APPENDIX 5

PRELIMINARY SOCIAL IMPACT ASSESSMENT: GOA TRAWL BYCATCH MANAGEMENT ANALYSIS

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NOTE TO REVIEWERS

This document is an in-process, preliminary version of the Social Impact Assessment appendix to the Gulf of Alaska Trawl Bycatch Management Environmental Impact Statement.

This document is provided at this preliminary stage of development in the Social Impact Assessment process to facilitate timely feedback on the approach to, and direction of, the impact analysis.

- Sections 1, 2, 3, and 4 are complete.

- Sections 5 and 6 are mostly complete, with additional information to be developed, or decisions to be made, clearly noted, typically using *blue italic font* in either main text or in footnotes and bookended with "<<" and ">>" symbols when in the text of the document.

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Acronyms and Abbreviations

ADFG	Alaska Department of Fish and Game
AFA	American Fisheries Act
AFSC	Alaska Fisheries Science Center
AKFIN	Alaska Fisheries Information Network
BSAI	Bering Sea/Aleutian Islands
CDQ	Community Development Quota
CEQ	Council on Environmental Quality
CFA	Community Fishing Association
CFR	Code of Federal Regulations
CFEC	Alaska Commercial Fisheries Entry Commission
CQE	Community Quota Entity
EIS	Environmental Impact Statement
EDR	Economic Data Report
EO	Executive Order
FMP	Fishery Management Plan
FR	Federal Register
GOA	Gulf of Alaska
IFQ	individual fishing quota
IPHC	International Pacific Halibut Commission
ISA	International Seafoods of Alaska
KIB	Kodiak Island Borough
KNI	Kodiak Near Island
LLP	License Limitation Program
LOA	length overall
MSA	Metropolitan Statistical Area
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NPFMC	North Pacific Fishery Management Council
PSC	prohibited species catch
QS	quota share
RIR	Regulatory Impact Review
TAC	total allowable catch

1 Overview

Due to reductions of prohibited species catch (PSC) limits that may be used in the Gulf of Alaska (GOA) trawl fisheries, the trawl fishing industry has requested that the North Pacific Fishery Management Council (NPFMC) provide a new management structure that better allows the participants to achieve reduced PSC while harvesting at optimum yield levels. To that end, the NPFMC has initiated an Environmental Impact Statement (EIS) that would allow National Oceanic and Atmospheric Administration (NOAA) Fisheries to allocate a portion of the total allowable catch (TAC) and/or PSC limits to voluntary harvest cooperatives and their members.

The current suite of alternatives includes a "no action" alternative (Alternative 1); a cooperative structure that allocates target, secondary, and PSC species (Alternative 2); a cooperative structure that allocates only PSC species (Alternative 3); and alternative that would allow the formation of a Community Fisheries Association (CFA) or create a set-aside that could be used for adaptive management (Alternative 4). The option for a CFA or alternative management could be applied to either of the two cooperative allocation structures under consideration.

The NPFMC has received substantial public testimony while developing its current suite of alternatives that could impact harvesters, processors, crew, communities, and local support industries. Based on public testimony and discussions at the NPFMC meetings, the options that might benefit GOA trawl harvesters and their processors are sometimes viewed by other stakeholders as potential negative outcomes. The contentious nature of this action and its potential impacts have prompted the NPFMC to conduct an analysis of the socioeconomic and Environmental Justice impacts of the four alternatives being considered. This task is being completed in accordance with the standards of the National Environmental Policy Act (NEPA) and is also intended to provide information sufficient for the NPFMC to adequately consider Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) National Standard 8 in its decision-making process, as outlined regulatory context discussion in the next section.

This document, *Preliminary SIA: GOA Trawl Bycatch Management Analysis*, was presented in annotated outline form to the NPFMC Advisory Panel and to the Council itself at the June, 2016 meetings in Kodiak. As stated in the "Note to Reviewers" immediately following the title page, this document, currently Appendix 5 to the *GOA Trawl Bycatch Management – Preliminary Analysis* document, is an in-process, preliminary version of the Social Impact Assessment (SIA) that will ultimately become an appendix to the GOA Trawl Bycatch Management EIS. Following completion of the final version of the SIA, summaries of the information, analyses, and conclusions contained in the SIA will also be incorporated into the main body of EIS itself.

2 Regulatory Context

The community-level social impact assessment of the proposed action is guided largely by NEPA; Executive Order (EO) 12898, Federal Action to Address Environmental Justice in Minority Population and Low-Income Populations; and National Standard 8 – Communities under the provisions of the Magnuson-Stevens Act.

2.1 Social and Economic Analysis Under NEPA

Under NEPA, "economic" and "social" effects are specific environmental consequences to be examined (40 CFR 1502.16 and 1508.8). Economic effects are examined primarily in the Regulatory Impact Review, a part of the main document to which this community analysis document is appended, while social effects (and community-level economic effects) are examined primarily in this section of the community analysis.

2.2 EO 12898 Environmental Justice

EO 12898 (59 FR 7629; February 16, 1994) directs Federal agencies "to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." The EO directs the development of agency strategies to include identification of differential patterns of consumption of natural resources among minority populations and low-income populations; Council on Environmental Quality (CEQ) environmental justice guidance under NEPA also specifically calls for consideration of potential disproportionately high and adverse impacts to Indian tribes[1] beyond a more general consideration of potential disproportionately high and adverse impacts to minority populations (Council on Environmental Quality 1997).[2] This section of the community analysis identifies minority populations and low-income populations potentially subject to high and adverse environmental effects of the proposed action alternatives and identifies potential changes to patterns of subsistence resource use among minority

[1] The term Indian tribe is retained due to its use in both the EO and CEQ guidance; the provisions of the EO and CEQ guidance are understood to apply to Alaska Native tribes in the region potentially affected by the proposed action alternatives.

[2] Per CEQ guidance on environmental justice, under NEPA, the identification of a disproportionately high and adverse human health or environmental effect (including interrelated social, cultural, and economic effects) on a low-income population, minority population, or Indian tribe does not preclude a proposed agency action from going forward, nor does it necessarily compel a conclusion that a proposed action is environmentally unsatisfactory. Rather, the identification of such an effect should heighten agency attention to alternatives, mitigation strategies, monitoring needs, and preferences expressed by the affected community or population. Further, per CEQ guidance, agencies should recognize the interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed agency action. The factors should include the physical sensitivity of the community or population to particular impacts; the effect of any disruption on the community structure associated with the proposed action; and the nature and degree of impact on the physical and social structure of the community.

populations and low-income populations that may result from implementation of the proposed action alternatives.

2.3 Magnuson-Stevens Act National Standard 8

National Standard 8 (50 CFR 600.345) specifies that conservation and management measures shall, consistent with the conservation requirements of the Magnuson-Stevens Act, take into account the importance of fishery resources to fishing communities by utilizing economic and social data that are based on the best scientific information available in order to (1) provide for the sustained participation of such communities, and (2) to the extent practicable, minimize adverse economic impacts to such communities. Per National Standard 8, the term "fishing community" means a community that is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew, and fish processors that are based in such communities. A fishing community is a social or economic group whose members reside in a specific location and share a common dependency on commercial, recreational, or subsistence fishing or directly related fisheries-dependent services and industries (for example, boatyards, ice suppliers, tackle shops). Also per National Standard 8, the term "sustained participation" means continued access to the fishery within the constraints of the condition of the resource.

3 Introduction and Methodology

For the purposes of this community assessment, a two-pronged approach to analyzing the community or regional components of changes associated with the implementation of a GOA trawl bycatch management program was utilized. First, tables based on existing quantitative fishery information were developed to identify patterns of participation in the various components of the relevant fisheries. Summary tables, typically including data on an annual basis from 2003 through 2014, are presented in Section 4.0, along with accompanying narrative. This analysis focuses on fishery sectors (primarily catcher vessels, permit holders, and/or processors for relevant groundfish, halibut, and Chinook salmon[3] commercial fisheries, and permit holders or fishermen for sport charter and/or subsistence halibut and Chinook salmon fisheries) and follows annual and average participation indicators.

Within this quantitative characterization of fishery participation, several simplifying assumptions were made. For the purposes of this analysis, assignment of catcher vessels (and catcher processors) to a region or community has been made based upon ownership address information as listed in the Alaska Commercial Fisheries Entry Commission (CFEC) vessel registration files or the NOAA Fisheries federal permit data. Thus, some caution in the interpretation of this information is warranted. It is not unusual for vessels to have complex ownership structures involving more than one entity in more than one region. Further, ownership location does not directly indicate where a vessel spends most of its time, purchases services, or hires its crew as, for example, some of the vessels owned by residents of the Pacific Northwest spend a great deal of time in Alaska ports and hire at least a few crew members from these ports. The region or community of ownership, however, does provide a rough indicator of the direction or nature of ownership ties (and a proxy for associated economic activity, as no existing datasets provide information on where GOA trawl catcher vessel earnings are spent), especially when patterns are viewed at the sector or vessel class level. Ownership location has further been chosen for this analysis as the link of vessels to communities rather than other indicators, such as vessel homeport information, based on previous NPFMC fishery management plan (FMP) social impact assessment experience that indicated the problematic nature of existing homeport data.

For shore-based processors, regional or community designation was based on the location of the plant itself (rather than ownership address) to provide a relative indicator of the local volume of fishery-related economic activity, which can also serve as a rough proxy for the relative level of associated employment and local government revenues. This is also consistent with other recent NPFMC FMP social impact assessment practice.

There are, however, considerable limitations on the data that can be utilized for these purposes, based on confidentiality restrictions. A prime example of this is where a community is the site of a single processor, or even two or three processors.[4] No information can be disclosed about the volume and/or value of

[3] Chinook salmon (*Oncorhynchus tschawytscha*) are also commonly referred to as king salmon, especially in the sport fishing industry.

[4] The number of data points that need to be lumped to comply with data confidentiality restrictions varies by data source. The CFEC requires aggregation of four data points to permit reporting of what would otherwise be confidential data, while virtually all other data sources require the aggregation of three data points to permit disclosure. In this section, because several data sources draw at least in part on CFEC data, volume and value data are presented only when four or more data points are aggregated.

landings in those communities. This, obviously, severely limits quantitative discussions of the potential impacts of the GOA trawl bycatch management alternatives. In short, the frame of reference or unit of analysis for the discussion in this section is the individual sector,[5] and the analysis looks at how participation in fisheries most likely to be affected by the proposed management actions has been differentially distributed across communities and regions within this framework. The practicalities of data limitations, however, serve to restrict this discussion.

The second approach to producing this community analysis involved selecting a subset of Alaska communities engaged in the relevant GOA trawl fisheries for characterization of the community context of the relevant fisheries to describe the range, direction, and order of magnitude of social- and community-level engagement and dependency on those fisheries. The approach of using a subset of communities rather than attempting characterization of all the communities in the region(s) involved was chosen due to the practicalities of time and resource constraints. This characterization has been initially undertaken with existing information (as supplemented with phone and email contact with a limited number of individuals) and without fieldwork in any of the communities, except for a brief stint of preliminary fieldwork in Kodiak that included several initial interviews conducted in the days immediately before the June 2016 NPFMC meetings in that community.[6]

The total set of communities engaged in the fisheries is numerous and far-flung. Communities (and types of potential impacts) vary based upon the type of engagement of the individual community in the fishery, whether it is through being homeport of a portion of the catcher vessel fleet, being the location of shore-based processing, being the base of catcher processor or floating processor ownership or activity, or being the location of fishery support sector businesses. In short, this second approach uses the community or region as the frame of reference or unit of analysis (as opposed to the fishery sector as in the first approach). This approach examines, within the community or region, the local nature of engagement or dependence on the fishery in terms of the various sectors present in the community and the relationship of those sectors (in terms of size and composition, among other factors) to the rest of the local social and economic context. This approach then qualitatively provides a context for potential community impacts that may occur because of fishery management-associated changes to the locally present sectors in combination with other community-specific attributes and socioeconomic characteristics.

Simplifying assumptions also needed to be made as to which communities to include in the profiles, given the large number of communities participating in the fisheries, the desire to focus on the communities most engaged in and/or dependent on the relevant fisheries (and therefore most likely to be directly affected by proposed management actions), and a recognition that communities with multi-sector activity would likely be most vulnerable to potential adverse impacts related to the proposed

[5] In this community analysis, the term “trawl catcher vessels” is often used as shorthand for “catcher vessels utilizing trawl gear.” In reality, some individual vessels fish groundfish with both types of gear over the course of a year, although these multi-gear vessels are few. An early study (AECOM 2013) found that among Alaska communities, only Kodiak and Sand Point had any vessels (and each had a single vessel) fish both gear types in the relevant GOA groundfish fisheries in any individual year 2003-2010, inclusive. (Kodiak had one vessel fish both gear types in 2006; Sand Point had one vessel fish both gear types in 2009.)

[6] As noted below, the utility/necessity of fieldwork in specific communities will be determined following the December 2016 NPFMC meetings, along with the availability of funding to support fieldwork, if that course is deemed appropriate.

fishery management changes. Thus, the communities selected for inclusion in the set of community profiles were those Alaska communities that had at least some multi-year GOA trawl catcher vessel activity and/or continuing shore-based processing activity in the years covered by the primary dataset used for analysis (2003-2014). Specifically, they were those communities that had at least one resident-owned trawl catcher vessel that made at least one GOA trawl delivery in more than one year[7] over the period 2003-2014[8] and/or had an average of 0.5 or more shore-based processors operating in the community annually over the period 2003-2014 (i.e., the community had, on average, shore-based processing in at least half of the years during the period[9]). Using these criteria, nine Alaska communities were selected for profiling as the communities most engaged in, and potentially the most dependent on, the GOA trawl fisheries potentially affected by the various GOA trawl bycatch management alternatives. Additionally, two Pacific Northwest communities or groupings of communities were chosen for inclusion in the series of community profiles based on substantial engagement in the GOA trawl fishery through one or more sectors relative to other participating communities in the Pacific Northwest region: the Seattle, Washington metropolitan area and Newport, Oregon (based on substantial multi-sector engagement in the former and substantial resident-owner catcher vessel engagement in the latter).

In sum, the communities (or aggregations of communities) selected for profiling and the criteria for their inclusion are:

- Alaska Communities
  - Harvesting and Processing
    - Kodiak
    - Sand Point
    - King Cove
  - Harvesting Only
    - Anchorage[10]
    - Petersburg
    - Homer

[7] Three other communities appear in the data as having one resident-owned vessel operate in the trawl fishery for a single year during the period 2003-2014. These are Anchor Point, Juneau, and Nikolaevsk each of which had one resident-owned GOA trawl catcher vessel shown as active in the data in 2003, but none in 2004-2014.

[8] As a simplifying assumption, trawl catcher vessels that engaged in pelagic trawl and non-pelagic trawl in both shallow-water and deep-water complexes were combined due to the limited number of vessels in any complex, pelagic or non-pelagic, in any community, for any year, in order to present more complete data than would otherwise be possible due to confidentiality restrictions.

[9] Four other communities appear in the data as having shore-based processing of trawl-caught deliveries in 2003-2014. These include three communities that took one or more deliveries in a single year 2003-2014 (Homer and Kenai, 2003, and Sitka, 2012) and one community that took one or more deliveries in two years 2003-2014 (Ninilchik, 2003 and 2006).

[10] The Anchorage community profile is based upon the Municipality of Anchorage, which encompasses a number of communities/named places within its boundaries, including, among others, Chugiak, Eagle River, and Girdwood. Some GOA trawl fishery data are reported separately for unincorporated communities within Anchorage (e.g., Girdwood shows at least some locally owned GOA trawl catcher vessel activity each year 2003-2014, except for 2004). These data are combined within the Anchorage community profile and the summary tables in this community analysis document. Similarly, Douglas and Auke Bay are unincorporated communities within the City and Borough of Juneau; while some fishery data are reported separately for these unincorporated communities, they are combined with Juneau data in the summary tables in this community analysis document.

    - Shore-Based Processing Only
        - Seward
        - Akutan
        - Unalaska/Dutch Harbor
- Pacific Northwest Communities/Aggregations of Communities
    - Harvesting and Processing (including at-sea processing)
        - Seattle Metropolitan Area (Seattle MSA[11])
    - Harvesting Only
        - Newport, Oregon

Among Alaska communities, Kodiak, Sand Point, and King Cove are both substantially engaged in and substantially dependent on the GOA trawl fishery and, thus, their community profiles are more detailed than the others. While the profiles of other communities are based on existing secondary source information, as noted above, the need for additional fieldwork specific to the GOA trawl bycatch management social impact assessment process and the alternatives chosen for analysis will be specifically evaluated for these three communities after initial review of this document at the December 2016 NPFMC meetings, along with the availability of funding to support fieldwork, if that course is deemed appropriate.

Proposed fieldwork in Kodiak, Sand Point, and King Cove, if deemed appropriate, would largely focus on three areas: (1) newly available secondary data on trawl catcher vessels and crew would be revisited and supplemented with input from field interviews regarding the classification of vessels affiliated with these three centrally important GOA trawl communities based on ownership community, delivery port, homeport, and crew residence, with special attention given to factors that may influence vessel consolidation outcomes that may accompany the individual alternatives; (2) the support services discussion for each of these three communities would be updated, focusing those businesses most directly associated with support of the GOA trawl fishery, given the importance of "local multiplier" effect of these businesses both in terms of local re-spending of fisheries dollars and the employment opportunities generated thereby; and (3) a set of key person interviews and targeted collection of locally available secondary data would focus on updating information on existing demand for public and private vessel support infrastructure and potential impacts of the alternatives on public and private providers. The usefulness of more limited, opportunistic fieldwork in Seward and Newport will also be evaluated.

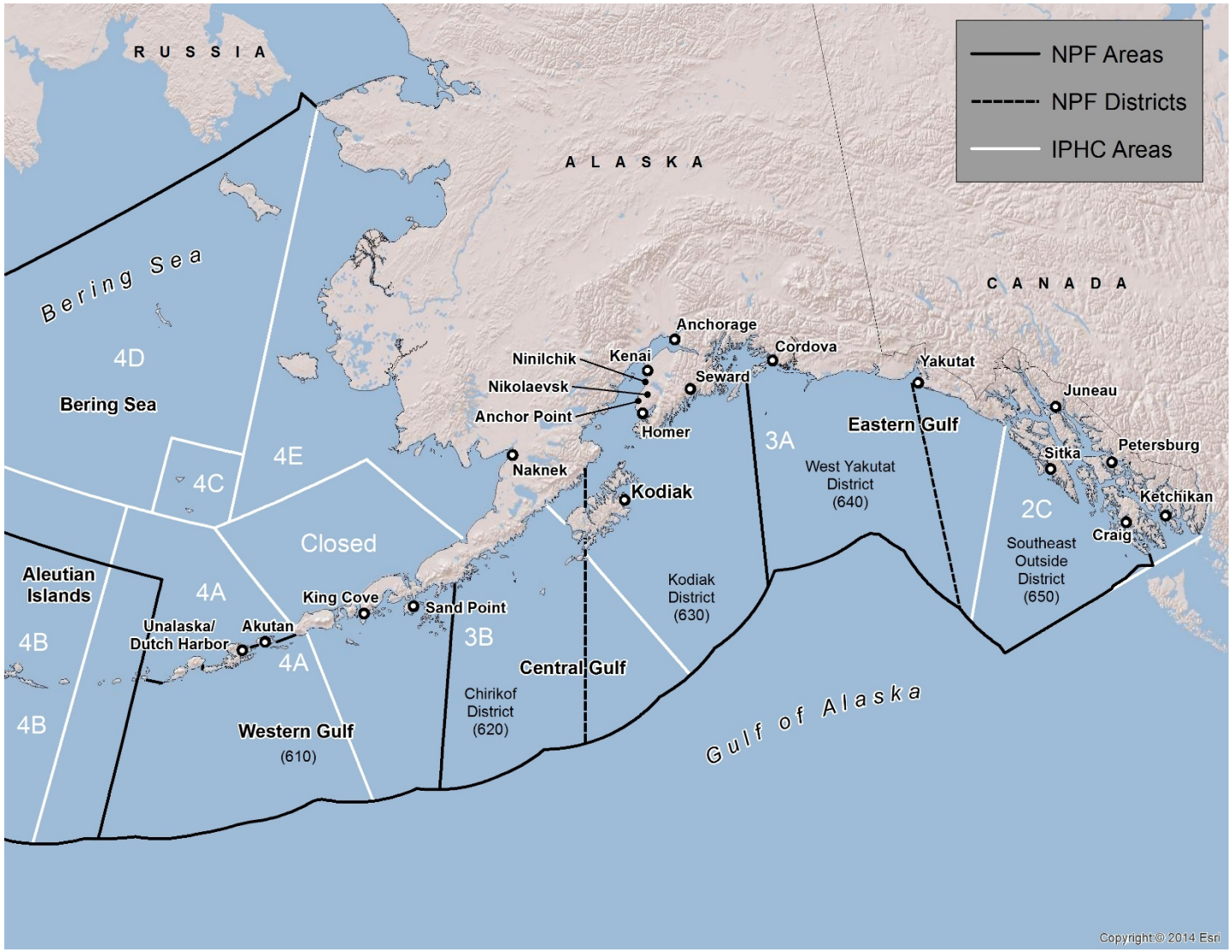
The location of the listed Alaska communities and their proximity to the GOA trawl management areas and the halibut regulatory areas in the GOA may be seen in Figure 1.[12] The location of the Seattle MSA and Newport, Oregon may be seen in Figure 2.[13] Summary profiles of each of these communities are presented in Section 5.0. These summaries are derived from detailed community-profiling efforts, the results of which are in part included in this analysis and in part included in other documents incorporated by reference, as noted in that section.

