34.4 million. Valdez is home to 102 local resident fishermen, or about 4 percent of the working age population. The community's 28 resident active permit holders grossed $5.4 million in 2013, yielding an estimated $3.4 million in labor income and 70 FTE jobs for local fishermen (due to data limitations it must be assumed local permit holders generally employ local crew members). However, 2013 was a record pink salmon year. For 2012 and 2013, the industry created an average of 45 local FTE fishing jobs. Valdez processing plants also create jobs for non-local fishermen, many of whom reside elsewhere in Alaska.

Commercial Fishing Sector in Valdez, 2013

Local Resident Employment	
Active Permit Owners	28
Crew Members	74
Total Resident Commercial Fishermen	**102**
Estimated Local FTE Jobs	**70**
Local Resident Earnings ($Millions)	
Estimated Labor Income (Permit Owners and Crew)	$3.4
Harvest Value of Local Resident Permit/Quota Owners	$5.4
Estimated Asset Value Held by Local Residents ($Millions)	
Limited Entry Permits	$4.8
IFQ Quota Shares	$1.4
Fishing Vessel Value, Gear, and Misc.	$7.1
Total Asset Value Held by Resident Commercial Fishermen	**$13.3**

Notes: Labor income figures include estimated income from tender vessels owned by local residents.
Totals may not sum due to rounding.
Source: McDowell Group estimates based on ADF&G data and industry interviews.

COMMERCIAL FISHING FLEET

The commercial fishing fleet consists of 56 vessels which homeport in Valdez, as well as numerous seiners that homeport elsewhere but deliver fish to local plants. Seiners account for 62 percent of the gross tonnage of commercial fishing and industry support vessels homeported in Valdez. Many of these boats also participate in longline IFQ fisheries for halibut and black cod (but are not included the totals for the longline category in the table below, so as to avoid double counting). Twenty longline, pot, and jig boats homeport in Valdez in addition to three tenders and two other small support vessels.

Valdez Commercial Fishing Fleet by Type and Ownership, 2013

	----------All Vessels----------			---Vessel Count By Residency---		
	Total Count	Gross Tons	Pct. by Gross Tons	Valdez	Other AK	Nonres.
Gillnetters	5	46	3%	3	2	-
Seiners	26	943	62%	17	3	6
Longliners, Pot, and Jig	20	301	20%	15	8	-
Tenders	3	227	15%	1	1	1
Others	2	2	<1%	-	2	-
Total CF Vessels	**56**	**1,519**	**-**	**36**	**16**	**7**

Note: Based on self-reported data on CFEC vessel registration. Longliner, pot, and jig category does not include combo boats which also fish for salmon (gillnet or seine).
Source: CFEC Commercial Vessel Database.

Sixty-four percent of the commercial fishing vessels which homeport in Valdez are owned by local residents. Twenty-nine percent are owned by other Alaska residents, while nonresidents own the remaining seven percent.

LIFE AS A COMMERCIAL FISHERMAN IN VALDEZ: PAT DAY, F/V ALASKAN SPIRIT

Valdez's Pat Day completed his 50th year of commercial fishing in 2014. Day owns and operates the 53' seiner Alaskan Spirit. He employs four crew members during the summer seining season, typically consisting of two to three local residents plus family members. In the offseason, his boat is on-call as an oil spill response vessel.

Like many other Valdez residents, salmon and the pipeline have provided for his family. "My two sons grew up seining which they used to pay for their schooling," recalls Day. "They work for Alyeska now but it's still great to have them and their kids around during the salmon season. For me the income from being on call for oil spill response provides some additional income; however, we have to keep the boat in the water and ready to respond within hours. Alyeska is definitely the town's biggest employer, followed by the city, but I think the (commercial) salmon industry is probably third. It's definitely an important part of the Valdez economy."

Large pink salmon harvests and additional processing capacity have created growing demand for boat upgrades, fishing gear, and marine electronics. "There has been more activity in recent years in the (Valdez) boatyard and we're seeing more technicians around in the summer. A lot of these guys are from Anchorage or other communities in Southcentral. I buy a lot of my fishing gear out of Homer, but also have some shipped up from Seattle. Most of my provisions and routine maintenance purchases are local though."