[11] The Seattle-Tacoma-Bellevue Metropolitan Statistical Area, referred to as the "Seattle MSA" in this document, is a U.S. Census Bureau defined region used to tabulate the metropolitan area in and around Seattle, Washington. It includes of King, Pierce, and Snohomish counties.

[12] This figure also includes other communities mentioned in the text as having at least minimal direct involvement in the GOA trawl fisheries through resident ownership of participating catcher vessels, catcher processors, and/or the local operation of shore-based processors accepting GOA trawl-caught deliveries during the period 2003-2014.

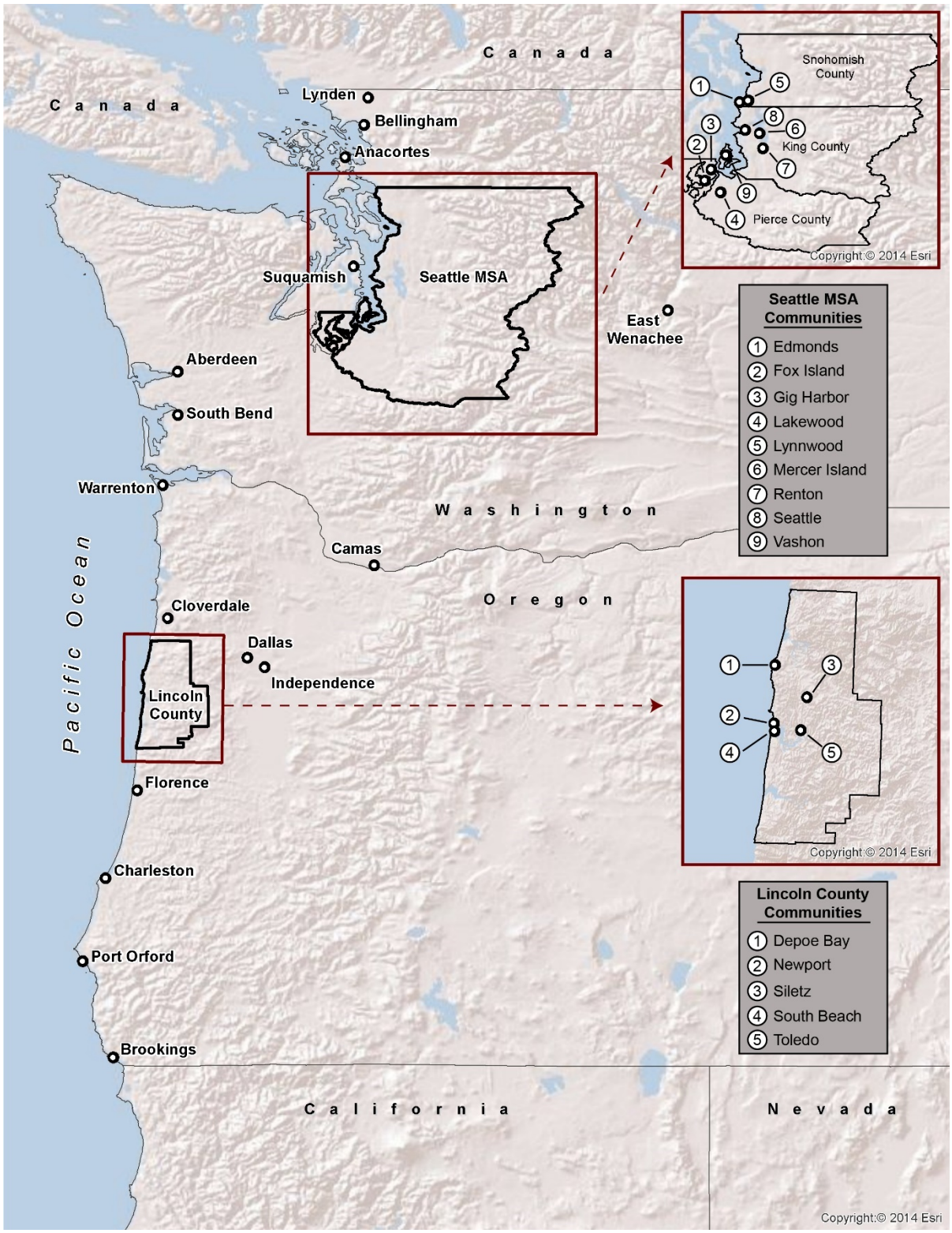
[13] This figure also includes other Washington and Oregon communities at least minimally directly engaged in the GOA trawl fishery through resident ownership of participating catcher vessels during the period 2003-2014.

Figure 1. Map of Selected Alaska Communities and Adjacent Federal and International Pacific Halibut Commission Fisheries Regulatory Areas



Source: National Oceanic and Atmospheric Administration 2016c

Figure 2. Map of Selected Washington and Oregon Communities



Source: U.S. Census Bureau 2011

It is also understood that not only the GOA trawl fisheries would be subject to potential impacts from the proposed GOA trawl bycatch management changes. It is assumed that if changes to GOA halibut PSC limits or Chinook salmon PSC limits were a part of the proposed action, directed halibut fisheries and Chinook salmon fisheries would potentially benefit from these management actions relative to the degree that the GOA halibut and Chinook salmon stocks themselves would benefit from these proposed actions (and the effective redistribution of overall halibut and Chinook salmon allocations between sectors that may occur with the various alternatives).[14]

Thus, in both the quantitative indicators and community profile summaries, information is presented on community engagement in the GOA commercial, sport, and subsistence halibut and Chinook salmon fisheries. In these cases, the GOA trawl communities profiled may or may not be the communities most centrally engaged in or dependent upon those fisheries.[15] That is, those communities that have the potential to experience the greatest adverse impacts that could result from the proposed management actions may not be the same communities that have the potential to experience the greatest beneficial impacts that could result from some components the proposed management actions.

This potential differential distribution of adverse and beneficial impacts among communities will be primarily addressed in the quantitative indicators discussion, but engagement in the three different types of halibut and Chinook salmon fisheries (commercial, sport, and subsistence) is also discussed in each of the community profiles, where negatively affected and positively affected populations have the greatest potential for overlap. Tables containing detailed quantitative information on engagement in the halibut and Chinook salmon fisheries for communities not included in the Section 5.0 community profiles are presented in Attachment 1 and Attachment 2, respectively.

Section 6.0 provides a summary of potential community-level impacts by alternative. Discussions in this section include community engagement, dependence, and vulnerability; GOA trawl fishery engagement in the Alaska communities profiled; GOA trawl fishery dependency and vulnerability to community-level impacts of the proposed action among Alaska communities; risks to fishing community sustained participation in the GOA trawl fisheries; and potential community-level impacts associated with impacts to GOA halibut and Chinook salmon fisheries where appropriate, including communities that are not substantially engaged in and/or dependent upon the GOA trawl fisheries.

With respect to environmental justice analysis presented by community in Section 6.0, for a minority population to be identified as one of potential concern, the proportion of minority residents in the geography being analyzed would need to be meaningfully greater than that of the general population and/or greater than 50 percent of the total population in the geography being analyzed. For a low-

[14] The communities shown on Figure 1 include the 10 communities most highly engaged in the commercial GOA halibut fishery and the commercial GOA Chinook salmon fishery as measured by the annual average number of resident-owned vessels participating in those respective fisheries during the period 2003-2014.

[15] In federally managed waters within and offshore of Alaska, residents of Alaska communities defined as rural have preferential subsistence-use access to a range of resources, including halibut and Chinook salmon, over residents of other Alaska communities. Among the communities profiled in this document, Akutan, King Cove, Kodiak, Petersburg, Sand Point, Unalaska/Dutch Harbor, and Sitka meet the regulatory definition of rural communities; Anchorage, Homer, and Seward do not (see https://www.federalregister.gov/articles/2016/03/10/2016-05317/subsistence-management-regulations-for-public-lands-in-alaska-rural-determinations-nonrural-list accessed 5/16/16).

income population to be identified as of potential concern with respect to environmental justice analysis, the proportion of low-income residents in the geography being analyzed would need to be meaningfully greater than that of the general population. For analysis of Alaska communities, the general population used as a benchmark is that of the state of Alaska itself.

- Census figures from 2010 show that 66.5 percent of the residents of Alaska identified themselves as White, 14.1 percent as American Indian or Alaska Native, 3.5 percent as Black/African American, 5.6 percent as Asian, 1.1 percent as Pacific Islander, and 9.2 percent as "some other race" or "two or more races." Finally, 6.2 percent of the residents of any race in Alaska identified themselves as Hispanic. Based on race and ethnicity combined, 37.1 percent of Alaska's total population was composed of minority residents (that is, all residents other than those identified as White/non-Hispanic [race/ethnicity]).

- The latest employment estimate based on the 2010-2014 U.S. Census American Community Survey suggests that 347,983 were employed in the state of Alaska with an unemployment rate of 8.4 percent. Per capita income for people in Alaska was estimated at $33,129, median household income was $71,829, and median family income was $83,714. An estimated 10.1 percent of Alaska's residents were considered low-income, defined as those individuals living below the poverty level threshold (Alaska Department of Labor and Workforce Development 2016).

For analysis of the Seattle MSA, where the demographics of individual sectors are known, the general population used as a benchmark is that of the state of Washington itself.

- Census figures from 2010 show that 77.3 percent of the residents of Washington identified themselves as White, 1.5 percent as American Indian or Alaska Native, 3.6 percent as Black/African American, 7.2 percent as Asian, 0.6 percent as Pacific Islander, and 9.9 percent as "some other race" or "two or more races." Finally, 11.2 percent of the residents of any race in Washington identified themselves as Hispanic. Based on race and ethnicity combined, 27.5 percent of Washington's total population was composed of minority residents (that is, all residents other than those identified as White/non-Hispanic [race/ethnicity]) (U.S. Census Bureau 2011).

- The latest employment estimate based on the 2010-2014 U.S. Census American Community Survey suggests that 3,194,382 were employed in the state of Washington with an unemployment rate of 5.6 percent. Per capita income for people in Washington was estimated at $31,233, median household income was $60,294, and median family income was $73,039. An estimated 13.5 percent of Washington's residents were considered low-income, defined as those individuals living below the poverty level threshold (U.S. Census Bureau 2016).

Similarly, for analysis of the Newport, where the demographics of individual sectors are known, the general population used as a benchmark is that of the state of Oregon itself.

- Census figures from 2010 show that 83.6 percent of the residents of Oregon identified themselves as White, 1.4 percent as American Indian or Alaska Native, 1.8 percent as

Black/African American, 3.7 percent as Asian, 0.3 percent as Pacific Islander, and 9.1 percent as "some other race" or "two or more races." Finally, 11.7 percent of the residents of any race in Oregon identified themselves as Hispanic. Based on race and ethnicity combined, 21.5 percent of Oregon's total population was composed of minority residents (that is, all residents other than those identified as White/non-Hispanic [race/ethnicity]) (U.S. Census Bureau 2011).

- The latest employment estimate based on the 2010-2014 U.S. Census American Community Survey suggests that 1,752,414 were employed in the state of Oregon with an unemployment rate of 6.6 percent. Per capita income for people in Oregon was estimated at $27,173, median household income was $50,521, and median family income was $61,890. An estimated 16.7 percent of Oregon's residents were considered low-income, defined as those individuals living below the poverty level threshold (U.S. Census Bureau 2016).

4 Quantitative Indicators of Community Fishery Engagement and Dependence

The following series of tables provides quantitative GOA fishery participation information, within the bounds of confidentiality restrictions, for the communities most directly engaged in the GOA trawl fisheries (Section 4.1), along with their participation in the GOA halibut and GOA Chinook salmon fisheries where relevant (Sections 4.2 and 4.3, respectively). This information is summarized, on a community-by-community basis, in the community profiles in a later section of this document.

4.1 GOA Trawl Fishery Indicators

The following sections contain a range of quantitative information describing engagement (or participation) in and dependency (or reliance) on the GOA trawl fishery by community for the following sectors:

- GOA Trawl Catcher Vessels
- GOA Trawl Catcher Processors
- Shore-Based Processors Accepting GOA Trawl-Caught Deliveries

4.1.1 GOA Trawl Catcher Vessels

Table 1 provides a count, by community and year (2003-2014), of GOA trawl catcher vessels for all Alaska communities; and state totals for Alaska, Oregon, Washington, and all other states combined. As shown, the largest component of fleet ownership during any given year is typically in Alaska, followed by Washington, Oregon, and all other states combined. Within Alaska, the largest concentrations of vessels are seen in Kodiak and Sand Point (together accounting, on average for one-third of the vessels in fishery), followed by King Cove.

Table 2 provides GOA trawl catcher vessel ex-vessel gross revenue information by community and year (2003-2014) to the extent possible within data confidentiality restrictions. As shown, within Alaska, only information for Kodiak and Sand Point can be disclosed on an individual community basis, but clearly apparent is the economic dominance of these two communities for this fleet within the state of Alaska.

Table 3 provides information on GOA trawl catcher vessel dependency on GOA trawl caught groundfish compared to all other areas, gear types, and species fished by those same vessels. As shown, GOA trawl ex-vessel gross revenues range roughly from 40 to 50 to 60 percent of all ex-vessel revenues for Sand Point, Newport, and Kodiak resident-owned GOA trawl catcher vessels, respectively, and about a quarter of all ex-vessel gross revenues for Seattle MSA resident-owned GOA trawl catcher vessels on an annual average basis.

Table 4 provides information on overall community catcher vessel fleet (all commercial fishing catcher vessels in the community, not just vessels that participate in the GOA trawl fishery) dependency on GOA trawl caught groundfish compared to all other areas, gear types, and species fished by those

vessels owned by residents of that same community to the extent possible given data confidentiality restrictions. As shown, GOA trawl caught groundfish accounted for just over 20 percent of the total ex-vessel gross revenues for the Sand Point community fleet as a whole, just over 15 percent of total ex-vessel gross revenues for the Newport community fleet as a whole, just over 11 percent for the Kodiak community fleet as a whole, and just under 2 percent for the Seattle MSA community fleet as a whole.

Table 5 provides GOA trawl catcher vessel halibut mortality information by community and year (2003-2014) to the extent possible within data confidentiality restrictions. As shown, Alaska and Oregon resident-owned vessels accounted for the greatest share of halibut mortality, together accounting for over 75 percent of trawl catcher vessel halibut mortality on an annual average basis. Among Alaska communities, only information for Kodiak and Sand Point can be disclosed on an individual community basis, with Kodiak resident-owned vessels accounting for about 91 percent of total halibut mortality aboard Alaska resident-owned GOA trawl catcher vessels on an annual average basis over the period 2003-2014.

Table 6 provides GOA trawl catcher vessel Chinook salmon mortality information by community and year (2003-2014) to the extent possible within data confidentiality restrictions. As shown, Alaska resident-owned GOA trawl catcher vessels account for almost half of all Chinook salmon mortality, as measured in number of fish, on an annual average basis of all GOA trawl catcher vessels over this period. Among Alaska communities, only information for Kodiak and Sand Point can be disclosed on an individual community basis, with Kodiak resident-owned vessels accounting for roughly 70 percent of total Chinook salmon mortality aboard Alaska resident-owned GOA trawl catcher vessels (as measured in number of fish) on an annual average basis over the period 2003-2014.

Table 7 provides information on the American Fisheries Act (AFA) status of GOA trawl catcher vessels by community and region. Table 8 provides similar information on the rockfish program status of GOA trawl catcher vessels. All else being equal, inclusion of vessels in one or more of these classes would likely reduce the vulnerability of individual vessels to adverse impacts to halibut or Chinook salmon PSC reductions through co-op or other internal vessel class compensation mechanisms and/or separate accounting of PSC thresholds unique to that vessel class (thereby insulating these vessels somewhat from adverse consequences of actions of vessels outside of their restricted class over which they have very little influence or control). As shown, among Alaska resident-owned vessels, AFA vessels are found only in Anchorage and Kodiak, while Alaska resident-owned vessels participating in the rockfish program are unique to Kodiak.

Table 1. Individual GOA Groundfish Trawl Catcher Vessels by Community of Vessel Owner, 2003-2014 (number of vessels)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
Anchorage	2	1	2	1	1	1	1	1	1	1	2	2	1.3	1.8%	4
Homer	2	0	1	1	0	0	0	0	0	0	0	0	0.3	0.5%	2
King Cove	2	2	4	4	4	4	5	3	3	3	3	3	3.3	4.5%	6
Kodiak	18	15	14	13	12	15	14	15	14	15	15	18	14.8	20.2%	29
Petersburg	1	1	1	1	1	1	1	1	1	1	1	2	1.1	1.5%	3
Sand Point	13	11	11	11	10	8	12	9	7	7	7	7	9.4	12.8%	14
All Other AK*	3	0	0	0	0	0	0	0	0	0	0	0	0.3	0.3%	3
Alaska Total	41	30	33	31	28	29	33	29	26	27	28	32	30.6	41.6%	60
Newport	10	10	9	7	7	7	6	6	8	5	4	4	6.9	9.4%	13
All Other OR	10	11	10	11	9	8	8	8	9	9	7	6	8.8	12.0%	14
Oregon Total	20	21	19	18	16	15	14	14	17	14	11	10	15.8	21.4%	24
Seattle MSA	18	14	17	18	21	22	18	17	18	22	23	20	19.0	25.9%	42
All Other WA	11	10	7	5	5	5	5	6	7	7	6	6	6.7	9.1%	15
Washington Total	29	24	24	23	26	27	23	23	25	29	29	26	25.7	34.9%	54
All Other States	3	2	3	2	2	2	2	1	1	1	1	1	1.8	2.4%	4
Grand Total	93	77	79	74	72	73	71	67	68	70	69	69	73.5	100.0%	124

*Anchor Point, Juneau, and Nikolaevsk each had one resident-owned GOA trawl catcher vessel in 2003 (only).
Note: Due to vessel movement between communities over the years shown, total unique CVs per community may not sum to state or grand totals.

Source: AKFIN 2016

Table 2. GOA Groundfish Trawl Catcher Vessel Ex-Vessel Gross Revenues by Community of Vessel Owner, 2003-2014 (adjusted 2015 millions of dollars)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
	$ (millions)													
Kodiak	10.59	10.09	12.34	13.25	12.25	17.40	11.50	17.06	17.62	20.87	18.87	24.02	15.49	29.1%
Sand Point	3.01	3.93	5.42	5.33	3.96	4.97	3.73	3.91	1.77	4.77	1.76	2.47	3.75	7.0%
All Other AK	1.63	1.28	1.93	1.62	1.61	1.54	0.57	1.46	1.54	2.77	1.31	2.14	1.62	3.0%
Alaska Total	15.23	15.31	19.70	20.19	17.82	23.91	15.80	22.43	20.93	28.41	21.94	28.63	20.86	39.2%
Newport	6.56	6.36	6.53	7.27	7.19	9.84	3.91	7.44	7.78	7.97	6.17	5.70	6.89	12.9%
All Other OR	7.85	7.44	8.20	7.64	7.37	9.22	7.44	10.83	12.68	12.30	11.86	10.35	9.43	17.7%
Oregon Total	14.41	13.80	14.73	14.91	14.57	19.06	11.35	18.27	20.46	20.27	18.03	16.05	16.33	30.6%
Seattle MSA	3.94	4.12	7.37	7.71	8.37	11.23	5.23	7.39	6.84	13.92	12.94	12.34	8.45	15.9%
All Other WA and Other States	7.16	8.23	8.98	8.81	8.22	9.00	5.06	6.03	7.71	8.39	6.66	7.45	7.64	14.3%
Washington and Other States Total	11.09	12.35	16.35	16.52	16.59	20.23	10.29	13.42	14.55	22.31	19.60	19.78	16.09	30.2%
Grand Total	40.73	41.46	50.77	51.63	48.98	63.20	37.44	54.12	55.94	70.99	59.56	64.47	53.27	100.0%

Source: AKFIN 2016

Table 3. GOA Groundfish Trawl Catcher Vessels Ex-Vessel Gross Revenue Diversification by Community of Vessel Owner, All Communities, 2003-2014

Geography	Annual Average Number of GOA Groundfish Trawl CVs 2003-2014	GOA Groundfish Trawl CVs Annual Average Ex-Vessel Gross Revenues from GOA Trawl-Caught Groundfish Only 2003-2014 ($ millions)	GOA Groundfish Trawl CVs Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries 2003-2014 ($ millions)	GOA Groundfish Trawl CVs GOA Trawl-Caught Groundfish Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average 2003-2014
Kodiak	14.8	$15.59	$25.97	60.0%
Sand Point	9.4	$3.73	$9.80	38.1%
All Other AK	6.5	$1.63	$6.86	23.8%
Alaska Total	30.7	$20.95	$42.63	49.1%
Newport	6.9	$6.95	$14.20	48.9%
All Other OR	8.8	$9.55	$16.74	57.1%
Oregon Total	15.8	$16.50	$30.94	53.3%
Seattle MSA	19.4	$8.52	$36.95	23.0%
Other WA and Other States	7.9	$7.73	$12.31	62.8%
Grand Total	73.8	$53.70	$122.83	43.7%

Source: AKFIN 2016b

Table 4. GOA Groundfish Trawl Catcher Vessel and All Catcher Vessel Ex-Vessel Gross Revenue Diversification by Community of Vessel Owner, 2003-2014

Geography	Annual Average Number of GOA Groundfish Trawl CVs 2003-2014	Annual Average Number of All Commercial Fishing CVs 2003-2014	All Commercial Fishing CVs Annual Average Ex-Vessel Gross Revenues from GOA Trawl-Caught Groundfish Only 2003-2014 ($ millions)	All Commercial Fishing CVs Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries 2003-2014 ($ millions)	All Commercial Fishing CVs GOA Trawl-Caught Groundfish Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average 2003-2014
Kodiak	14.8	265.0	$15.59	$137.91	11.3%
Sand Point	9.4	76.0	$3.73	$18.11	20.6%
All Other AK	6.5	3,983.9	$1.63	$530.73	0.3%
Alaska Total	30.7	4,324.9	$20.95	$686.75	3.1%
Newport	6.9	20.4	$6.95	$44.70	15.5%
All Other OR	8.8	191.9	$9.55	$71.20	13.4%
Oregon Total	15.8	212.3	$16.50	$115.90	14.2%
Seattle MSA	19.4	538.3	$8.52	$504.20	1.7%
Other WA and Other States	7.9	1064.4	$7.73	$235.88	3.3%
Grand Total	73.8	6,139.9	$53.70	$1,542.74	3.5%

Source: AKFIN 2016b

Table 5. GOA Groundfish Trawl Catcher Vessel Halibut Mortality by Community of Vessel Owner, 2003-2014 (metric tons)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
Kodiak	372.8	502.3	512.5	475.3	510.1	552.6	618.8	476.7	559.2	429.4	270.6	336.1	468.0	35.6%
Sand Point	9.6	15.4	6.1	16.8	11.2	25.6	14.2	2.2	1.6	75.6	27.3	22.3	19.0	1.4%
All Other AK	61.9	69.0	22.6	18.2	11.5	19.1	10.4	2.1	6.8	33.2	23.1	26.5	25.4	1.9%
Alaska Total	444.3	586.8	541.2	510.3	532.9	597.4	643.4	481.0	567.6	538.1	321.0	384.9	512.4	39.0%
Newport	252.8	281.0	306.4	258.2	248.4	198.7	113.4	171.8	197.3	256.6	122.6	135.1	211.9	16.1%
All Other OR	260.9	363.9	305.2	360.0	259.1	275.2	311.0	275.6	378.1	274.2	231.4	250.4	295.4	22.5%
Oregon Total	513.7	644.9	611.6	618.2	507.4	473.9	424.5	447.4	575.4	530.8	354.1	385.5	507.3	38.6%
Seattle MSA	42.1	59.6	85.3	116.3	163.1	208.1	101.6	83.6	86.3	134.7	91.5	47.2	101.6	7.7%
All Other WA and Other States	224.8	379.9	311.8	180.1	313.0	215.8	188.9	106.7	132.0	114.1	85.7	72.5	193.8	14.7%
Washington and Other States Total	266.9	439.5	397.0	296.4	476.1	423.9	290.5	190.2	218.3	248.8	177.3	119.7	295.4	22.5%
All Geographies	1,224.9	1,671.2	1,549.8	1,424.9	1,516.4	1,495.2	1,358.3	1,118.6	1,361.3	1,317.7	852.3	890.1	1,315.1	100.0%

Source: AKFIN 2016a

Table 6. GOA Groundfish Trawl Catcher Vessel Chinook Salmon Mortality by Community of Vessel Owner, 2003-2014 (number of fish)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
Kodiak	2,404.5	4,374.9	9,328.0	4,409.8	25,581.5	4,211.5	2,107.4	10,085.9	4,504.8	4,829.8	5,724.6	3,834.2	6,783.1	33.4%
Sand Point	409.1	1,166.6	3,124.1	1,536.4	1,371.9	1,051.3	198.9	10,814.7	1,065.3	1,759.7	83.8	1,201.2	1,981.9	9.8%
All Other AK	291.1	577.6	481.0	271.7	9.1	86.3	18.3	5,247.1	696.4	762.1	34.0	611.1	757.2	3.7%
Alaska Total	3,104.7	6,119.0	12,933.1	6,217.9	26,962.5	5,349.1	2,324.6	26,147.8	6,266.5	7,351.7	5,842.4	5,646.5	9,522.1	46.9%
Newport	1,659.7	1,997.0	2,486.1	3,591.2	2,672.4	2,266.5	676.7	2,788.0	1,850.0	1,697.2	1,884.8	1,454.4	2,085.3	10.3%
All Other OR	1,695.5	3,613.6	4,974.6	2,152.3	2,791.3	1,913.9	974.9	4,693.0	4,150.9	1,604.7	3,988.5	1,298.4	2,821.0	13.9%
Oregon Total	3,355.2	5,610.6	7,460.7	5,743.5	5,463.7	4,180.4	1,651.6	7,481.0	6,000.8	3,301.9	5,873.3	2,752.8	4,906.3	24.2%
Seattle MSA	461.9	1,065.8	3,438.6	2,738.0	2,385.2	1,665.8	1,072.5	11,305.6	3,105.9	4,542.0	4,905.7	2,671.5	3,279.9	16.2%
All Other WA and Other States	2,009.5	2,486.6	5,293.0	2,247.8	2,525.0	1,925.0	536.8	4,761.9	3,005.3	2,614.3	2,047.1	1,556.9	2,584.1	12.7%
Washington and Other States Total	2,471.4	3,552.4	8,731.5	4,985.8	4,910.3	3,590.8	1,609.3	16,067.4	6,111.2	7,156.3	6,952.8	4,228.4	5,864.0	28.9%
All Geographies	8,931.2	15,282.1	29,125.3	16,947.1	37,336.5	13,120.2	5,585.5	49,696.2	18,378.5	17,809.8	18,668.5	12,627.7	20,292.4	100.0%

Source: AKFIN 2016a

Table 7. GOA Groundfish Trawl Catcher Vessels AFA Program Designation by Community of Vessel Owner, Annual Average 2003-2014

Geography	Annual Average 2003-2014 (number of GOA Trawl Vessels)			Annual Average 2003-2014 (percent of GOA Trawl Vessels)		
	Total Vessels	AFA		Total Vessels	AFA	
		Yes	No		Yes	No
Anchorage	1.3	0.3	1.1	100.0%	18.8%	81.3%
Homer	0.3	0.0	0.3	100.0%	0.0%	100.0%
King Cove	3.3	0.0	3.3	100.0%	0.0%	100.0%
Kodiak	14.8	5.0	9.8	100.0%	33.7%	66.3%
Petersburg	1.1	0.0	1.1	100.0%	0.0%	100.0%
Sand Point	9.4	0.0	9.4	100.0%	0.0%	100.0%
All Other AK	0.3	0.0	0.3	100.0%	0.0%	100.0%
Alaska Total	30.6	5.3	25.3	100.0%	17.2%	82.8%
Newport	6.9	5.3	1.7	100.0%	75.9%	24.1%
All Other OR	8.8	4.1	4.8	100.0%	46.2%	53.8%
Oregon Total	15.8	9.3	6.4	100.0%	59.3%	40.7%
Seattle MSA	19.0	10.3	8.7	100.0%	54.4%	45.6%
All Other WA	6.7	0.2	6.5	100.0%	2.5%	97.5%
Washington Total	25.7	10.5	15.2	100.0%	40.9%	59.1%
All Other States	1.8	0.0	1.8	100.0%	0.0%	100.0%
Total	73.5	24.9	48.6	100.0%	33.9%	66.1%

Source: AKFIN 2016a

Table 8. GOA Groundfish Trawl Catcher Vessels Rockfish Program Designation by Community of Vessel Owner, Annual Average 2007-2014

Geography	Annual Average 2007-2014 (number of GOA Trawl Vessels)			Annual Average 2007-2014 (percent of GOA Trawl Vessels)		
	Total Vessels	Rockfish Program		Total Vessels	Rockfish Program	
		Yes	No		Yes	No
Anchorage	1.3	0.0	1.3	100.0%	0.0%	100.0%
Homer	0.0	0.0	0.0	0.0%	0.0%	0.0%
King Cove	3.5	0.0	3.5	100.0%	0.0%	100.0%
Kodiak	14.8	12.0	2.8	100.0%	81.4%	18.6%
Petersburg	1.1	0.0	1.1	100.0%	0.0%	100.0%
Sand Point	8.4	0.0	8.4	100.0%	0.0%	100.0%
All Other AK	0.0	0.0	0.0	0.0%	0.0%	0.0%
Alaska Total	29.0	12.0	17.0	100.0%	41.4%	58.6%
Newport	5.9	3.1	2.8	100.0%	53.2%	46.8%
All Other OR	8.0	4.6	3.4	100.0%	57.8%	42.2%
Oregon Total	13.9	7.8	6.1	100.0%	55.9%	44.1%
Seattle MSA	20.1	3.8	16.4	100.0%	18.6%	81.4%
All Other WA	5.9	3.3	2.6	100.0%	55.3%	44.7%
Washington Total	26.0	7.0	19.0	100.0%	26.9%	73.1%
All Other States	1.4	0.4	1.0	100.0%	27.3%	72.7%
Total	69.9	27.1	42.8	100.0%	38.8%	61.2%

Source: AKFIN 2016a

4.1.2 GOA Trawl Catcher Processors

Table 9 provides a count, by community and year (2003-2014), of GOA trawl catcher processors for all Alaska communities; and state totals for Alaska, Oregon, Washington, and all other states combined. As shown, the largest component of fleet ownership during any given year is typically in Washington, followed by all other states combined and then Alaska. All Alaska resident-ownership is concentrated in Kodiak, and then for only the two earliest years covered by the dataset. No Oregon resident-owned GOA trawl catcher processors are shown in the data for any year 2003 through 2014.

Table 10 provides GOA trawl catcher processor first wholesale gross revenue information by community and year (2003-2014) to the extent possible within data confidentiality restrictions. As shown, no data at the individual community level can be disclosed.

Table 11 provides information on GOA trawl catcher processor dependency on GOA trawl caught groundfish compared to all other areas, gear types, and species fished by those same vessels (the row in the table labeled "GOA Trawl Catcher Processors Only"). This same table also provides information on overall community catcher processor fleet dependency on GOA trawl caught groundfish (all community resident-owned catcher processors, not just catcher processors that participate in the GOA trawl fishery) compared to all other areas, gear types, and species fished by those vessels for communities with at least one resident-owned GOA trawl catcher processor (the row in the table labeled "All Trawl Catcher Processors"). Importantly, this table is (1) derived from a different data source than the preceding table and (2) is based on ex-vessel gross revenues rather than first-wholesale gross revenues (unlike the preceding table), with both differences resulting from limitations within available processor (both catcher processor and shore-based processor) diversity data. Thus, these data should be used as a relative gauge of diversity rather than used in direct comparison to the preceding table. As shown, based on ex-vessel gross revenues, for GOA trawl catcher processors, GOA trawl ex-vessel gross revenues are a small portion (well less than 1 percent) of GOA trawl catcher processor ex-vessel gross revenues specifically and community fleet trawl catcher processors in general.

Table 12 provides GOA trawl catcher processor halibut mortality information by community and year (2003-2014) to the extent possible within data confidentiality restrictions. Table 13 provides GOA trawl catcher processor Chinook salmon mortality information by community and year (2003-2014) to the extent possible within data confidentiality restrictions.

Table 13 provides GOA trawl catcher processor Chinook salmon mortality information by community and year (2003-2014) to the extent possible within data confidentiality restrictions.

Table 14 provides information on the Amendment 80 and AFA status of GOA trawl catcher processors by community and region. Table 15 provides similar information on the rockfish program status of GOA trawl catcher processors. As with trawl catcher vessels, all things being equal, inclusion of trawl catcher processors in one or more of these classes would likely reduce the vulnerability of individual catcher processors to adverse impacts that could result from halibut or Chinook salmon PSC reductions through co-op or other internal vessel class compensation mechanisms and/or separate accounting of PSC thresholds unique to that vessel class (thereby insulating these catcher processors somewhat from adverse consequences of actions of catcher processors outside of their restricted class over which they have very little influence or control).

Table 9. Individual GOA Groundfish Trawl Catcher Processors by Community of Vessel Owner, 2003-2014 (number of vessels)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CPs 2003-2014 (number)
Kodiak	2	2	0	0	0	0	0	0	0	0	0	0	0.3	2.1%	2
All Other AK	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0
Alaska Total	2	2	0	0	0	0	0	0	0	0	0	0	0.3	2.1%	2
Oregon Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0
Seattle MSA	16	13	13	13	12	13	16	15	15	14	11	10	13.4	83.9%	19
All Other WA	1	1	3	2	2	1	2	1	1	1	1	1	1.4	8.9%	4
Washington Total	17	14	16	15	14	14	18	16	16	15	12	11	14.8	92.7%	20
All Other States	2	0	0	1	1	0	0	1	1	2	2	0	0.8	5.2%	2
Grand Total	21	16	16	16	15	14	18	17	17	17	14	11	16	100.0%	22

Note: Due to vessel movement between communities over the years shown, total unique CPs per community may not sum to state or grand totals.

Source: AKFIN 2016a

Table 10. GOA Groundfish Trawl Catcher Catcher Processor First Wholesale Gross Revenues by Community of Vessel Owner, 2003-2014 (adjusted 2015 millions of dollars)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
Geography	$ (millions)													
All Geographies	13.75	9.90	11.81	13.93	12.22	11.66	12.86	15.47	18.61	16.48	12.09	16.11	13.74	100.0%

Source: AKFIN 2016a

Table 11 GOA Groundfish Trawl Catcher Processor Ex-Vessel Gross Revenue Diversification by Community of Vessel Owner, All Geographies, 2003-2014

Catcher Processor Type	Annual Average Number of GOA Groundfish Trawl CPs 2003-2014	Annual Average Ex-Vessel Gross Revenues from GOA Trawl-Caught Groundfish Only 2003-2014 ($ millions)	Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries 2003-2014 ($ millions)	GOA Trawl-Caught Groundfish Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average 2003-2014
GOA Trawl Catcher Processors Only	14.8	$0.57	$264.13	0.2%
All Trawl Catcher Processors	80.3	$0.57	$1,455.83	0.0%

Source: AKFIN 2016b

Table 12. GOA Groundfish Trawl Catcher Processor Halibut Mortality by Community of Vessel Owner, 2003-2014 (metric tons)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
All Geographies	852.4	773.2	564.4	559.1	405.7	442.7	455.7	516.4	509.9	388.5	377.0	502.3	528.9	100.0%

Source: AKFIN 2016a

Table 13. GOA Groundfish Trawl Catcher Processor Chinook Salmon Mortality by Community of Vessel Owner, 2003-2014 (number of fish)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
All Geographies	6,393.9	2,321.9	2,784.0	1,628.3	2,983.4	2,967.5	2,409.6	4,682.5	3,020.6	1,948.6	4,634.0	2,891.4	3,222.1	100.0%

Source: AKFIN 2016a

Table 14. GOA Groundfish Trawl Catcher Processors Amendment 80 and AFA Program Designations by Community of Vessel Owner, Annual Average 2003-2014

Geography	Annual Average 2003-2014 (number of GOA Groundfish Trawl CPs)					Annual Average 2003-2014 (percent of GOA Groundfish Trawl CPs)				
	Total Vessels	Amendment 80		AFA		Total Vessels	Amendment 80		AFA	
		Yes	No	Yes	No		Yes	No	Yes	No
Kodiak	0.3	0.3	0.0	0.0	0.3	100.0%	100.0%	0.0%	0.0%	100.0%
Alaska Total	0.3	0.3	0.0	0.0	0.3	100.0%	100.0%	0.0%	0.0%	100.0%
Seattle MSA	13.4	13.4	0.0	0.8	12.7	100.0%	100.0%	0.0%	5.6%	94.4%
All Other WA	1.4	1.4	0.0	0.0	1.4	100.0%	100.0%	0.0%	0.0%	100.0%
Washington Total	14.8	14.8	0.0	0.8	14.1	100.0%	100.0%	0.0%	5.1%	94.9%
All Other States	0.8	0.8	0.0	0.0	0.8	100.0%	100.0%	0.0%	0.0%	100.0%
Total	16.0	16.0	0.0	0.8	15.3	100.0%	100.0%	0.0%	4.7%	95.3%

Source: AKFIN 2016a

Table 15. GOA Groundfish Trawl Catcher Processors Rockfish Program Designation by Community of Vessel Owner, Annual Average 2007-2014

Geography	Annual Average 2007-2014 (number of GOA Groundfish Trawl CPs)			Annual Average 2007-2014 (percent of GOA Groundfish Trawl CPs)		
	Total Vessels	Rockfish Program		Total Vessels	Rockfish Program	
		Yes	No		Yes	No
Seattle MSA	13.3	4.8	8.5	100.0%	35.8%	64.2%
All Other WA	1.3	0.0	1.3	100.0%	0.0%	100.0%
Washington Total	14.5	4.8	9.8	100.0%	32.8%	67.2%
All Other States	0.9	0.0	0.9	100.0%	0.0%	100.0%
Total	15.4	4.8	10.6	100.0%	30.9%	69.1%

Source: AKFIN 2016a

4.1.3 Shore-Based Processors Accepting GOA Trawl-Caught Deliveries

Table 16 shows provides information on the distribution of shore-based processors that accepted trawl-caught GOA groundfish deliveries in the period 2003-2014. The communities specifically called out in the table are limited to subset of the communities otherwise selected for community profile characterization, plus Ninilchik, as these are the only communities that had at least one shore-based processor accepting trawl-caught deliveries of GOA groundfish in more than one year during the period 2003-2014 (with Ninilchik being the only community in the group averaging less than 0.5 shore-based processors per year accepting GOA trawl-caught groundfish).[16] For the purposes of this analysis, shore-based GOA trawl-caught groundfish processors are defined as those shore-based entities (as identified by F_ID [intent to operate] and SBPR [shore-based processor] codes in AKFIN [Alaska Fisheries Information Network] data) accepting catcher (or catcher processor) class vessel GOA trawl-caught groundfish deliveries, excluding halibut and/or sablefish.[17]

Table 17 provides information on the first wholesale gross revenues from trawl-caught GOA groundfish deliveries by community and year (2003-2014) to the extent possible within data confidentiality restrictions. As shown, only information for Kodiak can be disclosed on an individual community basis, but the concentration of GOA trawl-caught processing in the community is clear, with Kodiak accounting for roughly three-quarters of all GOA trawl-caught processing first wholesale gross revenues on an annual average basis.

Table 18 provides information on average annual GOA trawl shore-based processor dependency on GOA trawl-caught groundfish compared to all area and species fisheries landings processed by those same processors for the years 2003-2014. Importantly, this table is (1) derived from a different data source than the preceding table and (2) is based on ex-vessel gross revenues rather than first-wholesale gross revenues (unlike the preceding table), with both differences resulting from limitations within available processor (both shore-based processor and catcher processor) diversity data. Thus, these data should be used as a relative gauge of diversity rather than used in direct comparison to the preceding table. As shown, in the case of Kodiak GOA trawl-caught groundfish processors, over one-quarter of the total ex-vessel gross revenues generated by landings at the processors were associated with GOA trawl-caught groundfish over that period; for all other shore-based processors accepting GOA trawl-caught groundfish as a group, GOA trawl-caught groundfish accounted for less than four percent of total ex-vessel gross revenues generated by local on an average annual basis over the same period for those same processors.

[16] The shore-based processing activity attributed to Seattle in this section (and related tables in other sections of this social impact assessment) is in all likelihood actually activity associated with Seattle-owned floating processors operating in Alaska waters (but for which good operation location data are not available).

[17] Counts in the tables in this section are based on processing entity names in the data, which closely track with intent to operate codes for all communities specifically analyzed in this document, with the notable exception of Kodiak, where multiple names of processing entities associated with three different physical plants appear in the data, inflating the processor count. This is specifically addressed in the shore-based processing discussion of the Kodiak community analysis in Section 5.2.1.

Table 19 provides information on average annual total shore-based processor dependency (all shore-based processors in the communities that had at least one GOA trawl shore-based processor, not just the shore-based processors that participated in the GOA trawl fishery) on GOA trawl-caught groundfish compared to all area and species fishery landings processed by all processors for the years 2003-2014, within the constraints of confidentiality restrictions. This table is derived from the same data source as the preceding table, and the same data interpretation caveats detailed above equally apply. As shown, for 2008-2013, the distribution pattern of GOA trawl-caught groundfish ex-vessel gross revenues for all community processors was very similar to that of just those processors accepting GOA trawl-caught deliveries over these same years. For all Kodiak shore-based processors as a group, just over one-quarter of all ex-vessel gross revenues were associated with GOA trawl-caught groundfish deliveries that period; for all processors in all other communities with at least one shore-based processor accepting trawl-caught deliveries during this period, GOA trawl-caught groundfish accounted for less than 3 percent of total ex-vessel gross revenues on an average annual basis over the same period.