**THE APPENDIX CONTAINS HISTORICAL DATA ON THE VALDEZ COMMERCIAL FISHING SECTOR*

Seafood Processing Sector

Valdez has three processing plants, operated by Peter Pan Seafoods, Silver Bay Seafoods, and Valdez Fisheries. Peter Pan Seafoods and Silver Bay Seafoods account for the vast majority of Valdez landings and processing employment. It is estimated that processors employed approximately 610 workers in 2013, generating 180 FTE processing jobs. Due to the seasonal nature of PWS fisheries, large processors must rely on transient labor for most of their employment. Communities

Peter Pan Seafoods Plant in Valdez.

like Valdez simply do not have enough excess laborers during the busy summer salmon to fill the needs of large processing plants. However, the processing sector is estimated to directly create 70 FTE jobs for local or regional residents.

Valdez processing employment data is confidential. Local figures were estimated based on a custom data set provided by DOLWD for the collective Valdez-Cordova census area and interviews with local processors.

Seafood Processing Sector in Valdez, 2013

Processing Companies/Plants	3
Estimated Employment	
Total Workers	610
Full-Time Equivalent	170
Estimated Earnings ($Millions)	
Total Wage and Salaries	$8.8
Estimated Industry Asset Value ($Millions)	
Land, Buildings, Equipment, and Misc. Assets	$6.3

Notes: Seasonal workers who did not earn the majority of their 2013 annual Alaska earnings in seafood processing are not included in these figures. Employment data may include companies categorized as seafood wholesalers who also process seafood. Totals may not sum due to rounding.
Source: McDowell Group estimates based on DOLWD data; and industry interviews.

The Peter Pan Seafoods plant on South Harbor Drive operates from April to September processing salmon, halibut, and black cod; it employs 300 to 400 workers at peak season. Silver Bay Seafoods bought the former Northern Reach Seafoods plant in 2010. Since then, Silver Bay has invested in the plant, increasing its daily capacity from 250,000 pounds to 1 million pounds. The facility typically employs roughly 200 workers at peak season. VFDA operates a small processing plant and cold storage facility. VFDA uses both facilities to process its cost-recovery salmon, but other local users also rent time and space at the facilities.

Salmon Hatchery: Valdez Fisheries Development Association (VFDA)

VFDA is a private, nonprofit salmon hatchery operation based in Valdez whose mission is 'raising, propagating, and marketing fish and fish products, and developing renewable fisheries for the benefit of sports fishermen, commercial fishermen, fish processors, tourists, and all businesses dependent upon the fishing industry in Alaska.' The association owns and operates the Solomon Gulch hatchery, which produces pink and coho salmon for commercial and sport fisheries in Prince William Sound. In addition, VFDA processes surplus and underutilized cost-recovery salmon at its Fisheries Business Incubator facility and also operates a cold storage facility. Between 2008 and 2012, the non-profit contributed an annual average of 33 million pounds of salmon to common property commercial fisheries worth a five-year total of $73 million. In general, 20 to 40 percent of PWS seiners' income is derived from catching and selling pink salmon reared by VFDA.

VFDA employs 40 to 50 workers per year, with a year-round staff of 17 employees. The organization has an annual budget of $4.2 million and is a significant customer for local utilities, plumbing supply stores, and fuel.

A 2013 McDowell Group study estimated VFDA business operations and salmon production creates approximately $22 million in labor income annually in Alaska, or about 450 FTE jobs.[26]

VFDA "Fisheries Business Incubator" Processing Plant and Cold Storage Facility

VFDA manages and operates a processing plant built in 2003. The plant is capable of producing, fresh, frozen, smoked, and cured salmon products. The facility's construction was funded by VFDA and an Economic Development Administration grant as part of VFDA's Fisheries Business Incubator Investment Program. The business incubator concept provides opportunity for direct marketers to begin operations without bearing the entire burden of overhead and capital costs. The plant's processing equipment includes heading and gutting (H&G) equipment, fillet machines, a smoker, blast freezer tunnels, packaging equipment, and other items. VFDA is the primary user of the facility, processing cost recovery resources for its Solomon Falls® line of salmon products. VFDA has developed processing techniques and markets for numerous value-added salmon products, including flavored smoked coho fillets, *ikura*-style salmon caviar from both pink and coho roe, and smoked pink salmon sides which won the 2009 Symphony of Seafood award for best smoked product. Two direct marketers also use the facility to glaze and freeze spot prawns.