Table 16. Shore-Based Processors Accepting GOA Groundfish Trawl-Caught Deliveries by Community, 2003-2014 (number)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique SBPRs 2003-2014 (number)
Akutan	1	1	1	1	1	1	1	1	1	1	1	1	1.0	6.5%	1
King Cove	2	2	2	2	1	1	1	1	1	1	1	1	1.3	8.6%	3
Kodiak	6	8	7	8	10	9	9	9	9	7	8	7	8.1	52.4%	24
Ninilchik	1	0	0	1	0	0	0	0	0	0	0	0	0.2	1.1%	1
Sand Point	1	1	1	1	1	1	1	1	1	1	1	1	1.0	6.5%	1
Seward	0	1	1	0	0	0	0	1	2	2	1	1	0.8	4.9%	3
Unalaska/ Dutch Harbor	1	2	1	1	1	1	1	1	2	1	0	0	1.0	6.5%	4
All Other AK*	2	0	0	0	0	0	0	0	0	1	0	0	0.3	1.6%	3
Alaska Total	14	15	13	14	14	13	13	14	16	14	12	11	13.6	88.1%	35
Seattle	2	2	2	0	1	1	1	1	2	2	2	2	1.5	9.7%	3
Other/Unknown	0	0	0	1	1	0	0	0	0	1	0	1	0.3	2.2%	1
Grand Total	16	17	15	15	16	14	14	15	18	17	14	14	15.4	100.0%	36

* Other Alaska communities having shore-based processing of trawl-caught deliveries in 2003-2014 were Homer (2003), Kenai (2003), and Sitka (2012).
Source: AKFIN 2016a

Table 17. First Wholesale Gross Revenues from GOA Groundfish Trawl-Caught Deliveries to Shore-Based Processors by Community, 2003-2014 (adjusted 2015 dollars)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (dollars)	Average 2003-2014 (percent)
Geography	$ (millions)													
Kodiak	76.8	78.8	107.0	96.7	92.9	111.0	77.9	103.9	117.3	119.9	133.4	138.6	104.5	76.7%
All Other	19.0	25.4	47.7	38.0	29.3	31.0	19.3	35.0	29.4	46.3	30.6	29.0	31.7	23.3%
Total	95.8	104.3	154.7	134.8	122.2	142.0	97.3	138.9	146.8	166.2	164.0	167.6	136.2	100.0%

Source: AKFIN 2016a

Table 18. Shore-Based Processors in Alaska Accepting GOA Trawl-Caught Groundfish Deliveries Ex-Vessel Gross Revenues Diversity by Community 2003-2014

Geography	Annual Average Number of Processors Processing GOA Trawl-Caught Groundfish 2003-2014	GOA Trawl-Caught Groundfish Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ millions)	Total (All Areas and Species) Ex-vessel Gross Revenues Annual Average 2003-2014 ($ millions)	GOA Trawl-Caught Groundfish Ex-Vessel Gross Revenues as a Percentage of Total Ex-Vessel Gross Revenues Annual Average 2003-2014
Kodiak	8.3	$41.66	$150.77	27.6%
Other	5.3	$11.60	$297.63	3.9%
Total	13.6	$53.26	$448.40	11.9%

Source: AKFIN 2016b

Table 19. All Areas and Species Ex-Vessel Gross Revenues Diversity by Community for All Shore-Based Processors (for Alaska communities with at least one shore-based processor accepting GOA trawl-caught groundfish deliveries) 2003-2014

Geography	Annual Average Number of Processors Processing GOA Trawl-Caught Groundfish 2003-2014	Annual Average Number of Total Processors 2003-2014	GOA Trawl-Caught Groundfish Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ millions)	Total (All Areas and Species) Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ millions)	GOA Trawl-Caught Groundfish Ex-Vessel Gross Revenues as a Percentage of Total Ex-Vessel Gross Revenues Annual Average 2003-2014
Kodiak	8.3	12.6	$41.66	$161.39	25.8%
Other	5.3	13.0	$11.60	$476.73	2.4%
Total	13.6	25.6	$53.26	$638.12	8.3%

Source: AKFIN 2016b

4.2 GOA Halibut Fishery Indicators

Similar in format to the GOA trawl fishery indicators in Section 4.1, the following sections contain a range of quantitative information describing engagement (or participation) in and dependency (or reliance) on the GOA halibut fishery by community for the following sectors:

- GOA Commercial Halibut Catcher Vessels
- Shore-Based Processors Accepting GOA Commercial Halibut Deliveries

The communities highlighted in this section remain the communities most heavily engaged in and/or dependent upon the GOA trawl fishery to facilitate subsequent analysis of the potential aggregation of impacts across the three fisheries most likely to be directly impacted by the proposed alternatives (the GOA trawl fishery, the GOA halibut fishery, and the GOA Chinook salmon fishery). Detailed, analogous quantitative information on those communities most engaged in and dependent upon the GOA halibut fishery, independent of considerations of overlap with the GOA trawl fishery, are presented in Attachment 1.

Also, included in this section are an additional range of quantitative indictors of GOA halibut fishery engagement and/or dependency by community, including:

- GOA Commercial Halibut Quota Holdings, Areas 2C, 3A, 3B, and 4A
- GOA Halibut Sport Fishery, Areas 2C, 3A, 3B, and 4A
- GOA Halibut Subsistence Fishery, Areas 2C, 3A, 3B, and 4A

4.2.1 GOA Commercial Halibut Catcher Vessels, Areas 2C, 3A, 3B, and 4A

Table 20 shows information on the number of GOA commercial halibut catcher vessels by state and, within Alaska, by community for those communities with resident-owned fleets that are also engaged in the GOA trawl fisheries. Of note among Alaska communities is the number of vessels in Kodiak, Homer, and Petersburg, which ranked second, third, and fourth, respectively, behind Sitka for the highest average number of resident owned GOA commercial halibut catcher vessels in the state over the period 2003-2014; further, Sand Point ranked sixth and Anchorage ranked ninth (and King Cove ranked twentieth; see Attachment 1). In other words, of the six Alaska communities most engaged in the GOA trawl fishery as measured by resident-owned catcher vessels, three are among the top five (and five are among the top 10) Alaska communities most engaged in the GOA commercial halibut fishery as measured by participation of resident-owned catcher vessels.

Table 21 shows GOA commercial halibut catcher vessel ex-vessel gross revenue information by GOA trawl catcher vessel community and year (2003-2014). Clearly apparent is the relative economic importance of Kodiak, Homer, and Petersburg, which together account for well over half of the state halibut ex-vessel gross revenues total over this period, with Kodiak alone accounting for about 30 percent of the state total.

Table 22 provides information on GOA halibut catcher vessel dependency on GOA halibut compared to all other areas, gear types, and species fished by those same vessels, for the GOA trawl catcher vessel communities. As shown, dependency on GOA halibut, as measured in percentage of total ex-vessel revenues, ranged between about 20 percent to over 50 percent across all geographies, with the highest and lowest relative dependencies seen in Alaska communities.

Table 23 provides information on community catcher vessel fleet dependency on GOA halibut compared to all other areas, gear types, and species fished by all vessels owned by residents of the GOA trawl catcher vessel communities. (This table includes all commercial fishing catcher vessels, not just vessels that participate in the GOA halibut fishery for those communities that had at least one resident-owned GOA trawl catcher vessel participating in any year 2003-2014.) As shown, community fleet dependency on GOA halibut, as measured by GOA halibut ex-vessel gross revenues as a proportion of all ex-vessel gross revenues on an annual average basis, was roughly 5 percent for the Anchorage resident-owned fleet; ranged between 10 and 15 percent for the King Cove, Sand Point, and Petersburg resident-owned fleets; and was roughly 25 percent for the Homer and Kodiak resident-owned fleets.

Table 20. Individual Commercial Halibut Catcher Vessels With Revenue From Areas 2C, 3A, 3B, and 4A by Community of Vessel Owner, 2003-2014 (number of vessels)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
Anchorage	23	17	20	19	14	13	13	13	16	14	12	13	15.6	2.0%	49
Homer	98	101	94	89	83	80	84	85	85	83	75	71	85.7	11.0%	182
King Cove	5	5	5	6	7	7	8	6	7	6	4	4	5.8	0.8%	16
Kodiak	120	122	115	121	123	113	102	104	110	104	88	82	108.7	14.0%	218
Petersburg	39	45	39	42	42	40	39	39	35	30	31	31	37.7	4.8%	68
Sand Point	29	25	26	23	24	26	23	21	23	21	17	21	23.3	3.0%	56
All Other AK	463	445	434	417	407	377	334	331	311	285	265	277	362.2	46.6%	927
Alaska Total	777	760	733	717	700	656	603	599	587	543	492	499	638.8	82.3%	1,429
Newport	7	5	4	3	2	2	1	1	1	1	1	0	2.3	0.3%	7
All Other OR	35	33	31	27	25	22	20	18	19	17	18	16	23.4	3.0%	57
Oregon Total	42	38	35	30	27	24	21	19	20	18	19	16	25.8	3.3%	60
Seattle MSA	50	51	48	52	52	48	49	46	45	45	44	42	47.7	6.1%	80
All Other WA	62	54	56	62	55	55	48	45	45	37	29	32	48.3	6.2%	103
Washington Total	112	105	104	114	107	103	97	91	90	82	73	74	96.0	12.4%	178
All Other States	18	18	22	15	16	14	16	15	16	16	16	11	16.1	2.1%	57
Grand Total	949	921	894	876	850	797	737	724	713	659	600	600	776.7	100.0%	1,632

Note: Due to vessel movement between communities over the years shown, total unique CVs per community may not sum to state or grand totals.

Source: AKFIN 2016a

Table 21. GOA Halibut Catcher Vessels Ex-Vessel Gross Revenues by Community of Vessel Owner, 2003-2014 (adjusted 2015 dollars)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
Geography	$ (millions)													
Anchorage	3.65	3.21	3.23	3.40	3.54	3.51	2.81	3.34	3.41	2.32	1.61	1.62	2.97	1.8%
Homer	20.78	21.70	19.34	22.33	24.95	23.66	17.96	26.30	23.64	15.32	11.50	9.28	19.73	11.8%
King Cove	1.39	1.33	1.10	1.03	0.96	1.07	0.77	0.81	1.11	0.77	0.48	0.33	0.93	0.6%
Kodiak	42.71	40.69	35.26	40.23	42.70	41.13	28.05	37.37	34.93	22.98	16.32	13.02	32.95	19.8%
Petersburg	11.52	13.38	13.29	15.16	16.26	13.88	8.86	11.74	10.19	7.40	6.26	5.11	11.09	6.7%
Sand Point	3.44	2.73	2.37	2.24	2.11	3.03	1.57	2.35	2.09	1.39	0.64	0.65	2.05	1.2%
All Other AK	50.56	52.96	48.40	52.91	57.80	50.42	33.16	44.62	38.20	29.53	23.23	20.67	41.87	25.1%
Alaska Total	134.05	136.00	122.98	137.30	148.32	136.70	93.19	126.52	113.58	79.70	60.03	50.68	111.59	67.0%
Oregon Total	16.39	14.58	13.23	13.34	15.46	12.34	7.31	8.71	7.79	5.49	4.19	3.04	10.16	6.1%
Seattle MSA	31.08	31.90	26.64	30.92	34.20	31.58	20.55	27.33	26.76	18.14	14.42	11.44	25.41	15.3%
All Other WA	19.00	17.54	17.81	18.61	19.87	17.30	10.80	16.23	13.03	8.76	6.36	5.52	14.24	8.5%
Washington Total	50.08	49.44	44.45	49.53	54.07	48.88	31.36	43.55	39.80	26.90	20.78	16.97	39.65	23.8%
All Other States	7.46	6.10	5.78	5.59	5.75	6.50	4.15	5.62	5.54	4.26	3.66	2.01	5.20	3.1%
Grand Total	207.98	206.12	186.44	205.76	223.60	204.43	136.00	184.41	166.70	116.35	88.66	72.70	166.60	100.0%

Source: AKFIN 2016a

Table 22. GOA Halibut Catcher Vessels Ex-Vessel Gross Revenue Diversification by Community of Vessel Owner, All Communities, 2003-2014

Geography	Annual Average Number of GOA Halibut CVs 2003-2014	GOA Halibut CVs Annual Average Ex-Vessel Gross Revenues from GOA Halibut Only 2003-2014 ($ millions)	GOA Halibut CVs Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries 2003-2014 ($ millions)	GOA Halibut CVs GOA Halibut Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average 2003-2014
Anchorage	15.6	3.0	5.6	53.0%
Homer	85.7	19.7	36.6	53.9%
King Cove	5.8	0.9	2.5	37.5%
Kodiak	108.7	32.9	74.3	44.3%
Petersburg	37.7	11.1	38.8	28.5%
Sand Point	23.3	2.1	10.5	19.5%
All Other AK	362.2	41.9	116.5	36.0%
Alaska Total	638.8	111.6	284.8	39.2%
Oregon Total	25.8	10.2	28.2	36.0%
Seattle MSA	47.7	25.4	64.7	39.3%
All Other WA	48.3	14.2	39.6	36.0%
Washington Total	96.0	39.6	104.2	38.0%
All Other States Total	16.1	5.2	17.0	30.6%
Grand Total	776.7	166.6	434.2	38.4%

Source: AKFIN 2016b

Table 23. GOA Halibut Catcher Vessel and All Catcher Vessel Ex-Vessel Gross Revenue Diversification by Community of Vessel Owner, 2003-2014

Geography	Annual Average Number of GOA Halibut CVs 2003-2014	Annual Average Number of All Commercial Fishing CVs 2003-2014	All Commercial Fishing CVs Annual Average Ex-Vessel Gross Revenues from GOA Halibut Only 2003-2014 ($ millions)	All Commercial Fishing CVs Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries 2003-2014 ($ millions)	All Commercial Fishing CVs GOA Halibut Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average 2003-2014
Anchorage	15.6	239.0	3.0	53.9	5.5%
Homer	85.7	323.8	19.7	78.7	25.1%
King Cove	5.8	32.3	0.9	9.2	10.2%
Kodiak	108.7	265.0	32.9	137.9	23.9%
Petersburg	37.7	322.2	11.1	73.4	15.1%
Sand Point	23.3	76.0	2.1	18.1	11.3%
All Other AK	362.2	3,066.7	41.9	315.6	13.3%
Alaska Total	638.8	4,324.9	111.6	686.8	16.2%
Oregon Total	25.8	212.3	10.2	115.9	8.8%
Seattle MSA	47.7	538.3	25.4	504.2	5.0%
All Other WA	48.3	640.8	14.2	157.3	9.1%
Washington Total	96.0	1,179.0	39.6	661.5	6.0%
All Other States Total	16.1	423.7	5.2	78.6	6.6%
Grand Total	776.7	6,139.9	166.6	1,542.7	10.8%

Source: AKFIN 2016b

4.2.2 Shore-Based Processors Accepting GOA Commercial Halibut Deliveries

Table 24 provides information on the distribution of shore-based processors that accepted GOA halibut deliveries in the period 2003-2014. The communities specifically called out in the table are limited to subset of the communities otherwise selected for community profile characterization, plus Ninilchik, as these are the only communities that also had at least one shore-based processor accepting trawl-caught deliveries of GOA groundfish in more than one year during the period 2003-2014 (with Ninilchik being the only community in the group averaging less than 0.5 shore-based processors per year accepting GOA trawl-caught groundfish). As shown, all communities averaged more GOA halibut shore-based processors than processors accepting GOA trawl-caught deliveries on annual basis, except for King Cove and Seattle (both of which had very few processors in total).

Table 25 provides information on the first wholesale gross revenues from GOA halibut deliveries by community and year (2003-2014) to the extent possible within data confidentiality restrictions. As shown, only information for Kodiak can be disclosed on an individual community basis, with Kodiak accounting for over 20 percent of all GOA halibut processing first wholesale gross revenues on an annual average basis.

Table 26 provides information on average annual GOA halibut dependency on GOA halibut compared to all area and species fisheries landings processed by those same processors for the years 2003-2014. Importantly, this table is (1) derived from a different data source than the preceding table and (2) is based on ex-vessel gross revenues rather than first-wholesale gross revenues (unlike the preceding table), with both differences resulting from limitations within available processor (both shore-based processor and catcher processor) diversity data. Thus, these data should be used as a relative gauge of diversity rather than used in direct comparison to the preceding table. As shown, Kodiak GOA halibut processors derived over one-quarter of their total ex-vessel gross revenues from GOA halibut alone over that period; for all other GOA halibut shore-based processors as a group, GOA halibut accounts for well less than 20 percent of total ex-vessel gross revenues on an average annual basis over the same period for those same processors.

Table 27 provides information on average annual total shore-based processor dependency (all shore-based processors in the communities that had at least one GOA trawl shore-based processor, not just the shore-based processors that participated in the GOA trawl fishery) on GOA halibut compared to all area and species fishery landings processed by all processors for the years 2003-2014, within the constraints of confidentiality restrictions. This table is derived from the same data source as the preceding table, and the same data interpretation caveats detailed above equally apply. As shown, for 2008-2013, the distribution pattern of GOA halibut ex-vessel gross revenues for all community processors was similar to that of just those processors accepting GOA halibut deliveries over these same years. All Kodiak shore-based processors as a group derived somewhat less than one-quarter of their total ex-vessel gross revenues from GOA halibut alone over that period; for all processors in all other communities with at least one shore-based processor accepting trawl-caught deliveries during this period, GOA halibut accounted for about one-eighth of total ex-vessel gross revenues on an average annual basis over the same period.

Table 24. Shore-Based Processors Accepting GOA Halibut Deliveries by Community, 2003-2014 (number)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique SBPRs 2003-2014 (number)
Akutan	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.9%	1
King Cove	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.9%	1
Kodiak	10	9	11	11	12	10	9	9	8	7	8	7	9.3	17.4%	22
Ninilchik	1	1	1	1	1	0	0	0	1	1	0	0	0.6	1.1%	3
Sand Point	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.9%	1
Seward	2	3	3	4	3	3	2	3	3	3	3	4	3.0	5.7%	6
Unalaska/ Dutch Harbor	6	5	4	4	3	2	2	2	2	2	2	1	2.9	5.5%	7
All Other AK	37	36	41	39	36	33	32	29	31	30	30	30	33.7	63.4%	83
Alaska Total	59	57	63	62	58	51	48	46	48	46	46	45	52.4	98.7%	124
Seattle	2	0	0	0	0	0	0	0	1	0	0	0	0.3	0.5%	3
Other/Unknown	3	1	0	0	0	0	0	0	0	0	0	1	0.4	0.8%	4
Grand Total	64	58	63	62	58	51	48	46	49	46	46	46	53.1	100.0%	131

Source: AKFIN 2016a

Table 25. First Wholesale Gross Revenues from GOA Halibut Deliveries to Shore-Based Processors by Community, 2003-2014 (adjusted 2015 dollars)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (dollars)	Average 2003-2014 (percent)
Geography	$ (millions)													
Kodiak	$38.0	$39.3	$36.9	$44.9	$48.5	$48.0	$29.9	$37.9	$42.5	$32.0	$18.1	$16.5	$36.0	21.6%
All Other	$168.5	$166.6	$149.5	$161.5	$173.7	$156.6	$110.6	$146.7	$124.2	$85.5	$71.0	$56.5	$130.9	78.4%
Total	$206.5	$205.9	$186.4	$206.4	$222.2	$204.6	$140.5	$184.6	$166.7	$117.5	$89.1	$73.0	$166.9	100.0%

Source: AKFIN 2016a

Table 26. Shore-Based Processors in Alaska Accepting GOA Halibut Deliveries Ex-Vessel Gross Revenues Diversity by Community 2003-2014

Geography	Annual Average Number of Processors Processing GOA Halibut 2003-2014	GOA Halibut Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ millions)	Total (All Areas and Species) Ex-vessel Gross Revenues Annual Average 2003-2014 ($ millions)	GOA Halibut Ex-Vessel Gross Revenues as a Percentage of Total Ex-Vessel Gross Revenues Annual Average 2003-2014
Kodiak	9.3	$36.0	$147.1	24.5%
All Other	43.8	$130.9	$799.0	16.4%
Total	53.1	$166.9	$946.1	17.6%

Source: AKFIN 2016b

Table 27. All Areas and Species Ex-Vessel Gross Revenues Diversity by Community for All Shore-Based Processors (for Alaska communities with at least one shore-based processor accepting GOA halibut deliveries) 2003-2014

Geography	Annual Average Number of Processors Processing GOA Halibut 2003-2014	Annual Average Number of Total Processors 2003-2014	GOA Halibut Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ millions)	Total (All Areas and Species) Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ millions)	GOA Halibut Ex-Vessel Gross Revenues as a Percentage of Total Ex-Vessel Gross Revenues Annual Average 2003-2014
Kodiak	9.3	12.6	$36.0	$161.4	22.3%
All Other	43.8	107.3	$130.9	$1,020.3	12.8%
Total	53.1	119.9	$166.9	$1,181.7	14.1%

Source: AKFIN 2016b

4.2.3 GOA Commercial Halibut Quota Holdings, Areas 2C, 3A, 3B, and 4A

Table 28 provides information on the distribution of commercial halibut quota share (QS) holders under the halibut Individual Fishing Quota (IFQ) program in areas 2C, 3A, 3B, and 4A[18] combined in each of the Alaska communities substantially engaged in the GOA trawl fishery through resident ownership of catcher vessels as well as all other Alaska communities combined,[19] along with the total number of QS holders from the states of Alaska, Oregon, and Washington, as well as all other states combined. As shown, halibut QS holders are largely concentrated in Alaska, but these holders are widely distributed among many communities, with roughly 60 percent of Alaska holders of halibut QS in these areas residing outside the Alaska communities substantially engaged in the GOA trawl fishery through resident ownership of catcher vessels.

Table 29 shows the distribution of commercial halibut QS units in areas 2C, 3A, 3B, and 4A combined held by residents of the Alaska communities substantially engaged in the GOA trawl fishery through resident ownership of catcher vessels as well as all other Alaska communities combined, along with the total number of QS units held by residents of the states of Alaska, Oregon, and Washington, plus all other states combined. As shown, halibut QS unit ownership is largely concentrated in Alaska (but not as concentrated as the count of quota holders). These QS units are widely distributed among many communities, with approximately 45 percent of halibut QS units held by Alaska residents being held by residents of communities other than those substantially engaged in the GOA trawl fishery through resident ownership of catcher vessels.

[18] For this analysis, for the sake of completeness, Area 4A, typically considered outside of the GOA for fishery management purposes, was added to this community analysis due to geographic overlap with the Western Gulf groundfish management area, the potential spillover of beneficial impacts into the only immediately adjacent region in U.S. federal waters, and an overlap of permits held by residents of at least some communities relevant to this analysis.

[19] A more comprehensive summary of commercial halibut QS holdings by community is provided in Attachment 1.

Table 28. Commercial Halibut QS Holders for Areas 2C, 3A, 3B, and 4A (combined), by Community, 2003-2016 (number of holders)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Average 2003-2016 (number)	Average 2003-2016 (percent)
Anchorage	200	182	169	167	149	135	131	124	122	107	108	105	103	109	136.5	5.1%
Homer	236	229	217	220	207	195	192	195	195	185	173	165	168	168	196.1	7.3%
King Cove	14	14	14	13	14	15	14	15	15	13	13	11	13	13	13.6	0.5%
Kodiak	250	236	233	233	234	229	218	215	213	199	197	190	186	186	215.6	8.0%
Petersburg	221	219	216	221	218	211	206	205	201	196	192	194	199	199	207.0	7.7%
Sand Point	43	42	40	36	32	36	35	35	35	34	33	31	29	29	35.0	1.3%
All Other AK	1,667	1,601	1,560	1,538	1,430	1,343	1,315	1,261	1,223	1,140	1,108	1,089	1,065	1,051	1,313.6	48.9%
Alaska Total	2,617	2,510	2,437	2,417	2,273	2,155	2,104	2,044	1,998	1,869	1,818	1,782	1,760	1,753	2,109.8	78.6%
Newport	13	12	9	9	7	8	7	7	6	6	6	5	5	6	7.6	0.3%
All Other OR	100	93	89	91	89	90	87	83	86	85	82	76	75	76	85.9	3.2%
Oregon Total	113	105	98	100	96	98	94	90	92	91	88	81	80	82	93.4	3.5%
Seattle MSA	185	180	175	165	164	159	149	150	151	148	146	151	147	141	157.9	5.9%
All Other WA	218	215	212	217	209	186	186	178	174	161	161	158	157	154	184.7	6.9%
Washington Total	403	395	387	382	373	345	335	328	325	309	307	309	304	295	342.6	12.8%
All Other States	175	182	189	172	160	141	148	146	139	133	139	130	121	125	150.0	5.6%
Grand Total	3,292	3,175	3,096	3,058	2,889	2,727	2,671	2,596	2,543	2,394	2,342	2,292	2,258	2,247	2,684.3	100.0%

Source: National Oceanic and Atmospheric Administration 2016a

Table 29. Commercial Halibut QS Units for Areas 2C, 3A, 3B, and 4A (Combined) Held by Community Residents, 2003-2016 (thousands of units)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Average 2003-2016 (number)	Average 2003-2016 (percent)
Anchorage	10,410	10,042	9,338	9,317	9,564	9,871	10,050	10,828	10,909	10,922	10,884	11,885	11,296	11,413	10,481	3.3%
Homer	21,773	21,403	20,698	22,281	20,716	20,672	21,024	21,954	22,222	21,228	19,870	19,698	19,925	19,576	20,932	6.7%
King Cove	852	845	869	867	857	939	857	953	953	783	916	1,010	1,234	1,234	941	0.3%
Kodiak	42,986	42,677	44,804	46,624	46,148	47,864	45,787	44,648	45,070	44,657	45,131	43,112	42,142	41,915	44,540	14.2%
Petersburg	27,457	28,554	28,881	28,578	28,315	29,596	29,384	29,409	28,202	28,370	28,497	29,168	29,858	30,245	28,894	9.2%
Sand Point	2,792	2,784	2,612	2,105	1,850	2,344	2,461	2,466	2,446	2,489	2,476	2,370	2,258	2,258	2,408	0.8%
All Other AK	87,729	86,726	86,699	86,593	86,029	85,108	87,139	86,750	86,984	88,345	88,543	88,648	89,874	89,611	87,484	27.9%
Alaska Total	193,999	193,031	193,902	196,365	193,478	196,392	196,701	197,007	196,785	196,795	196,317	195,891	196,588	196,252	195,679	62.5%
Newport	5,149	5,157	3,544	3,539	2,216	2,863	2,465	2,465	2,464	2,464	2,464	2,418	2,418	2,727	3,025	1.0%
All Other OR	19,214	18,395	18,126	17,238	18,641	15,265	14,432	16,596	17,067	19,806	19,285	20,572	20,455	19,742	18,202	5.8%
Oregon Total	24,362	23,553	21,670	20,777	20,856	18,128	16,897	19,061	19,531	22,270	21,749	22,990	22,873	22,469	21,228	6.8%
Seattle MSA	46,139	46,755	44,703	44,551	46,381	45,416	44,409	44,520	44,732	45,010	46,095	48,497	46,786	46,275	45,733	14.6%
All Other WA	33,030	33,920	35,328	33,870	34,247	34,187	34,345	32,332	31,749	28,678	28,508	26,717	29,233	30,747	31,921	10.2%
Washington Total	79,170	80,675	80,031	78,421	80,628	79,603	78,753	76,852	76,481	73,688	74,603	75,214	76,018	77,021	77,654	24.8%
All Other States	15,747	16,034	17,711	17,690	18,291	19,131	20,902	20,047	20,457	20,464	20,538	19,026	17,669	17,406	18,651	6.0%
Grand Total	313,278	313,293	313,313	313,254	313,254	313,254	313,254	312,968	313,254	313,217	313,207	313,121	313,149	313,149	313,212	100.0%

Source: National Oceanic and Atmospheric Administration 2016a

4.2.4 GOA Halibut Sport Fishery, Areas 2C, 3A, 3B, and 4A

Table 30 provides information on the number of sport charter halibut permit holders, permits by area (2C and 3A[20]), and total permits held by community for 2016 for each of the Alaska communities substantially engaged in the GOA trawl fishery, as measured by resident ownership of GOA trawl catcher vessels,[21] and all other Alaska communities combined, as well as totals for the states of Alaska, Oregon, and Washington, and a total for all other states combined. As suggested by the large number of permit holders who are residents of "all other" Alaska communities (and the large number of permits held by those holders), halibut sport charter permits are widely held across many Alaska communities (61 total in 2016), although there are a considerable number of permit holders in all the listed communities except for King Cove and Sand Point (neither of which had any residents who were permit holders). Both King Cove and Sand Point are in area 3B, which is not subject to management under sport charter regulations. In terms of total number sport charter halibut permits held, in 2016 Kodiak ranked third in the state (behind Sitka and Ketchikan), with Homer and Anchorage ranking fourth and fifth, respectively. In other words, of the six Alaska communities most engaged in the GOA trawl fishery as measured by resident-owned catcher vessels, three are also among the top five Alaska communities most engaged in the GOA halibut sport charter fishery as measured by the number of permits held in 2016. A fourth community, Petersburg, ranked thirteenth in number of permits held in 2016.

Table 31 provides information on sport halibut harvest for areas 2C and 3A, by charter and non-charter vessels, in terms of the number of fish harvested, the average weight per fish, and the total yield (millions of pounds of halibut), for each year 2003-2014 and the annual averages 2003-2014 for each of those variables.

Table 32 provides information on sport halibut charter and non-charter harvest for sub-areas within areas 2C and 3A, in terms of total yield for each year 2011-2014, plus the annual average for that period.

[20] Areas 3B and 4A do not have developed sport charter halibut sectors, at least in part due to the relative remoteness of the communities in the area as tourism destinations; all sport charter halibut discussions in this community analysis therefore focus exclusively on areas 2C and 3A.

[21] A more comprehensive summary of halibut sport charter permit holdings by community is provided in Attachment 1.

Table 30. Sport Charter Halibut Fishing Permits, Areas 2C and 3A, 2016

Geography	Individual Permit Holders	Permits by Area		Total Permits Held
		2C	3A	
Anchorage	40	1	61	62
Homer	48	0	61	61
King Cove	0	0	0	0
Kodiak	36	0	64	64
Petersburg	13	16	0	16
Sand Point	0	0	0	0
All Other AK	366	480	278	758
Alaska Total	503	497	464	961
Newport	0	0	0	0
All Other OR	8	5	4	9
Oregon Total	8	5	4	9
Seattle MSA	11	14	5	19
All Other WA	17	20	4	24
Washington Total	28	34	9	43
All Other States	50	47	26	73
Grand Total	589	583	503	1,086

Source: National Oceanic and Atmospheric Administration 2016c

Table 31. Sport Harvest by Region: Number of Halibut Caught, Average Weight, and Total Poundage (millions of lbs), Charter and Non-Charter Vessels, 2003-2014

Area	Type of Vessel	Measurement	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014
2C	Charter	Number of Fish	73,784	84,327	102,206	90,471	109,835	102,965	53,602	41,202	36,545	42,436	52,675	65,036	71,257
		Avg. Weight per Fish (lb)	19.13	20.75	19.10	19.94	17.46	19.42	23.31	26.36	9.40	14.27	14.47	12.04	17.97
		Yield (millions of lb)	1.412	1.750	1.952	1.804	1.918	1.999	1.249	1.086	0.344	0.605	0.762	0.783	1.305
	Non-Charter	Number of Fish	45,697	62,989	60,364	50,520	68,498	66,296	65,549	52,896	42,202	54,696	78,078	69,060	59,737
		Avg. Weight per Fish (lb)	18.52	18.84	14.01	14.30	16.51	19.08	17.29	16.72	16.24	17.87	17.43	16.95	16.98
		Yield (millions of lb)	0.846	1.187	0.845	0.723	1.131	1.265	1.133	0.885	0.685	0.977	1.361	1.170	1.017
3A	Charter	Number of Fish	163,629	197,208	206,902	204,115	236,133	198,108	167,599	177,460	184,293	173,582	199,248	174,351	190,219
		Avg. Weight per Fish (lb)	20.67	18.60	17.83	17.95	16.95	17.05	16.31	15.20	15.16	13.16	12.62	11.65	16.10
		Yield (millions of lb)	3.382	3.668	3.689	3.664	4.002	3.378	2.734	2.698	2.793	2.284	2.514	2.032	3.070
	Non-Charter	Number of Fish	118,004	134,960	127,086	114,887	166,338	145,286	150,205	124,088	128,464	113,359	121,568	127,125	130,948
		Avg. Weight per Fish (lb)	17.34	14.35	15.61	14.57	13.71	13.37	13.47	12.79	12.57	11.83	11.94	12.06	13.63
		Yield (millions of lb)	2.046	1.937	1.984	1.674	2.281	1.942	2.023	1.587	1.615	1.341	1.452	1.533	1.785
Total	Charter	Number of Fish	237,413	281,535	309,108	294,586	345,968	301,073	221,201	218,662	220,838	216,018	251,923	239,387	261,476
		Avg. Weight per Fish (lb)	20.19	19.24	18.25	18.56	17.11	17.86	18.01	17.31	14.20	13.37	13.00	11.76	16.57
		Yield (millions of lb)	4.794	5.418	5.641	5.468	5.920	5.377	3.983	3.784	3.137	2.889	3.276	2.815	4.375
	Non-Charter	Number of Fish	163,701	197,949	187,450	165,407	234,836	211,582	215,754	176,984	170,666	168,055	199,646	196,185	190,685
		Avg. Weight per Fish (lb)	17.67	15.78	15.09	14.49	14.53	15.16	14.63	13.97	13.48	13.79	14.09	13.78	14.70
		Yield (millions of lb)	2.892	3.124	2.829	2.397	3.412	3.207	3.156	2.472	2.300	2.318	2.813	2.703	2.802

Source: Alaska Department of Fish and Game 2016; AECOM 2013

Table 32. Sport Halibut Charter and Non-Charter Harvest by Area and Community, Total Yield (millions of lbs), 2011-2014

Area	Region	Type	2011	2012	2013	2014	Average
2C	Ketchikan	Charter	0.027	0.041	0.070	0.092	0.058
		Non-Charter	0.062	0.107	0.212	0.152	0.133
	POW Island	Charter	0.073	0.120	0.135	0.162	0.122
		Non-Charter	0.099	0.130	0.197	0.130	0.139
	PBG/WRG	Charter	0.023	0.059	0.085	0.037	0.051
		Non-Charter	0.150	0.226	0.347	0.257	0.245
	Sitka	Charter	0.126	0.216	0.222	0.253	0.204
		Non-Charter	0.085	0.100	0.071	0.108	0.091
	Jun/Haines/Skag	Charter	0.036	0.051	0.085	0.079	0.063
		Non-Charter	0.145	0.140	0.204	0.211	0.175
	Glacier Bay	Charter	0.059	0.118	0.166	0.160	0.126
		Non-Charter	0.145	0.275	0.329	0.311	0.265
3A	Central Cook Inlet	Charter	0.664	0.522	0.651	0.440	0.569
		Non-Charter	0.478	0.319	0.358	0.372	0.382
	Lower Cook Inlet	Charter	1.102	0.833	0.784	0.622	0.835
		Non-Charter	0.536	0.477	0.536	0.484	0.508
	Kodiak	Charter	0.189	0.172	0.207	0.175	0.186
		Non-Charter	0.130	0.147	0.105	0.155	0.134
	North Gulf Coast	Charter	0.547	0.414	0.486	0.458	0.476
		Non-Charter	0.167	0.118	0.203	0.156	0.161
	Eastern PWS	Charter	0.101	0.107	0.113	0.101	0.106
		Non-Charter	0.121	0.128	0.086	0.137	0.118
	Western PWS	Charter	0.044	0.079	0.084	0.086	0.073
		Non-Charter	0.160	0.135	0.132	0.173	0.150
	Yakutat	Charter	0.125	0.128	0.135	0.101	0.123
		Non-Charter	0.021	0.018	0.031	0.057	0.032
	Glacier Bay	Charter	0.022	0.029	0.054	0.050	0.039
		Non-Charter	--	--	--	--	--

Source: Alaska Department of Fish and Game 2016

4.2.5 GOA Halibut Subsistence Fishery, Areas 2C, 3A, 3B, and 4A

Table 33 provides information on subsistence halibut harvest by community, for each of the Alaska communities substantially engaged in the GOA trawl fishery, as measured by resident ownership of GOA trawl catcher vessels, for all other Alaska communities combined, for the state as a whole, in terms of the number of subsistence fishermen, the number of fish harvested, and the total pounds of halibut caught for each year 2003-2014 and the annual averages 2003-2014 for each of those variables. As suggested by the large number of subsistence fishermen who are residents of "all other" Alaska communities and the large number of fish and pounds of halibut harvested by these fishermen (typically between two-thirds and three-quarters of the state totals for each of the three variables in any given year), halibut subsistence activity is widespread among numerous Alaska communities, although there are relatively large numbers of subsistence fishermen and volumes of subsistence halibut caught in the individually listed communities.

Table 33. Estimated Number of Halibut Subsistence Fishermen, Number of Halibut Caught, and Poundage Caught, by Alaska Community, 2003-2014 (numbers, pounds)

Community	Measurement	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (available years, number)	Average 2003-2014 (available years, percent)
Anchorage	Number of Subsistence Fishermen	37	46	39	49	62	48	52	47	71	49	--	38	49	0.9%
	Number of Halibut Caught	465	967	666	696	695	324	618	524	619	564	--	268	582	1.2%
	Pounds of Halibut Caught	11,206	25,239	15,474	16,854	13,619	7,692	12,991	13,545	10,283	11,502	--	6,200	13,146	1.4%
Homer	Number of Subsistence Fishermen	7	10	11	15	7	20	19	11	12	12	--	13	12	0.2%
	Number of Halibut Caught	74	132	108	80	36	163	479	183	175	199	--	81	155	0.3%
	Pounds of Halibut Caught	1,455	1,134	1,770	820	462	1,948	7,561	1,984	2,407	2,767	--	1,419	2,157	0.2%
King Cove	Number of Subsistence Fishermen	23	26	31	38	27	43	50	49	45	24	--	32	35	0.7%
	Number of Halibut Caught	399	355	330	458	310	382	328	510	360	270	--	293	363	0.8%
	Pounds of Halibut Caught	7,857	9,022	8,432	8,017	5,978	7,319	5,995	7,871	6,477	3,981	--	5,047	6,909	0.7%

Community	Measurement	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (available years, number)	Average 2003-2014 (available years, percent)
Kodiak	Number of Subsistence Fishermen	646	802	871	961	945	963	923	900	837	769	--	763	853	16.3%
	Number of Halibut Caught	6,526	8,359	10,694	8,750	9,381	9,366	9,346	8,445	7,953	6,704	--	6,401	8,357	17.9%
	Pounds of Halibut Caught	153,254	187,214	210,828	205,822	193,633	177,334	177,769	164,092	138,348	125,820	--	118,123	168,385	18.1%
Petersburg	Number of Subsistence Fishermen	415	482	436	426	386	393	418	409	370	383	--	375	408	7.8%
	Number of Halibut Caught	2,975	3,727	3,305	3,084	2,902	2,841	2,816	2,817	2,385	2,494	--	2,677	2,911	6.2%
	Pounds of Halibut Caught	55,718	71,784	61,372	53,682	47,517	46,600	46,766	47,266	40,087	44,912	--	48,375	51,280	5.5%
Sand Point	Number of Subsistence Fishermen	21	109	100	133	136	130	70	61	85	61	--	64	88	1.7%
	Number of Halibut Caught	225	561	1,356	914	1,364	1,510	654	559	607	357	--	440	777	1.7%
	Pounds of Halibut Caught	4,819	11,355	21,901	20,214	24,615	25,013	11,759	7,306	13,397	5,708	--	6,387	13,861	1.5%
All Other AK	Number of Subsistence Fishermen	3,783	4,509	4,133	4,287	4,370	3,706	3,758	3,505	3,279	3,088	--	3,217	3,785	72.4%
	Number of Halibut Caught	33,260	38,311	39,416	40,107	39,009	34,018	31,172	30,274	26,035	26,377	--	30,504	33,498	71.8%

Community	Measurement	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (available years, number)	Average 2003-2014 (available years, percent)
	Pounds of Halibut Caught	807,013	887,414	858,445	819,903	746,469	621,082	597,993	554,893	486,106	490,644	--	574,398	676,760	72.6%
Alaska Total	Number of Subsistence Fishermen	4,932	5,984	5,621	5,909	5,933	5,303	5,290	4,982	4,699	4,386	--	4,502	5,231	100.0%
	Number of Halibut Caught	43,924	52,412	55,875	54,089	53,697	48,604	45,413	43,312	38,134	36,965	--	40,664	46,644	100.0%
	Pounds of Halibut Caught	1,041,322	1,193,162	1,178,222	1,125,312	1,032,293	886,988	860,834	796,957	697,105	685,334	--	759,949	932,498	100.0%

Source: Alaska Department of Fish and Game 2016; AECOM 2013

4.3 GOA Chinook Salmon Fishery Indicators

Similar in format to the GOA trawl fishery indicators in Section 4.1, the following sections contain a range of quantitative information describing engagement (or participation) in and dependency (or reliance) on the GOA Chinook salmon fishery by community for the following sectors:

- GOA Commercial Chinook Salmon Catcher Vessels
- Shore-Based Processors Accepting GOA Commercial Chinook Salmon Deliveries

The communities highlighted in this section remain the communities most heavily engaged in and/or dependent upon the GOA trawl fishery to facilitate subsequent analysis of the potential aggregation of impacts across the three fisheries most likely to be directly impacted by the proposed alternatives (the GOA trawl fishery, the GOA halibut fishery, and the GOA Chinook salmon fishery). Detailed, analogous quantitative information on those communities most engaged in and dependent upon the GOA Chinook salmon fishery, independent of considerations of overlap with the GOA trawl fishery, are presented in Attachment 2. It is important to note, however, that the commercial GOA Chinook salmon fishery differs from the GOA trawl and GOA halibut commercial fisheries in several ways.