In 2012, VFDA opened a new modular cold storage facility that will eventually be capable of storing 300,000 pounds of product at temperatures down to 10 degrees below zero. It is expected to increase opportunities for local fishermen to do direct marketing and allow local businesses to achieve greater economies of scale when purchasing perishable products. The facility is used by local and Anchorage seafood processors to store frozen product, as well as local sport fish custom processors, a marine hardware store to hold frozen bait, and by Fedex (for overflow of perishable packages).

Seafood Industry Support Sector

Valdez has a well-developed marine support sector. Most businesses provide goods and services to several types of clientele, including Alyeska, commercial fishing boats, and recreational or guiding boats. Although Valdez has infrastructure and service providers for repair and some vessel upgrade work, most commercial fishermen purchase fishing gear and specialty equipment from companies in Homer, Anchorage, or Puget Sound. A list of support sector companies is provided below.

Seafood Industry Support Businesses and Facilities in Valdez

Transportation and Logistics		
Alaska Marine Lines		CAT Trucking
Carlile Transport		Northstar Terminal & Stevedore Co.
Ravn Air	Samson Tug and Barge	Wilson Brothers Distributing
Retail Trade, Fuel, Storage, and Rental Services		
North Pacific Fuel		Gulf Coast Inc.
NAPA Auto Parts		South Central Hardware
J&R Plumbing/Heating Supply		Prospector Outfitters
Valdez Boat Works		Crowley Marine Service, Inc.

[26] *Economic Impact of the Valdez Fisheries Development Association.* McDowell Group. December 2013.

HD Marine		Valdez Marine & Outdoors
Haltness Equipment		Harris Sand & Gravel
Marine Electronics, Electricians, and Communications		
Copper Valley Wireless	Curtis Electric	Frontier Electric
Marine Repair, Surveying, and Fabrication		
HD Marine		Valdez Boat Works
Raibow Fiberglass & Boat Repair		Rodney Walters (Fiberglass Repair)
Rich Long (Marine Surveys)		Mark Delozier (Marine Surveys)
Banking and Finance		
First National Bank of Alaska		Wells Fargo

Seafood Industry Asset Value

The Valdez seafood industry held an estimated $20 million in assets as of 2013. The total amount of seafood assets present in Valdez was the lowest of all Southcentral regions profiled in this report, but still represents a per capita value of $4,800 (per resident), placing it ahead of Anchorage/Mat-Su and Kenai in per capita terms.

Estimated Value of Selected Seafood Industry Assets in Valdez, in $Millions, 2013

Commercial Fishing Permits, Quota, Vessels, and Misc.	$13.3
Seafood Processing Facilities and Equipment	6.3
Total Value	**$19.6**

Source: McDowell Group estimates based on industry interviews and correlations with processing assets in other Southcentral communities.

Fueling Economic Growth in Valdez with Seafood

The City of Valdez embarked on a major harbor expansion project this spring that is scheduled to be finished by the summer of 2018. The new boat harbor will add 320 slips to the City's port facilities and increase the size of upland support areas. These new facilities are specifically aimed at serving the needs of commercial and industrial users. The existing harbor suffers from capacity issues during the summer months, as recreational, commercial, charter, industrial, and Coast Guard vessels vie for moorage. It is not uncommon to see seine boats tie up "three deep" or more in the harbor, as shown in the picture. Approximately two-thirds of the harbor users are from interior Alaska or Anchorage/Mat-Su. This major

Seiners tied up in Valdez Small Boat Harbor (Image: VFDA).

infrastructure project is a crucial step towards expanding the local seafood industry and has been the City's top development priority for more than a decade.

Valdez's two large processors will likely embarked on major expansion projects within the next two years. Few details have been disclosed since these projects are not yet underway, but when complete they will likely bring more salmon into the community, increase the value of current production by creating co-products from salmon heads, and expand the seafood resource tax base. Both projects are related to increased pink production from VFDA and PWSAC. Each hatchery has been cleared by ADF&G to release more pink salmon under their current permits.

In a unique joint venture, Peter Pan Seafoods and Trident Seafoods plan to build a salmon oil plant adjacent to the current Peter Pan facility. When complete, the addition will be capable of processing salmon heads (and potentially other unused parts) into high quality salmon oil suitable for human consumption. The fish oil plant would be built and owned by Peter Pan and leased to Trident, which would operate the plant and supply necessary equipment. Trident Seafoods sells salmon oil capsules under its Pure Alaska Omega brand. The product is sold in all Costco locations and most Sam's Club locations, according to the product website (www.purealaskaomega.com/salmon-oil).