In broad terms, anyone with a Commercial Fisheries Entry Commission salmon permit may fish for Chinook salmon (unless otherwise prohibited); generally, Chinook are treated like all other species of salmon: when the salmon season is open, it is permissible to retain and sell Chinook salmon. However, in most management areas of the state, salmon fishermen are not targeting Chinook salmon, but encounter them while targeting other salmon species. Some area management plans do have provisions that target surplus Chinook production; there are also management provisions that limit salmon fishing to conserve Chinook when stock sizes are low in some areas. Non-retention of Chinook salmon occurs in some salmon fisheries, and is implemented when specific conservation or fishery allocation issues arise. Sometimes the non-retention restrictions are spelled out in Board of Fisheries regulatory management plans; in other instances, Chinook non-retention is implemented by emergency order.[22] Management actions intended to promote Chinook escapements and/or minimize Chinook harvests are common throughout the state and include gear restrictions, season closures, and area closures (Hartill 2016). In other words, some of the commercial Chinook salmon statistics presented in this section, at least for some areas at some times, do not represent people “fishing for Chinook” but, instead, harvests of Chinook while in the pursuit of other species.

Also, included in this section are an additional range of quantitative indictors of GOA Chinook salmon fishery engagement and/or dependency by community, including:

- GOA Chinook Salmon Sport Fishery
- GOA Chinook Salmon Subsistence and Personal Use Fishery

[22] A straightforward example of Chinook salmon non-retention periods occurs in the southeast troll fishery. There are specific areas and periods of the year when the troll fishery is open, but Chinook salmon retention is not allowed. The non-retention dates and areas are set out in management plans, and adjusted seasonally by emergency order, as needed (Hartill 2016).

4.3.1 GOA Commercial Chinook Salmon Catcher Vessels

Table 34 shows information on the number of GOA Chinook salmon catcher vessels by state and, within Alaska, by community for those communities with resident-owned fleets that are also engaged in the GOA trawl fisheries.[23] As shown, about three-quarters of all GOA Chinook salmon catcher vessels are owned by residents of Alaska communities are owned by residents of communities other than those most engaged in the GOA trawl fishery as measured by the number of resident-owned catcher vessels.

Table 35 shows GOA commercial Chinook salmon catcher vessel ex-vessel gross revenue information by community and year (2003-2014). As shown, roughly 90 percent of all GOA Chinook salmon catcher vessel ex-vessel gross revenue accrues to residents of Alaska communities other than those most engaged in the GOA trawl fishery as measured by the number of resident-owned catcher vessels.

Table 36 provides information on GOA Chinook salmon catcher vessel dependency on GOA Chinook salmon compared to all other areas, gear types, and species fished by those same vessels, for the GOA trawl catcher vessel communities. As shown, dependency on GOA Chinook salmon, as measured in percentage of total ex-vessel revenues, ranged from well less than one percent to somewhat over two percent across the six Alaska communities, and less than five percent for all geographies shown.

Table 37 provides information on community catcher vessel fleet dependency on GOA Chinook salmon compared to all other areas, gear types, and species fished by all vessels owned by residents of the GOA trawl catcher vessel communities. (This table includes all commercial fishing catcher vessels, not just vessels that participate in the GOA Chinook salmon fishery for those communities that had at least one resident-owned GOA trawl catcher vessel participating in any year 2003-2014.) As shown, community fleet dependency on GOA Chinook salmon, as measured by GOA Chinook salmon ex-vessel gross revenues as a proportion of all ex-vessel gross revenues on an annual average basis, was less than one-half of one percent for the six Alaska GOA trawl catcher vessel communities and less than one percent for all geographies combined. The highest level of dependency was for “all other Alaska” (that is, for all Alaska communities combined, exclusive of the six named Alaska GOA trawl catcher vessel communities) at approximately three percent.

[23] A more comprehensive summary of commercial Chinook salmon catcher vessels by community is provided in Attachment 2.

Table 34. Individual Commercial Chinook Catcher Vessels With Revenue by Community of Vessel Owner, 2003-2014 (number of vessels)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
Anchorage	72	81	76	67	64	55	61	66	67	61	66	77	67.8	3.6%	232
Homer	124	120	150	142	118	113	122	121	130	123	161	145	130.8	7.0%	405
King Cove	18	21	20	22	24	19	23	26	24	23	20	24	22.0	1.2%	46
Kodiak	75	74	76	72	70	64	73	71	88	84	95	86	77.3	4.2%	188
Petersburg	32	34	32	45	56	32	40	41	20	47	30	61	39.2	2.1%	138
Sand Point	47	49	50	49	47	41	51	48	57	50	56	41	48.8	2.6%	98
All Other AK	1,001	1,102	1,104	1,117	1,111	1,047	1,096	1,070	1,056	1,078	1,054	1,140	1,081.3	58.3%	2,456
Alaska Total	1,369	1,481	1,508	1,514	1,490	1,371	1,466	1,443	1,442	1,466	1,482	1,574	1,467.2	79.0%	3,246
Newport	0	0	0	0	0	0	0	1	1	0	0	0	0.2	0.0%	1
All Other OR	60	54	63	58	57	53	55	49	45	44	37	43	51.5	2.8%	166
Oregon Total	60	54	63	58	57	53	55	50	46	44	37	43	51.7	2.8%	167
Seattle MSA	85	82	88	94	86	76	96	73	98	84	82	86	85.8	4.6%	246
All Other WA	168	176	201	176	184	164	180	146	169	142	128	150	165.3	8.9%	456
Washington Total	253	258	289	270	270	240	276	219	267	226	210	236	251.2	13.5%	676
All Other States	68	63	84	82	91	94	111	81	87	83	93	99	86.3	4.7%	347
Grand Total	1,750	1,856	1,944	1,924	1,908	1,758	1,908	1,793	1,842	1,819	1,822	1,952	1,856.3	100.0%	3,962

Note: Due to vessel movement between communities over the years shown, total unique CVs per community may not sum to state or grand totals.

Source: AKFIN 2016a

Table 35. GOA Chinook Catcher Vessels Ex-Vessel Gross Revenues by Community of Vessel Owner, 2003-2014 (adjusted 2015 dollars)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
Geography	$ (thousands)													
Anchorage	415	489	353	282	277	122	106	115	163	162	109	203	233	1.8%
Homer	357	287	354	350	324	88	117	146	291	262	124	238	245	1.8%
King Cove	1	1	2	5	6	7	10	9	8	20	10	11	8	0.1%
Kodiak	74	122	100	149	124	94	43	57	61	45	68	18	79	0.6%
Petersburg	307	480	250	504	382	220	212	214	170	321	166	363	299	2.3%
Sand Point	14	38	22	40	57	38	64	47	47	43	51	46	42	0.3%
All Other AK	10,572	15,652	11,132	12,943	12,344	9,329	6,071	7,706	8,301	8,414	6,412	10,357	9,936	74.9%
Alaska Total	11,740	17,070	12,214	14,272	13,513	9,896	6,622	8,293	9,042	9,268	6,940	11,236	10,842	81.7%
Oregon Total	315	322	298	299	307	208	178	103	132	157	73	149	212	1.6%
Seattle MSA	457	590	511	845	605	314	364	308	345	276	156	278	421	3.2%
All Other WA	1,282	1,936	1,522	2,113	1,796	1,285	907	1,150	1,042	885	487	1,517	1,327	10.0%
Washington Total	1,740	2,527	2,033	2,957	2,401	1,599	1,271	1,457	1,387	1,161	643	1,794	1,748	13.2%
All Other States	305	384	341	456	507	597	391	245	409	506	638	818	466	3.5%
Grand Total	14,099	20,303	14,887	17,984	16,728	12,301	8,463	10,098	10,970	11,092	8,293	13,997	13,268	100.0%

Source: AKFIN 2016a

Table 36. GOA Chinook Salmon Catcher Vessels Ex-Vessel Gross Revenue Diversification by Community of Vessel Owner, All Communities, 2003-2014

Geography	Annual Average Number of GOA Chinook Salmon CVs 2003-2014	GOA Chinook Salmon CVs Annual Average Ex-Vessel Gross Revenues from GOA Chinook Salmon Only 2003-2014 ($ thousands)	GOA Chinook Salmon CVs Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries 2003-2014 ($ thousands)	GOA Chinook Salmon CVs GOA Chinook Salmon Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average 2003-2014
Anchorage	67.8	232.9	10,136.6	2.3%
Homer	130.8	244.9	25,800.4	0.9%
King Cove	22.0	7.6	6,479.8	0.1%
Kodiak	77.3	79.4	28,459.6	0.3%
Petersburg	39.2	299.1	17,882.8	1.7%
Sand Point	48.8	42.2	15,018.2	0.3%
All Other AK	1,081.3	9,936.1	133,303.6	7.5%
Alaska Total	1,467.2	10,842.2	237,081.0	4.6%
Oregon Total	51.7	211.7	7,326.1	2.9%
Seattle MSA	85.8	420.7	23,102.3	1.8%
All Other WA	165.3	1,326.8	31,435.8	4.2%
Washington Total	251.2	1,747.5	54,538.1	3.2%
All Other States Total	86.3	466.4	26,475.1	1.8%
Grand Total	1,856.3	13,267.9	325,420.3	4.1%

Source: AKFIN 2016b

Table 37. GOA Chinook Salmon Catcher Vessel and All Catcher Vessel Ex-Vessel Gross Revenue Diversification by Community of Vessel Owner, 2003-2014

Geography	Annual Average Number of GOA Chinook Salmon CVs 2003-2014	Annual Average Number of All Commercial Fishing CVs 2003-2014	All Commercial Fishing CVs Annual Average Ex-Vessel Gross Revenues from GOA Chinook Salmon Only 2003-2014 ($ thousands)	All Commercial Fishing CVs Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries 2003-2014 ($ thousands)	All Commercial Fishing CVs GOA Chinook Salmon Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average 2003-2014
Anchorage	67.8	239.0	232.9	53,918.0	0.4
Homer	130.8	323.8	244.9	78,680.6	0.3
King Cove	22.0	32.3	7.6	9,152.8	0.1
Kodiak	77.3	265.0	79.4	137,910.6	0.1
Petersburg	39.2	322.2	299.1	73,365.1	0.4
Sand Point	48.8	76.0	42.2	18,106.2	0.2
All Other AK	1,081.3	3,066.7	9,936.1	315,618.5	3.1
Alaska Total	1,467.2	4,324.9	10,842.2	686,751.7	1.6
Oregon Total	51.7	212.3	211.7	115,904.6	0.2
Seattle MSA	85.8	538.3	420.7	504,201.6	0.1
All Other WA	165.3	640.8	1,326.8	157,295.3	0.8
Washington Total	251.2	1,179.0	1,747.5	661,496.9	0.3
All Other States Total	86.3	423.7	466.4	78,588.9	0.6
Grand Total	1,856.3	6,139.9	13,267.9	1,542,742.1	0.9

Source: AKFIN 2016b

4.3.2 Shore-Based Processors Accepting GOA Commercial Chinook Salmon Deliveries

Table 38 provides information on the distribution of shore-based processors that accepted GOA Chinook salmon deliveries in the period 2003-2014. The communities specifically called out in the table are limited to subset of the communities otherwise selected for community profile characterization, plus Ninilchik, as these are the only communities that also had at least one shore-based processor accepting trawl-caught deliveries of GOA groundfish in more than one year during the period 2003-2014 (with Ninilchik being the only community in the group averaging less than 0.5 shore-based processors per year accepting GOA trawl-caught groundfish). As shown, three communities averaged more GOA Chinook salmon shore-based processors than processors accepting GOA trawl-caught deliveries on annual basis (Kodiak, Ninilchik, and Seward), while four averaged fewer (Akutan, King Cove, Sand Point, and Unalaska/Dutch Harbor); as shown, however, about 85 percent of processors accepting GOA Chinook salmon over this period operated in communities other than these seven.

Table 39 provides information on the first wholesale gross revenues from GOA Chinook salmon deliveries by community and year (2003-2014) to the extent possible within data confidentiality restrictions. As shown, only information for Kodiak can be disclosed on an individual community basis, with Kodiak accounting for less than one percent of all GOA Chinook salmon processing first wholesale gross revenues on an annual average basis.

Table 40 provides information on average annual GOA Chinook salmon dependency on GOA Chinook salmon compared to all area and species fisheries landings processed by those same processors for the years 2003-2014. Importantly, this table is (1) derived from a different data source than the preceding table and (2) is based on ex-vessel gross revenues rather than first-wholesale gross revenues (unlike the preceding table), with both differences resulting from limitations within available processor (both shore-based processor and catcher processor) diversity data. Thus, these data should be used as a relative gauge of diversity rather than used in direct comparison to the preceding table. As shown, Kodiak GOA halibut processors derived about one-tenth of one percent of their total ex-vessel gross revenues from GOA Chinook salmon alone over that period; for all other GOA Chinook salmon shore-based processors as a group, GOA Chinook salmon accounts for about three percent of total ex-vessel gross revenues on an average annual basis over the same period for those same processors.

Table 41 provides information on average annual total shore-based processor dependency (all shore-based processors in the communities that had at least one GOA trawl shore-based processor, not just the shore-based processors that participated in the GOA trawl fishery) on GOA Chinook salmon compared to all area and species fishery landings processed by all processors for the years 2003-2014, within the constraints of confidentiality restrictions. This table is derived from the same data source as the preceding table, and the same data interpretation caveats detailed above equally apply. As shown, for 2008-2013, the distribution pattern of GOA Chinook salmon ex-vessel gross revenues for all community processors was similar to that of just those processors accepting GOA Chinook salmon deliveries over these same years. All Kodiak shore-based processors as a group derived about one-tenth of one percent of their total ex-vessel gross revenues from GOA Chinook salmon alone over that period; for all processors in all other communities with at least one shore-based processor accepting trawl-caught deliveries during this period, GOA Chinook salmon accounted for about three percent of total ex-vessel gross revenues on an average annual basis over the same period.

Table 38. Shore-Based Processors Accepting GOA Chinook Salmon by Community, 2003-2014 (number)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique SBPRs 2003-2014 (number)
Akutan	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.1%	1
King Cove	1	1	1	1	1	1	1	1	1	1	1	1	1.0	0.8%	1
Kodiak	7	8	9	9	10	8	9	8	9	9	8	7	8.4	6.8%	20
Ninilchik	1	1	1	2	1	0	1	0	0	0	1	0	0.7	0.5%	5
Sand Point	1	2	2	2	2	2	1	2	1	1	1	2	1.6	1.3%	2
Seward	3	2	1	1	3	1	1	2	1	1	1	1	1.5	1.2%	5
Unalaska/ Dutch Harbor	0	0	0	0	0	1	0	0	0	0	0	0	0.1	0.1%	1
All Other AK	102	115	114	112	108	116	101	95	99	100	95	107	105.3	84.5%	288
Alaska Total	115	129	128	127	125	129	114	108	111	112	107	119	118.7	95.3%	323
Seattle	3	0	0	0	0	0	0	0	0	0	0	0	0.3	0.2%	3
Other/Unknown	9	6	4	5	7	7	5	5	5	4	5	6	5.7	4.5%	23
Grand Total	127	135	132	132	132	136	119	113	116	116	112	125	124.6	100.0%	349

Source: AKFIN 2016a

Table 39. First Wholesale Gross Revenues from GOA Chinook Salmon Deliveries to Shore-Based Processors by Community, 2003-2014 (adjusted 2015 dollars)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (dollars)	Average 2003-2014 (percent)
Geography	$ (thousands)													
Kodiak	102.1	222.7	162.1	314.5	198.3	179.4	72.5	157.3	177.0	93.4	135.2	42.6	154.8	0.6%
All Other	18,446.2	33,959.9	30,944.4	35,889.3	32,032.5	25,604.7	15,536.8	19,379.2	22,123.8	18,329.4	16,745.0	22,261.4	24,271.1	99.4%
Total	18,548.3	34,182.6	31,106.5	36,203.8	32,230.8	25,784.1	15,609.3	19,536.5	22,300.8	18,422.9	16,880.2	22,304.0	24,425.8	100.0%

Source: AKFIN 2016a

Table 40. Shore-Based Processors in Alaska Accepting GOA Chinook Salmon Deliveries Ex-Vessel Gross Revenues Diversity by Community 2003-2014

Geography	Annual Average Number of Processors Processing GOA Chinook Salmon 2003-2014	GOA Chinook Salmon Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ thousands)	Total (All Areas and Species) Ex-vessel Gross Revenues Annual Average 2003-2014 ($ thousands)	GOA Chinook Salmon Ex-Vessel Gross Revenues as a Percentage of Total Ex-Vessel Gross Revenues Annual Average 2003-2014
Kodiak	8.4	154.8	137,070.2	0.1%
Other	116.2	24,271.1	785,271.3	3.1%
Total	124.6	24,425.8	922,341.5	2.6%

Source: AKFIN 2016b

Table 41. All Areas and Species Ex-Vessel Gross Revenues Diversity by Community for All Shore-Based Processors (for Alaska communities with at least one shore-based processor accepting GOA Chinook salmon deliveries) 2003-2014

Geography	Annual Average Number of Processors Processing GOA Chinook Salmon 2003-2014	Annual Average Number of Total Processors 2003-2014	GOA Chinook Salmon Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ thousands)	Total (All Areas and Species) Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ thousands)	GOA Chinook Salmon Ex-Vessel Gross Revenues as a Percentage of Total Ex-Vessel Gross Revenues Annual Average 2003-2014
Kodiak	8.4	12.6	154.8	161,393.5	0.1%
Other	116.2	146.4	24,271.1	862,095.3	2.8%
Total	124.6	159.0	24,425.8	1,023,488.8	2.4%

Source: AKFIN 2016b

4.3.3 GOA Chinook Salmon Sport Fishery

Table 42 provides information on the GOA sport Chinook salmon harvest by subarea in the Southeast and South-Central regions, in terms of the number of fish harvested, for each year 2003-2014 and the annual averages 2003-2014. Data separating Chinook salmon sport fishery harvest into guided and un-guided harvests by community are not readily available.

Table 42. Sport Harvest by Region: Number of Chinook Salmon Harvested, 2003-2014 (number)

Region	Area	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
Southeast	Ketchikan	11,788	14,393	16,483	10,084	11,370	11,030	22,633	10,128	12,387	4,831	11,039	13,878	12,504	8.6%
	Prince of Wales Island	7,793	10,120	13,615	12,670	11,633	3,894	5,793	7,014	10,385	7,390	7,335	12,784	9,202	6.4%
	Kake, Petersburg, Wrangell, Stikine	7,465	7,958	8,988	10,972	10,797	5,669	5,328	3,987	3,843	3,679	3,657	5,214	6,463	4.5%
	Sitka	21,727	26,443	26,698	34,751	30,879	15,337	18,336	23,515	27,909	21,927	19,974	40,748	25,687	17.8%
	Juneau	13,679	14,756	14,948	11,163	10,372	10,524	12,169	10,085	6,839	6,038	8,105	7,224	10,492	7.3%
	Skagway	1,229	1,042	758	798	776	387	466	494	492	362	481	293	632	0.4%
	Haines	888	853	601	504	524	63	269	248	762	199	164	153	436	0.3%
	Glacier Bay	3,325	3,601	3,343	3,488	5,363	1,671	3,277	2,072	3,155	1,778	4,947	5,264	3,440	2.4%
	Yakutat	1,476	1,406	1,141	1,364	1,134	690	1,294	960	803	291	690	1,384	1,053	0.7%
South-Central	North Gulf Coast/Prince William Sound	6,372	5,553	6,059	7,931	6,438	5,650	6,145	5,366	3,928	3,076	5,811	4,618	5,579	3.9%
	Knik Arm	2,562	2,556	3,692	3,813	4,326	2,843	2,152	1,076	1,012	292	495	1,026	2,154	1.5%
	Anchorage	3,678	3,160	4,329	3,165	3,106	2,647	1,027	1,130	616	113	824	882	2,056	1.4%
	Susitna River drainage	24,534	24,192	24,632	24,864	20,341	13,426	8,368	8,894	8,701	2,785	2,489	2,049	13,773	9.5%
	West Cook Inlet drainages	1,124	782	546	1,038	1,380	437	829	854	76	0	0	130	600	0.4%
	Kenai Peninsula freshwater	25,472	26,383	30,066	26,265	26,461	23,397	15,637	14,136	15,089	2,226	3,570	2,424	17,594	12.2%
	Cook Inlet saltwater	14,828	17,737	18,850	16,368	12,556	8,562	6,546	10,134	9,284	6,890	11,022	11,989	12,064	8.3%
	Cook Inlet (Shellfish only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
	Kodiak	9,031	11,263	9,298	11,821	11,251	9,466	8,854	6,440	7,926	7,558	9,333	8,854	9,258	6.4%
	Alaska Peninsula/Aleutian Islands	3,105	4,263	3,215	3,682	2,538	2,134	2,826	2,329	2,923	2,687	1,966	1,609	2,773	1.9%
	Kvichak River drainage	577	1,293	1,440	1,132	1,075	1,072	300	418	1,427	917	949	1,088	974	0.7%
	Nushagak, Wood River and Togiak	7,004	8,607	9,537	8,976	11,587	7,700	7,171	4,514	6,529	6,804	7,632	8,451	7,876	5.4%
SE & S-C	Grand Total	167,657	186,361	198,239	194,849	183,907	126,599	129,420	113,794	124,086	79,843	100,483	130,062	144,608	100.0%

Source: Alaska Department of Fish and Game 2016a

4.3.4 GOA Chinook Salmon Subsistence and Personal Use Fishery

Table 43 provides information on the subsistence and personal use GOA Chinook salmon fishery by community, for each of the Alaska communities substantially engaged in the GOA trawl fishery, as measured by resident ownership of GOA trawl catcher vessels,[24] for all other Alaska communities combined, and for the state as a whole, in terms of the number of returned households/permits, Chinook salmon harvest, and all salmon harvest, for each year 2010-2013 and the annual averages 2010-2013 for each of those variables.