Silver Bay Seafoods acknowledged they are considering expansion plans for their Valdez facility; however, company officials are not yet providing any further details about the expansion project.

Company Profile: Silver Bay Seafoods

From the remnants of Alaska's timber industry, Silver Bay Seafoods has quickly emerged as the industry's largest Alaska-based processor. The company began processing salmon in Sitka in 2007 at a newly constructed facility on the former Alaska Pulp Mill site. In just seven years its operations have grown to include four plants in Alaska (Sitka, Valdez, Craig, and Naknek) as well as one processing facility in California. Silver Bay is primarily owned by fishermen who also deliver to its plants.

Valdez became the third Silver Bay location when the company purchased the former Northern Reach Fisheries plant in 2010. Since then, it has invested millions in the facility to upgrade processing and freezing equipment. The plant is now capable of processing up to 1 million pounds of salmon per day.

Silver Bay's arrival in Valdez has created new jobs, both directly and indirectly. At peak season, the plant employs approximately 200 workers, including five local workers in year-round positions. Seasonal workers are typically nonresidents. Both Silver Bay and Peter Pan Seafoods are major utility consumers for the City and purchase several million dollars of fuel and supplies from Valdez and Anchorage each year. In addition, their finished product creates jobs for workers at the Port of Valdez dock. It is estimated that the record 2013 pink salmon season generated more than 40 million pounds of finished product (produced by all three processors), equivalent to almost 1,000 40'-containers.

Silver Bay has also increased regional competition for salmon among processors. This has been a positive development for fishermen and VFDA. "It's important for the hatchery to have another local bidder for the cost recovery harvest. The capacity added by Silver Bay ensures there is plenty of competition for VFDA and PWSAC cost recovery fish from regional processors," notes Pat Day, a local seiner and VFDA Board President.

The company contributes to the local and regional economy through wages paid to its employees, local/regional spending, and payments to fishermen; but residents also benefit from owning an equity stake in the firm. Day, who delivers to Silver Bay's Valdez facility, adds "It's been really interesting and rewarding for us fishermen to see the other side of the business first-hand after all these years." Southcentral is home to many Silver Bay shareholders. These fishermen-owners receive profit-sharing distributions derived from all Silver Bay operations, from Bristol Bay to California. Together with wages, payments for fish, and regional spending, these payments create new jobs and income in Southcentral Alaska.

Scope and Impact of Seafood Shipments

In 2013, Southcentral processors produced 250 million pounds of seafood. The vast majority of this product was shipped out of the region, creating valuable backhaul for Southcentral freight carriers.

Marine cargo is the dominant seafood transportation mode, typically consisting of frozen seafood or canned salmon (dry freight). Anchorage and Valdez accounted for about 80 percent of total marine shipping volume exiting Southcentral in 2013 (based on our survey of processors). Anchorage is a major hub for southbound seafood traffic. Product from Kenai, Homer, Seward, and even Cordova (via barge service to Whittier) is often trucked to the Port of Anchorage and shipped south on Totem Ocean Trailer Express or Horizon Lines vessels. Alaska Marine Lines, a subsidiary of Lynden, Inc., is also a major seafood shipper, with operations in Anchorage, Valdez, Cordova, Seward, and Whittier (in addition to Southeast and Western Alaska). Samson Tug & Barge is another key seafood shipper in Southcentral. It is estimated that marine cargo shippers transported 193 million pounds of seafood out of Southcentral Alaska in 2013, generating $20.2 million in revenue.

Air cargo moved an estimated 17.3 million pounds of mostly fresh product out of the region in 2013. Alaska Airlines is the dominant player, but Fedex and other air carriers also move significant amounts of seafood. Companies like Pen Air and Northern Air Cargo bring product into Anchorage from outside the region, where it is often routed to other markets or further processed by regional processing companies. The volume of seafood coming into Anchorage via air cargo could not be estimated, and is not included in these volume estimates. Therefore, the air cargo segment is a conservative approximation of the actual volume. The availability of reliable air cargo service is an important factor in adding value to Alaska's seafood resource because fresh product commands a premium price. Air carriers grossed an estimated $25.8 million moving seafood out of Southcentral in 2013.

Estimated Volume of Southcentral Seafood Cargo by Shipping Type, 2013

	Pounds Shipped (in Millions)	Estimated Cost of Shipping ($Millions)
Air Cargo	17.3	$25.8
Marine Cargo	193.0	$20.2
Road System (to Lower 48 or Canada)	40.2	$11.3
Total Shipments Out of Southcentral	**250.5**	**$57.2**
Sold to Local End-Users	3.4	$0.2
Product Trucked Out of Whittier to Anchorage	91.0	$4.6
Other Intra-Region Shipments	29.5	$1.5
Total In-Region Shipments	**123.9**	**$6.2**

Source: McDowell Group estimates based on processor surveys, U.S. Army Corps of Engineers (Waterborne Statistics Center), and ADF&G production data.

Trucking product south over the road system is another alternative for moving fresh seafood. It is estimated that regional trucking companies transported 40.2 million pounds out of the region in 2013, providing $11.3 million in revenue for long-haul carriers. In addition, more than 120 million pounds of seafood is transported via truck within the region as a result of 1) processors buying fish in one community and transporting it to their

plant elsewhere, 2) transporting finished product to buyers within the region, 3) transporting product between Whittier and the Port of Anchorage, or 4) transporting fish waste to regional buyers.

Most freight traffic in Southcentral comes from northbound routes bringing materials and goods into the region from the lower 48, but seafood shipped out of Southcentral creates valuable "backhaul" for marine cargo, air cargo, and trucking companies. This backhaul allows shippers to offer more competitive rates on both northbound and southbound cargo which helps lower the cost of living and doing business in Alaska for all residents in the region.

McDowell Group compiled shipping data from a survey of Southcentral processors regarding the volume of seafood shipped out of Southcentral plants in 2013. Most processors provided information but it was not possible to obtain a complete accounting of seafood shipments. McDowell Group used the survey responses, marine cargo data from the Army Corps of Engineers, and production data from ADF&G to estimated total shipping volumes.

IMPACT OF SEAFOOD BACKHAUL

Transporting a quarter of a billion pounds of seafood is a significant revenue stream for Southcentral shipping companies. It is estimated that seafood accounts for 10 to 15 percent of marine cargo revenue in Southcentral Alaska (not including crude oil or other bulk shipments).[27] Since most goods bought in Alaska stores must be shipped to Alaska, seafood backhaul helps lower the cost of shipping and hence the prices on everything from soap to cars in Southcentral Alaska. Based on household expenditure models developed by McDowell Group, seafood backhaul likely saves the average Southcentral household more than $70 per year (due to offsetting the cost of northbound cargo rates that would otherwise be more expensive).

[27] The estimated range is based on economic output produced by the water transportation sector in Southcentral Alaska, and assumptions made about that data (which includes things like oil tankers and bulk shipments of coal and other materials). Calculating the exact impact of seafood on total shipping revenue is not possible due to a lack of data; however, the impact on the marine cargo sector (not including crude oil or bulk shipments) has been estimated within a range based on available data and industry interviews.

Upper Cook Inlet Salmon Harvest by Regional User Groups

Salmon fisheries in the Upper Cook Inlet area serve a large number of commercial, sport, and personal use fishermen. The majority of Alaska's population lives in the region (Anchorage, the Mat-Su Valley, or the Kenai Peninsula Borough). As a result, the allocation of salmon among various user groups is an important consideration. Harvest and catch data are summarized below to illustrate how each user group has utilized the salmon resource during the past 10 years.

Collectively, the region's major user groups harvested an average of 5.1 million salmon in Upper Cook Inlet fisheries between 2004 and 2013. Commercial fishermen accounted for 80 percent of the region's total salmon harvest, most of which are sockeye. Commercial fishermen accounted for 56 percent of the coho harvest and 25 percent of the average Chinook harvest in Upper Cook Inlet over the past 10 years.

Chinook, coho, and sockeye are key salmon species for regional sport and personal use fisheries. Sport fishermen accounted for 73 percent of the total Chinook harvest, 43 percent of the total coho harvest, and 9 percent of the total sockeye harvest over the past 10 years. Chinook salmon are the most sought after species for sport fishermen, but are relatively rare accounting for just 1 percent of the total salmon harvest. A significant percentage of salmon caught by sport fishermen are released for various reasons. The figures below provide data on retained harvest and total catch in sport fisheries. Similar data was not readily available for other area fisheries but is expected to be minor compared to the retained harvest of target species. Personal use fisheries in Upper Cook Inlet primarily target sockeye and accounted for 10 percent of the area's sockeye harvest.