Table 43. Estimated Subsistence and Personal Use Chinook Salmon Harvests, 2010-2013 (number of returned households/permits and number of fish)

Geography	Measurement	2010	2011	2012	2013	Average 2010-2013 (number)	Average 2010-2013 (percent)
Anchorage	Returned Households/Permits	13,585	14,544	15,314	15,220	14,666	30.9%
	Chinook Harvest	1,344	1,843	1,033	1,149	1,342	1.3%
	All Salmon Harvest	281,228	338,400	355,915	286,106	315,412	19.6%
Homer	Returned Households/Permits	728	826	837	840	808	1.7%
	Chinook Harvest	60	77	37	71	61	0.1%
	All Salmon Harvest	13,854	17,497	17,960	14,396	15,927	1.0%
King Cove	Returned Households/Permits	49	40	46	48	46	0.1%
	Chinook Harvest	0	4	52	10	17	0.0%
	All Salmon Harvest	4,645	6,230	5,260	4,480	5,154	0.3%
Kodiak	Returned Households/Permits	1,441	1,523	1,455	1,335	1,439	3.0%
	Chinook Harvest	153	76	114	142	121	0.1%
	All Salmon Harvest	21,138	30,872	22,597	26,251	25,215	1.6%
Petersburg	Returned Households/Permits	95	102	138	184	130	0.3%
	Chinook Harvest	5	2	23	38	17	0.0%
	All Salmon Harvest	1,951	1,136	1,886	2,682	1,914	0.1%
Sand Point	Returned Households/Permits	35	35	42	46	40	0.1%
	Chinook Harvest	176	274	178	164	198	0.2%
	All Salmon Harvest	5,074	4,411	5,926	4,441	4,963	0.3%
All Other	Returned Households/Permits	29,028	30,350	30,673	31,417	30,367	63.9%
	Chinook Harvest	133,340	129,042	73,774	83,043	104,800	98.4%
	All Salmon Harvest	1,189,534	1,235,104	1,319,271	1,230,688	1,243,649	77.1%
Alaska Total	Returned Households/Permits	44,961	47,420	48,505	49,090	47,494	100.0%
	Chinook Harvest	135,078	131,318	75,211	84,617	106,556	100.0%
	All Salmon Harvest	1,517,424	1,633,650	1,728,815	1,569,044	1,612,233	100.0%

Source: Alaska Department of Fish and Game 2013a; Alaska Department of Fish and Game 2013b; Alaska Department of Fish and Game 2014; Alaska Department of Fish and Game 2015

[24] A more comprehensive summary of GOA Chinook salmon subsistence and personal use by Alaska community is provided in Attachment 2.

5 Community Context of the Fisheries

5.1 Overview

This section contains a set of community profiles for the communities that were most substantially engaged in and/or dependent upon the GOA trawl fishery over the period 2003-2014, organized by their geographic location and sector mode of engagement in the fishery. Specifically, they were those Alaska communities that had at least one resident-owned trawl catcher vessel that made at least one GOA trawl delivery in more than one year over the period 2003-2014 and/or had an average of 0.5 or more shore-based processors operating in the community annually over the period 2003-2014 (i.e., the community had, on average, shore-based processing in at least half of the years during the period). Based on these criteria, a total of total of nine Alaska communities were identified for inclusion in the series of community profiles. Additionally, two Pacific Northwest communities or groupings of communities were chosen for inclusion in the series of community profiles based on substantial engagement in the GOA trawl fishery through one or more sectors relative to other participating communities in the Pacific Northwest region: the Seattle, Washington metropolitan area and Newport, Oregon (based on substantial multi-sector engagement in the former and substantial resident-owner catcher vessel engagement in the latter).

Among Alaska communities, three were substantially engaged in GOA trawl fishery through both engagement of resident-owned catcher vessels and engagement of one or more locally operating shore-based processors. These were:

- Kodiak
- Sand Point
- King Cove

Three other Alaska communities were engaged to a greater degree than other Alaska communities in the GOA trawl fishery through participation of local resident-owned catcher vessels, but did not have a locally operating shore-based processor during this period. These were:

- Anchorage
- Petersburg
- Homer

An additional three other Alaska communities were engaged to a greater degree than other Alaska communities in the GOA trawl fishery through local operations of a shore-based processor, but were not engaged through participation of resident-owned catcher vessels. These were:

- Seward
- Akutan
- Unalaska/Dutch Harbor

Among communities in the Pacific Northwest, two were substantially engaged in the GOA trawl fishery through participation of local resident-owned catcher vessels or, in the case of the Seattle MSA additionally through local ownership of catcher processors as well as being shown in the data as the location of shore-based processing (in this case, likely floating processors operating in Alaska). These were:

- Seattle MSA, Washington
- Newport, Oregon

The level of detail provided in the following community profiles varies by nature and relative order of magnitude of community engagement in the fishery and, therefore, the likelihood that these communities could experience community-level social impacts because of the implementation of one or more of the proposed GOA trawl bycatch management alternatives. More detailed community descriptions are provided for the communities of Kodiak, Sand Point, and King Cove, covering in summary form local demographics, the local economy and socioeconomic context, commercial fisheries engagement through the harvest and processing sectors, sport fishing engagement, subsistence fishing engagement, local fishing support services, and public revenues. For the communities described in less detail, relevant information is presented in more abbreviated form, and then only to the extent necessary to contextualize the community's specific type of limited involvement in the GOA trawl fisheries.

5.2 Alaska Communities

5.2.1 Kodiak

5.2.1.1 Introduction, Location, and History

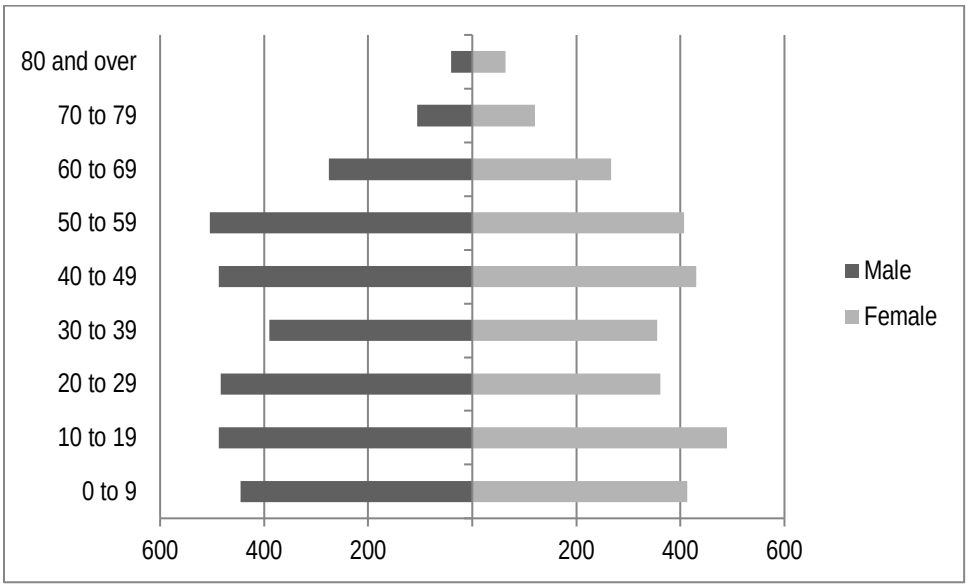
The city of Kodiak, located on a northeastern shore of Kodiak Island and bridge-connected Near Island in the Gulf of Alaska, is approximately 250 miles southwest of Anchorage. Kodiak is incorporated as a Home Rule City within the Kodiak Island Borough (KIB). Kodiak Island is only reachable by air and sea, but an on-island road system, which does not connect to the other incorporated communities in the borough, does connect Kodiak to the unincorporated census designated places of Chiniak and Womens Bay, as well Kodiak Station, the site of the largest U.S. Coast Guard installation in the country. Kodiak is adjacent to the Central GOA Regulatory Area, Kodiak District (630), and halibut regulatory area 3A.

Kodiak Island is estimated to have been inhabited for at least 7,500 years by the ancestors of the present-day inhabitants of the Alutiiq culture area. At the time of the Russian contact in the mid-1700s, the peoples living on Kodiak Island were the Koniags, the Alutiiq of Kodiak Island and the Alaska Peninsula; following contact disease, violence, and hardship drastically reduced the indigenous population of the island (National Oceanic and Atmospheric Administration 2013). A Russian trading post was established on a site that is now a part of the city of Kodiak in 1792 and for a time the community served as the capital of Russian America. While the fur trade continued after the purchase of Alaska by the United States, substantive development of commercial fishing in the area can be traced back to the establishment of a cannery on the Karluk spit in 1882, with multiple canneries opening in the 1890s. The community served as a major center of military activity during the Aleutian Campaign in World War II, with the local Navy base of that era providing the foundation of the contemporary Coast Guard installation. Following the war, Kodiak once again became an important regional center for fish processing (National Oceanic and Atmospheric Administration 2013).

5.2.1.2 Community Demographics

According to U.S. Census figures from 2010, a total of 6,130 people reside in Kodiak. There were proportionally more males in the population than most communities profiled, as demonstrated in Figure 3, and the largest cohort of residents consisted of individuals aged 10 to 19. The gender composition of Kodiak varies from state and national averages, especially during those years when individuals would be mostly likely to be in the active labor pool, indicative of being the work location of an industry or industries with predominately male, relatively transient workforces whose members have come to Kodiak for employment. However, Kodiak's population is not as disproportionately male as some of the smaller communities profiled that are tied to very large seafood processing operations relative to the overall population base, reflective of a more diverse economy and larger population base in Kodiak (AECOM 2013).

Figure 3. Kodiak 2010 Population Structure



Source: U.S. Census Bureau 2011

Census figures from 2010 show that 40.3 percent of the residents of Kodiak identified themselves as White, 9.9 percent as American Indian or Alaska Native, 0.5 percent as Black/African American, 37.4 percent as Asian, 1.0 percent as Pacific Islander, and 10.9 percent as "some other race" or "two or more races." Finally, 9.4 percent of the residents of any race in Kodiak identified themselves as Hispanic. Based on race and ethnicity combined, 62.7 percent of Kodiak's total population was composed of minority residents (that is, all residents other than those identified as White/non-Hispanic [race/ethnicity]). In general, compared to several smaller fishing communities in the region, Kodiak has a relatively small Alaska Native population segment, but one that is larger than those communities in the region that were not originally Alaska Native communities. Similar to the smaller profiled fishing communities of King Cove and Sand Point, however, Kodiak has a sizeable Asian/Pacific Islander/Other population segment that is often associated with larger seafood processing operations that in other communities draw a proportionately large number of workers from a non-local labor pool (AECOM 2013).

Housing data from the U.S. Census, as shown in Table 44, indicate that 97.7 percent of all Kodiak residents lived in non-group quarters housing, with total housing units in Kodiak numbering 2,178. Of those housing units, approximately 93.6 percent were occupied. Family households number 1,342, with an average household size of 2.94 persons. The relatively few residents living in group quarters differentiates Kodiak from many other communities dominated by seafood processing, as those communities typically have substantial numbers of relatively transient residents living in group housing. Despite a large seafood processing population, these workers tend to be long-term Kodiak residents and do not live in group quarters housing, although many may have originally come to the community for seafood processing employment opportunities before settling in the community for the longer term (AECOM 2013).

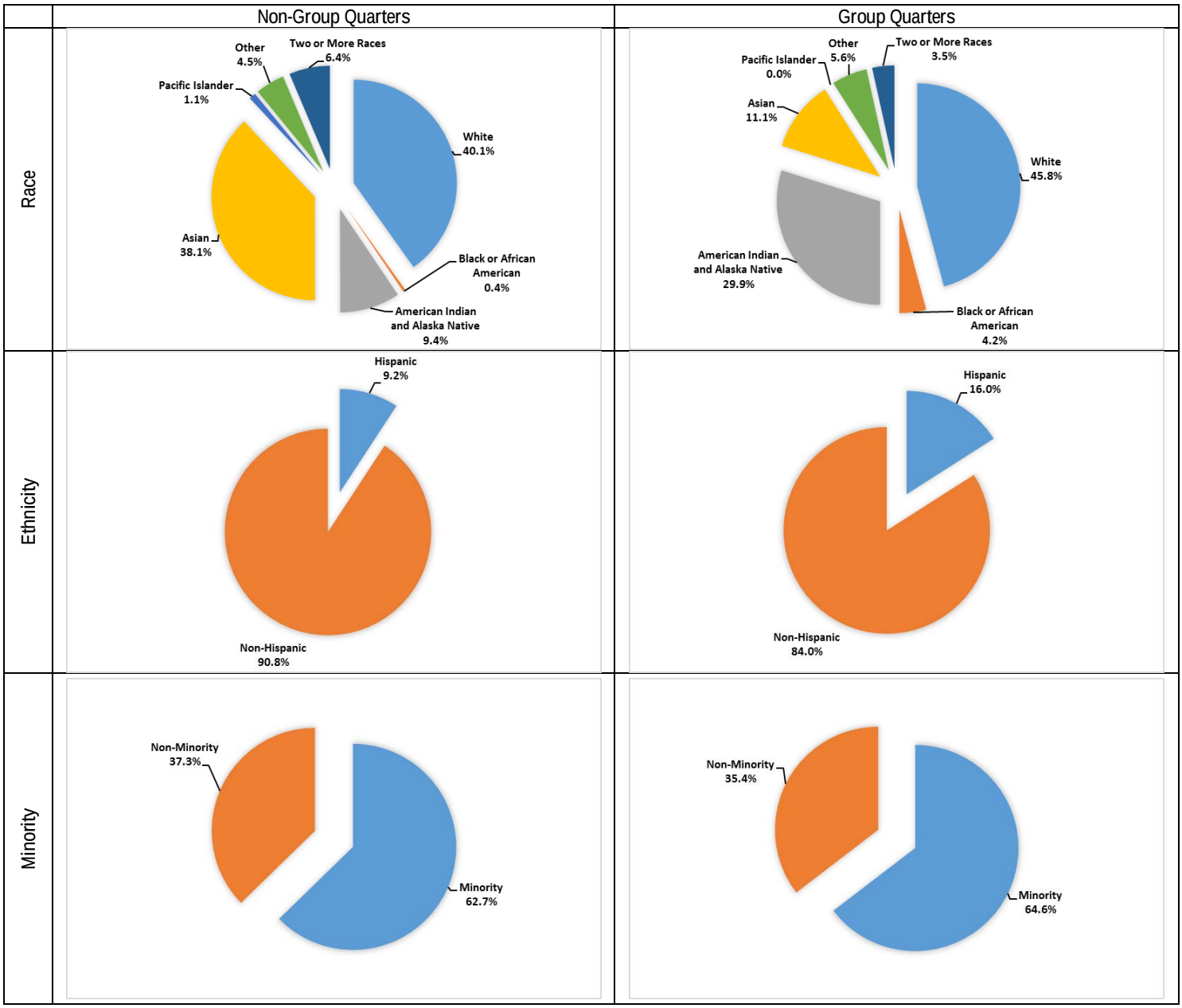
Table 44. Kodiak 2010 Housing Information

Category	Number	Percent
Total Population	6,130	100%
Living in Non-Group Quarters	5,986	97.7%
Living in Group Quarters	144	2.3%
Total Housing Units	2,178	100%
Occupied Housing (Households)	2,039	93.6%
Vacant Housing	139	6.4%
Family Households	1,342	65.8%
Average Household Size	2.94	na

na = not applicable
Source: U.S. Census Bureau 2011

Figure 4 provides a comparison of selected demographic indices for race, ethnicity, and minority status by housing type for Kodiak. As shown, the demographics of the portion of the population living in non-group quarters is quite different from the portion of the population living in group quarters. In other communities in southwestern Alaska with relatively large processing capacity, such as Sand Point and King Cove, it is common for Alaska Native residents to make up a relatively large proportion of the non-group quarters population and a relatively small proportion of the group quarters population, with the opposite being true for persons of Asian/Pacific Islander/Other descent. In Kodiak, that pattern is reversed, which is primarily attributable to two factors. First, a substantial portion of the Kodiak population consists of individuals who originally came to Kodiak for employment opportunities in the processing industry but who stayed long-term, settling in the community as permanent residents (and/or are individuals who have kinship or other pre-existing social ties to other individuals who did so), a situation not common in other southwest Alaska communities. Second, group quarter housing in other (smaller) southwest Alaska communities with relatively large processing capacity tends to be processor housing that, in turn, houses a large number of persons relative to the total population of the community. In Kodiak, however, relatively few people live in group quarters housing, and much of that housing is not affiliated with processing entities, with several examples including homeless shelters, juvenile correction facilities, and nursing facilities, residential institutions that are not common in smaller fishing communities in the region.

Figure 4. Selected Demographic Indices by Housing Type, Kodiak, 2010



Source: U.S. Census Bureau 2011

5.2.1.3 Local Economy and Socioeconomic Context

As described in AECOM 2010, the economic underpinning of the community of Kodiak is commercial fishing, with much of the direct and indirect economic activity in Kodiak relying to a greater or lesser degree on fishing activity as a base. Though commercial fishing remains a central element underpinning the local economy, Kodiak's economy is quite diversified, particularly by rural Alaska standards. The local U.S. Coast Guard installation, although relatively self-sufficient in many respects, contributes substantially to the local economy. Tourism has grown in importance in recent years as an economic driver but is not nearly as important to economy as the commercial fishing and government sectors.

The latest estimates based on the 2010-2014 U.S. Census American Community Survey suggest that 3,678 people were employed in Kodiak, with an unemployment rate of 2.9 percent. Per capita income for people in Kodiak was estimated at $28,592, median household income was $62,292, and median family income was $72,315. An estimated 11.7 percent of Kodiak's residents were considered low-income, defined as those individuals living below the poverty level threshold (Alaska Department of Labor and Workforce Development 2016). Table 45 displays the top five occupations in Kodiak.

Table 45. Kodiak Top Five Occupations, 2014

Rank	Occupations
1	Meat, Poultry, and Fish Cutters and Trimmers
2	Sales and Related Workers
3	Cashiers
4	Janitors and Cleaners
5	Personal Care Aides

Source: Alaska Department of Labor and Workforce Development 2016

5.2.1.4 Commercial Fisheries Engagement

Overview

According to a study commissioned by the KIB and the City of Kodiak, in 2014 the seafood industry accounted for an annual average of just over 3,900 jobs in the KIB, $236 million in total annual labor income, and $396 million in total output, including all direct, indirect, and induced effects (McDowell Group 2016). According to this same study, that represents, conservatively, 30 to 40 percent of the local economy, measured in terms of income and employment, respectively (McDowell Group 2016).

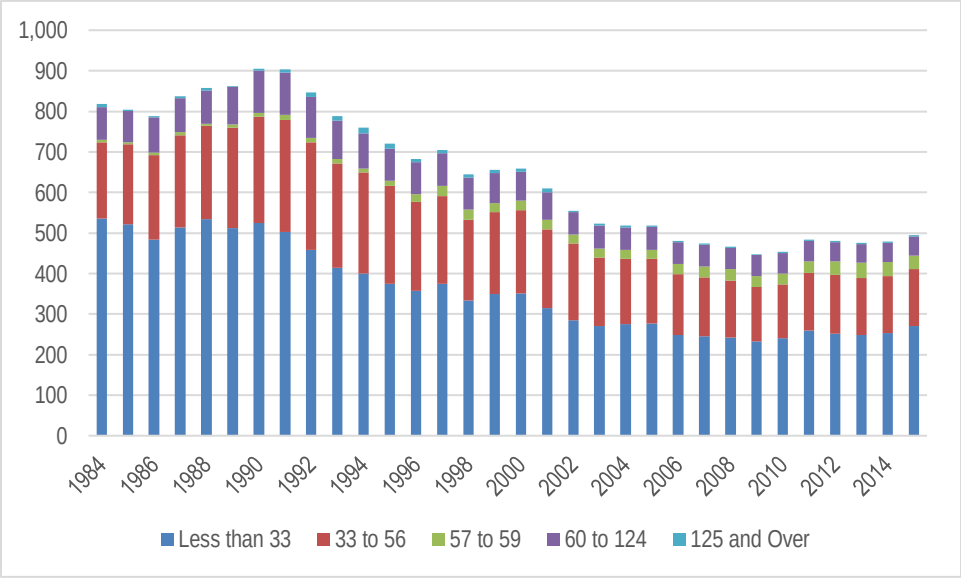
Harvest Sector

General

Figure 5 shows changes in the number of locally owned commercial fishing vessels, by size class, for the period 1984 through 2014. As shown, there was a general decreasing trend in the number of resident-owned commercial fishing vessels in the community from around 1990 through 2009, with

overall fleet numbers plateauing in more recent years, well below the peak seen roughly 25 years ago. A detailed, if now somewhat dated, overview of the Kodiak fleet, including types of vessels and their associated annual rounds, distribution of permit holders, catch and earnings estimates, and landings inside and outside of the community, along with an analysis of the spatial distribution of the fishing effort of the local fleet is available in an earlier NPFMC community profile (EDAW 2005). As updating this information is effort intensive and not central to the current GOA trawl bycatch management-oriented community analysis, this overarching characterization has not been updated here. Rather, the more qualitatively oriented and GOA trawl specific-focused discussion has been expanded below. Limited parallel information is also provided on the local fleet sectors engaged in the GOA halibut and GOA Chinook salmon fisheries.