Upper Cook Inlet Salmon Fisheries, Annual Average Number of Salmon Harvested or Caught by User Group, 2004 - 2013

Numbers of Salmon	Commercial Fisheries	Personal Use Fisheries	Sport Fisheries	Sport Fisheries	Species Totals
Species	**Harvest**	**Harvest**	**Harvest**	**Catch**	**Harvest**
Sockeye	3,530,805	429,716	396,329	614,429	4,356,850
Chinook	14,140	1,130	40,496	106,242	55,766
Coho	188,637	4,701	145,622	235,750	338,960
Pink and Chum	344,355	6,701	23,492	239,657	374,548
Total	**4,077,937**	**442,249**	**605,939**	**1,196,078**	**5,126,125**
Percent	**Commercial Fisheries**	**Personal Use Fisheries**	**Sport Fisheries**	**Sport Fisheries**	**Species Totals**
Species	**Harvest**	**Harvest**	**Harvest**	**Catch**	**Harvest**
Sockeye	81%	10%	9%	-	85%
Chinook	25	2	73	-	1
Coho	56	1	43	-	7
Pink and Chum	92	2	6	-	7
Total	**80%**	**9%**	**12%**	-	-

Note: A large percentage of sport-caught salmon are released. Therefore figures on (retained) harvest and total catch are presented. The total number of salmon caught in commercial and personal use fisheries is believed to be relatively close to the number of salmon retained.
Source: ADF&G (2013 Upper Cook Inlet Annual Management Report and custom data request from Alaska Sport Fishing Survey database [Intranet]. 1996-2013, ADF&G, Division of Sport Fish, 06/04/15).

Appendix: Historical Commercial Fishing Harvest, Earnings, and Employment

Southcentral Alaska: Total Resident Commercial Fishing Activity, 2004-2013

Year	Total Fishermen	Skippers	Resident Crew Members	Gross Earnings ($Millions)	Gross Earnings Per Active Permit Holder
2004	5,363	2,072	3,291	$126.1	$60,838
2005	5,251	2,103	3,148	147.2	69,992
2006	5,125	2,071	3,054	141.1	68,121
2007	5,374	2,065	3,309	186.0	90,073
2008	5,513	2,102	3,411	201.7	95,964
2009	5,324	2,043	3,281	157.3	76,994
2010	5,592	2,088	3,504	246.4	117,998
2011	5,890	2,187	3,703	259.2	118,515
2012	5,854	2,146	3,708	243.7	113,554
2013	5,729	2,168	3,561	285.2	131,565
5-yr Avg.	**5,678**	**2,126**	**3,551**	**$238.4**	**$111,725**

Note: Gross earnings data shown above does not match other sections of this report because this data only comes from CFEC, which handles groundfish landings differently than NMFS. Gross earnings data for 2013 produced for this report's analysis incorporated NMFS groundfish landings because it provides a better account of total landings and applies groundfish earnings to the location of the vessel owner rather than the permit owner. Figures also do not include revenue earned from tendering activities.

Source: CFEC and ADF&G license statistics (totals compiled by McDowell Group).

Anchorage/Mat-Su: Resident Commercial Fishing Activity, 2004-2013

Year	Total Fishermen	Skippers	Resident Crew Members	Gross Earnings ($Millions)	Gross Earnings Per Active Permit Holder
2004	1,980	696	1,284	$35.1	$50,464
2005	2,014	720	1,294	42.7	59,356
2006	1,961	708	1,253	38.8	54,814
2007	2,110	715	1,395	46.2	64,622
2008	2,289	735	1,554	51.7	70,396
2009	2,151	690	1,461	45.3	65,696
2010	2,343	714	1,629	61.2	85,757
2011	2,378	736	1,642	71.5	97,137
2012	2,382	720	1,662	66.9	92,963
2013	2,223	724	1,499	85.0	117,423
5-yr Avg.	**2,295**	**717**	**1,579**	**$66.0**	**$91,795**

Note: The note from the previous table applies to the Anchorage/Mat-Su area as well.
Source: CFEC and ADF&G license statistics (totals compiled by McDowell Group).

Cordova: Resident Commercial Fishing Activity, 2004-2013

Year	Total Fishermen	Skippers	Resident Crew Members	Gross Earnings ($Millions)	Gross Earnings Per Active Permit Holder
2004	562	295	267	$17.9	$60,542
2005	560	296	264	23.2	78,512
2006	570	296	274	22.9	77,449
2007	572	301	271	35.8	118,843
2008	563	296	267	36.8	124,387
2009	541	284	257	24.7	86,964
2010	577	298	279	53.4	179,104
2011	592	294	298	46.0	156,569
2012	620	296	324	47.1	158,987
2013	619	298	321	56.8	190,449
5-yr Avg.	**590**	**294**	**296**	**$45.6**	**$154,414**

Note: Figures do not include revenue earned from tendering activities and as a result may not match other figures quoted in this report.
Source: CFEC and ADF&G license statistics (totals compiled by McDowell Group).

Homer: Resident Commercial Fishing Activity, 2004-2013

Year	Total Fishermen	Skippers	Resident Crew Members	Gross Earnings ($Millions)	Gross Earnings Per Active Permit Holder
2004	891	364	527	$39.6	$108,875
2005	874	378	496	40.7	107,772
2006	889	387	502	46.8	120,916
2007	958	378	580	60.0	158,761
2008	951	397	554	68.4	172,218
2009	945	404	541	53.2	131,578
2010	962	424	538	78.2	184,481
2011	1,077	451	626	82.4	182,619
2012	1,098	453	645	80.4	177,420
2013	1,086	455	631	83.1	182,639
5-yr Avg.	**1,034**	**437**	**596**	**$75.4**	**$171,747**

Note: Figures do not include revenue earned from tendering activities and as a result may not match other figures quoted in this report.
Source: CFEC and ADF&G license statistics (totals compiled by McDowell Group).

Kenai Region: Resident Commercial Fishing Activity, 2004-2013

Year	Total Fishermen	Skippers	Resident Crew Members	Gross Earnings ($Millions)	Gross Earnings Per Active Permit Holder
2004	1,344	510	834	$18.3	$35,919
2005	1,220	510	710	23.3	45,748
2006	1,173	495	678	15.6	31,495
2007	1,184	475	709	20.2	42,438
2008	1,125	475	650	19.5	40,983
2009	1,123	457	666	15.5	34,007
2010	1,111	442	669	25.5	57,642
2011	1,220	484	736	30.6	63,224
2012	1,144	462	682	20.7	44,874
2013	1,204	486	718	29.3	60,304
5-yr Avg.	**1,160**	**466**	**694**	**$24.3**	**$52,010**

Note: Figures do not include revenue earned from tendering activities and as a result may not match other figures quoted in this report.
Source: CFEC and ADF&G license statistics (totals compiled by McDowell Group).

Seward: Resident Commercial Fishing Activity, 2004-2013

Year	Total Fishermen	Skippers	Resident Crew Members	Gross Earnings ($Millions)	Gross Earnings Per Active Permit Holder
2004	154	45	109	$6.2	$138,824
2005	154	46	108	5.6	121,818
2006	158	39	119	6.4	164,416
2007	151	39	112	9.6	246,820
2008	174	44	130	9.3	211,875
2009	158	46	112	7.1	153,713
2010	148	43	105	10.8	250,727
2011	162	43	119	10.7	248,951
2012	168	43	125	10.9	254,277
2013	148	41	107	11.8	288,122
5-yr Avg.	**157**	**43**	**114**	**$10.3**	**$239,158**

Note: Figures do not include revenue earned from tendering activities and as a result may not match other figures quoted in this report.
Source: CFEC and ADF&G license statistics (totals compiled by McDowell Group).

Valdez: Resident Commercial Fishing Activity, 2004-2013

Year	Total Fishermen	Skippers	Resident Crew Members	Gross Earnings ($Millions)	Gross Earnings Per Active Permit Holder
2004	110	28	82	$1.1	$39,021
2005	115	26	89	2.9	111,023
2006	90	25	65	1.6	63,926
2007	97	27	70	3.3	123,750
2008	112	31	81	4.6	147,145
2009	81	29	52	1.1	39,353
2010	105	32	73	5.3	165,148
2011	96	31	65	3.7	119,263
2012	99	32	67	3.6	111,058
2013	102	28	74	5.4	192,063
5-yr Avg.	**97**	**30**	**66**	**$3.8**	**$125,377**

Note: Figures do not include revenue earned from tendering activities and as a result may not match other figures quoted in this report.
Source: CFEC and ADF&G license statistics (totals compiled by McDowell Group).