Figure 5. Number of Commercial Fishing Vessels Owned by Kodiak Residents, by Length Category, 1984-2015.



Source: Commercial Fisheries Entry Commission 2016

From 2003 through 2014, the annual number of Kodiak resident-owned commercial fishing vessels participating in all fisheries, using all gear types in all areas combined (i.e., the community commercial fishing fleet), varied from 251 (in 2008) to 289 (in 2011), with an annual average of 265.0 resident-owned commercial fishing vessels over this time span. The annual ex-vessel gross revenues for these vessels ranged from $115,549,836 (in 2014) to $167,011,428 (in 2011), with an annual average of $137,910,563 ex-vessel gross revenues over this period. In 2014, the most recent year for which data are available, Kodiak had 256 resident-owned vessels.

GOA Trawl Catcher Vessels

A total of 29 unique Kodiak resident-owned GOA trawl catcher vessels participated in the fishery over the years 2003-2014, averaging approximately 15 vessels participating per year, ranging between 12 vessels (2007) and 18 vessels (2003 and 2014) participating in the fishery under Kodiak resident

ownership in any given year. These vessels accrued a total of 178 vessel participation years over this 12-year span, with the participation of individual vessels under Kodiak resident ownership ranging from one to 12 years:

- Seven vessels participated one year (two in 2003; one each in 2005, 2006, 2007; and two in 2014)[25]
- Three vessels participated two years (two in 2003 and 2004; the other 2003 and 2005)[26]
- Three vessels participated three years (one in 2003, 2004, and 2008; the other two in 2012-2014)[27]
- One vessel participated four years (2008-2011)[28]
- Two vessels participated five years (both 2010-2014)[29]
- Two vessels participated seven years (one in 2003-2006, 2008, 2009, and 2014; the other in 2008-2014)
- One vessel participated nine years (2003-2011)[30]
- One vessel participated 11 years (2003-2010 and 2012-2014)
- Nine vessels participated all 12 years (2003-2014)

Over the years 2003-2014, the Kodiak resident-owned GOA trawl catcher vessel fleet was far more diversified in terms of vessel length overall (LOA) categories than the resident-owned GOA trawl catcher vessel fleet of any other Alaska community, with a much higher proportion of larger vessels

[25] Four of these vessels participated in the GOA trawl fishery under the ownership of residents of other communities before or after participating in the fishery as Kodiak resident-owned vessels. Of the vessels that were owned by residents of other communities before being owned by Kodiak residents: one participated for three years while owned by a resident of a state other than Alaska, Washington, or Oregon; one participated for 11 years while owned by an Oregon resident; and one participated for seven years while owned by a Sand Point resident and an additional three years while owned by Washington residents. Another vessel participated for five years under Washington resident ownership after participating in the fishery as a Kodiak resident owned vessel.

[26] One of these vessels is shown in the dataset as participating in the GOA trawl fishery in 2005 and 2006 under the ownership of Washington residents after it participated in the fishery in 2003 and 2004 under Kodiak resident ownership.

[27] One of these vessels is shown in the dataset as participating in the GOA trawl fishery in each year 2003-2014, but as having Newport resident ownership in the years 2003-2012 before changing to Kodiak resident ownership for the most recent two years covered by the dataset.

[28] This vessel is shown in the dataset as participating in the GOA trawl fishery 2003-2007 under Oregon resident ownership before participating under Kodiak resident ownership 2008-2011.

[29] One of these vessels is shown in the dataset as participating in the GOA trawl fishery 2003-2008 under Washington resident ownership before participating under Kodiak resident ownership 2010-2014.

[30] This vessel is shown in the dataset as participating in the GOA trawl fishery in each year 2003-2014, but as having both Kodiak and Seattle MSA resident ownership in 2011 and participating exclusively under Seattle MSA resident ownership 2012-2014.

than any other regularly participating Alaska community. Whereas the participation of both Sand Point and King Cove, the two other Alaska communities most substantially engaged in and dependent upon the GOA trawl fishery from a resident-ownership of catcher vessels perspective, were highly if not exclusively focused on vessels in the less than 60 feet LOA range, of the 29 unique vessels with Kodiak resident ownership that participated in the GOA trawl fishery during this period, none were in the less than 57 feet LOA category; eight were in the 57-59 feet LOA category (all were 58 feet LOA); and 21 were in the 60-124 feet LOA category. None were in the greater than or equal to 125 feet LOA category. Within the 60-124 feet LOA category, two vessels were in the 60-69 feet LOA subcategory, three were in the 70-79 feet LOA subcategory, five were in the 80-89 feet LOA subcategory, 10 were in the 90-99 feet LOA subcategory, one was in the 100-109 feet LOA subcategory, and none were in the 110-124 feet LOA subcategory. Of the nine Kodiak resident-owned GOA trawl catcher vessels that participated in the fishery all 12 years 2003-2014, all were in either the 80-89 feet or 90-99 feet LOA subcategories.

GOA trawl-caught ex-vessel gross revenues for Kodiak resident-owned GOA trawl catcher vessels averaged approximately $15.5 million annually over the period 2003-2014, ranging from approximately $10 million (2004) to approximately $24 million (2014) in any given year.

In terms of reliance or dependency, for Kodiak resident-owned GOA trawl catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 60 percent of all ex-vessel gross revenues generated by those vessels for the period with year-to-year variation ranging from about 42 percent (2004) to about 74 percent (2013). For the Kodiak resident-owned community fleet (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 11 percent of all ex-vessel gross revenues generated by those vessels for the period with year-to-year variation ranging from about 8 percent (2004) to about 20 percent (2014).

Table 46 provides information on the “delivery footprint” of the Kodiak resident-owned GOA trawl fleet. As shown, there were deliveries made by Kodiak vessels to eight different communities (or categories of communities) over the 2003-2014 period, an average of less than 1.5 Kodiak vessels per year made GOA trawl-caught deliveries to Sand Point and an average of less than one Kodiak vessel per year made deliveries to Akutan, King Cove, Seward, “all other Alaska,” Seattle (in all likelihood actually a floating processor operating in Alaska waters), and to unknown communities during the years covered by the dataset. In contrast, the greatest continuity of deliveries, by far, by the Kodiak resident-owned fleet was to Kodiak itself, with deliveries by no fewer than 12 vessels in every year covered by the data, with an annual average of approximately 15 Kodiak resident-owned GOA trawl catcher vessels per year making landings in Kodiak over this period. The central importance of Kodiak as the delivery port for Kodiak resident-owned GOA trawl catcher vessels may also be seen in the fact that a total of 29 unique Kodiak resident-owned GOA trawl catcher vessels delivered to Kodiak over the 2003-2014, which was the grand total of Kodiak resident-owned GOA trawl catcher vessels delivering to all communities during this period; a review of yearly unique vessel counts also shows that every Kodiak resident-owned GOA trawl catcher vessel that delivered to any other community also delivered to Kodiak during that same year.

Table 46. Community of GOA Trawl-Caught Deliveries by Catcher Vessels Owned by Kodiak Residents by Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Akutan	0	0	0	0	0	0	0	1	1	1	1	1	0.4	2.8%	2
King Cove	0	0	0	0	0	0	0	0	1	0	0	1	0.2	1.1%	2
Kodiak	18	15	14	13	12	15	14	15	14	15	15	18	14.8	100.0%	29
Ninilchik	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Sand Point	2	0	0	0	1	1	0	1	1	5	3	2	1.3	9.0%	9
Seward	0	0	1	0	0	0	0	2	2	1	2	1	0.8	5.1%	4
Unalaska/Dutch Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
All Other AK*	0	0	0	0	0	0	0	0	0	1	0	0	0.1	0.6%	1
Seattle	1	0	0	0	0	0	0	1	0	1	0	0	0.3	1.7%	3
Unknown	0	0	0	1	1	0	0	0	0	1	0	1	0.3	2.2%	2
Grand Total	18	15	14	13	12	15	14	15	14	15	15	18	14.8	100.0%	29

*One Kodiak resident-owned catcher vessel made at least one GOA trawl-caught delivery to a shore-based processor in Sitka in 2012.
Source: AKFIN 2016b

GOA Trawl Catcher Vessel Crew

GOA trawl catcher vessel crew data are available from two primary sources: National Marine Fisheries Service Economic Data Report (EDR) data that were collected for 2015[31] and Alaska Fisheries Science Center (AFSC) GOA trawl fishery social survey data that were collected in 2014. Both are summarized in this section.[32]

2015 EDR Catcher Vessel Crew Data

GOA Trawl Crew Positions Held by Kodiak Residents on all GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, a total of 76 unique Kodiak residents held crew positions on GOA trawl catcher vessels, including 31 individuals who held CFEC gear operator permits and 45 individuals who held Alaska Department of Fish and Game (ADFG) crew licenses.

- If crew positions are counted rather than unique individuals (as some individuals worked on more than one GOA trawl catcher vessel during the year), in 2015 a total of 84 crew positions were held by Kodiak residents, including 36 positions held by individuals with CFEC gear operator permits and 48 positions held by individuals with ADFG crew licenses. These included:

    - 47 on vessels owned by Kodiak residents (23 CFEC gear operator permit holders and 24 ADFG crew license holders).

    - 13 on vessels owned by Seattle MSA residents (5 CFEC gear operator permit holders and 8 ADFG crew license holders).

[31] As noted elsewhere, multiple caveats apply to catcher vessel EDR data, including: 2015 was the first year EDR catcher vessel crew data were collected; only one year of data is available; the available data have not been verified and audited (as audits typically rely on multiple years of data to identify outliers); and data are missing (have not yet been submitted) for 10 GOA trawl catcher vessels, which includes four vessels that were apparently active in the fishery in 2015 and six that were not (n = 68 catcher vessels in the EDR data). Additionally, one vessel appears in the data twice, as it changed ownership during the year (i.e., there are 67 unique catcher vessels in the EDR data), and there are some minor inconsistencies in crew (n = 365 unique persons) and vessel counts specific to crew position and compensation data relative to other fields in the data (e.g., n = 387 crew positions for most variables, but 386 crew positions for compensation variables). Specific to community level analysis, residence community information is not available for 55 unique individual crew members (1 CFEC gear operator permit holder and 54 ADFG crew license holders) who held 56 crew positions (1 CFEC gear operator permit holder and 55 ADFG crew license holders). Nevertheless, these data are the best available and are presented here as an indication of relative if not exact crew employment and, to the extent possible within data confidentiality constraints, compensation patterns across communities.

[32] *Pending direction coming out of the December 2016 Council meetings and an ultimate decision on fieldwork in Kodiak, Sand Point, and King Cove, 2015 data on trawl catcher vessels and crew will be revisited and supplemented with input from field interviews regarding the classification of vessels affiliated with these three centrally important GOA trawl communities based on ownership community, delivery port, homeport, and crew residence.*

- 10 on vessels owned by Washington residents of communities (Camas and East Wanatchee) outside of the Seattle MSA (2 CFEC gear operator permit holders and 8 ADFG crew license holders).
- 11 on vessels owned by Newport residents (4 CFEC gear operator permit holders and 7 ADFG crew license holders).
- 3 on vessels owned by Oregon residents of communities (Independence and Siletz) other than Newport (1 CFEC gear operator permit holders and 1 ADFG crew license holder).

Crew Positions and Payments to Labor on Kodiak Resident-Owned GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, there were a total of 86 crew positions on Kodiak resident-owned GOA trawl catcher vessels, including 31 positions whose occupant held a CFEC gear operator permit and 55 positions whose occupant held an ADFG crew license. Of these positions:
  - 47 were held by Kodiak residents (23 CFEC gear operator permit holders and 24 ADFG crew license holders).
  - 11 were held by residents of other Alaska communities, including Anchor Point, Anchorage, Chiniak, Gustavus, Juneau, Old Harbor, and Palmer (3 CFEC gear operator permit holders and 8 ADFG crew license holders).
  - 1 was held by a resident of Newport (1 CFEC gear operator permit holder and 0 ADFG crew license holders).
  - 8 were held by residents of Oregon communities other than Newport, including Beaverton, Lebanon, Port Orford, Redmond, Siletz, Sweet Home, and Waldport (2 CFEC gear operator permit holders and 6 ADFG crew license holders).
  - 1 was held by a resident of the Seattle MSA (0 CFEC gear operator permit holders and 1 ADFG crew license holder).
  - 5 were held by residents of Washington communities outside of the Seattle MSA, including Chehalis, Ferndale, Sedro Woolley, and Sequim (1 CFEC gear operator permit holder and 4 ADFG crew license holders).
  - 4 were held by residents of other states, including California, Illinois, Massachusetts, and Texas (0 CFEC gear operator permit holders and 4 ADFG crew license holders).
  - 9 were held by individuals whose residence location was unknown (0 CFEC gear operator permit holders and 9 ADFG crew license holders).

- EDR data indicate that in 2015, for the 14 GOA trawl catcher vessels identified as having Kodiak ownership, a total of 85 crew members on those vessels received $6,097,021 in total labor payments from the GOA trawl fishery, including $2,442,728 to captains and $3,654,293 to other crew members.

For additional detail on EDR GOA trawl catcher vessel crew data, please see Table 103, Table 104, and Table 105 in Attachment 3.

AFSC 2014 Social Survey Catcher Vessel Crew Data

Of Kodiak GOA trawl catcher vessel owners and crew members (n=93)[33] who participated in the 2014 AFSC GOA trawl fishery social survey (National Oceanic and Atmospheric Administration 2015) and answered the specific questions relevant to the following demographic, industry participation, and employment topics:

- 98.9 percent were male.
- Average age was 45.3 years (with a standard deviation of 13.2).
- 89.9 percent identified themselves as white/Caucasian, 1.1 percent identified themselves as Alaska Native or American Indian, 3.4 percent identified themselves as Native Hawaiian or Other Pacific Islander, 0.0 percent identified themselves as black/African American, 0.0 percent identified themselves as Asian, and 5.7 percent identified themselves as being some other race or two or more races. 3.7 percent identified themselves as Hispanic or Latino.
- 58.7 percent indicated their family historically participated in commercial fishing or processing activities.
- Their families had been participating in commercial fishing or processing activities for an average of 3.5 generations (with a standard deviation of 5.6).
- On average, they were 18.5 years old when they started to work in commercial fishing or processing activities (with a standard deviation of 7.6).
- They had been working in the GOA groundfish trawl fishery an average of 16.5 years (with a standard deviation of 11.5).
- 96.6 percent indicated that 76-100 percent of their combined family income came from their participation in fishing activities.
- 3.4 percent indicated that 51-75 percent of their combined family income came from their participation in fishing activities.
- 11.1 percent indicated they maintained a job outside of commercial fishing or processing industry.

For additional detail on selected AFSC survey questions and responses, please see Table 109 in Attachment 4.

[33] This number includes all catcher vessel owners and crew associated with vessels for which Kodiak was determined to be the primary port of mooring. The primary port of mooring was determined via the AFSC survey and/or through key person interviews during the AFSC survey effort. The vessel's primary port of mooring is not necessarily the same as the catcher vessel owners' and/or crews' place of residence.

GOA Halibut

A total of 218 unique Kodiak resident-owned catcher vessels participated in the GOA halibut fishery over the years 2003-2014, averaging approximately 109 vessels participating per year, ranging between 82 vessels (2014) and 123 vessels (2007) participating in the fishery under Kodiak resident ownership in any given year.

GOA halibut ex-vessel gross revenues for Kodiak resident-owned catcher vessels averaged approximately $33.0 million annually over the period 2003-2014, ranging from approximately $13 million (2014) to approximately $43 million (2003 and 2007) in any given year.

In terms of reliance or dependency, for Kodiak resident-owned GOA halibut catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA halibut deliveries accounted for approximately 44 percent of all ex-vessel gross revenues generated by those vessels for the period. For the Kodiak resident-owned community fleet (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA halibut deliveries accounted for approximately 24 percent of all ex-vessel gross revenues generated by those vessels for the period.

GOA Chinook Salmon

A total of 188 unique Kodiak resident-owned catcher vessels participated in the GOA Chinook salmon fishery over the years 2003-2014, averaging approximately 77 vessels participating per year, ranging between 64 vessels (2008) and 95 vessels (2013) participating in the fishery under Kodiak resident ownership in any given year.

GOA Chinook salmon ex-vessel gross revenues for Kodiak resident-owned catcher vessels averaged approximately $79 thousand annually over the period 2003-2014, ranging from approximately $18 thousand (2014) to approximately $149 thousand (2006) in any given year.

In terms of reliance or dependency, for Kodiak resident-owned GOA Chinook salmon catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA Chinook salmon deliveries accounted for approximately 0.3 percent of all ex-vessel gross revenues generated by those vessels for the period. For the Kodiak resident-owned community fleet (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA Chinook salmon deliveries accounted for approximately 0.1 percent of all ex-vessel gross revenues generated by those vessels for the period.

Processing Sector

General

Kodiak's shoreplants have played an important role in the history of the community, influencing its economic and demographic patterns over the years. Even among the major contemporary processing plants, there is a considerable amount of diversity in the size, volume, and species processed. Locally based processors vary in product output and specialization, ranging from large quantity canning of

salmon, to fresh and fresh-frozen products, as well as niche markets servicing the sport-fishing industry (AECOM 2010).

From 2003 through 2014, the annual number of active Kodiak shore-based processors varied from 10 (in 2014) to 14 (in 2005-2007), with an annual average of 12.6 shore-based processors operating over this time span. Based on a count of intent to operate codes, a total of 28 unique shore-based processing entities operated in Kodiak during this period.[34]

The annual first wholesale gross revenues for these processors ranged from $134 million (in 2003) to $197 million (in 2011), with an annual average of $161 million in first wholesale gross revenues over this period. In 2014, the most recent year for which data are available, Kodiak's 10 active shore-based processors had $144 million in first wholesale gross revenues.

Kodiak has historically been, and remains, the center of seafood processing for the Central GOA region. As of 2016, six relatively large, multi-species shore-based processors in Kodiak were accepting substantial volumes of GOA trawl-caught deliveries on a regular basis. These include:

- Alaska Pacific Seafoods
- Global Seafoods
- International Seafoods of Alaska
- Ocean Beauty Seafoods
- Pacific Seafoods
- Trident Seafoods

The operations of each of these plants are characterized below. These plants were profiled in 2010 for other NPFMC social impact assessment analyses, and some were profiled for earlier analyses as well. Where relevant, summary information from these earlier descriptions is incorporated into the current characterizations to show trends of change that have occurred over the intervening years. Other changes that have occurred in the Kodiak processing sector over the last several years include consolidation of processing into fewer plants, with the purchase of the local Alaska Fresh Seafoods and Western Alaska Fisheries plants by another locally operating processor, as described below. Western Alaska Fisheries was a large, multi-species plant within which GOA trawl-caught fish were an important part of the annual round of operations; in contrast, the processing of GOA trawl-caught deliveries was not a central focus of operations at Alaska Fresh Seafoods, although the plant did accept at least some GOA trawl-caught deliveries most years 2003-2014.

[34] The number of intent to operate codes may or may not closely correspond with physical processing plants in any given community, for a number of reasons. For example, a processing entity may use the physical plant of another processing entity to have its product custom processed or, as another example, one processing entity may purchase another in whole or in part and continue to retain two distinct intent to operate codes based on the retention/creation of different units within the corporate organization of the successor entity. In other cases, it is not apparent why what looks to be the same entity would have more than one intent to operate code. In the case of Kodiak, it would appear that there is more double counting of processing entities than is the case for the other communities described in this document, with the most extreme example being one of the companies that has a physical plant in the community appears in the data under five different intent to operate codes. This potential analytic challenge is addressed through the description of the processing operations that both have physical plants in the community accepted GOA trawl-caught deliveries during the period 2003-2014.

Additionally, two smaller Kodiak shore-based processors, Kodiak Island WildSource and Alaska Seafood Systems, are shown in the database as having accepted as least some GOA trawl-caught deliveries 2003-2014; these entities are briefly described in the "Other Kodiak Processors" discussion at the end of this section. Further, at the time of preliminary fieldwork for this analysis (June 2016), a processing firm operating in multiple other locations in Alaska was pursuing the acquisition of a range of local assets that would potentially allow it to become a new entrant to the local processing sector as also noted in the "Other Kodiak Processors" discussion at the end of this section.

Alaska Pacific Seafoods

Alaska Pacific Seafoods, a division of North Pacific Seafoods, was the first American plant to produce surimi. The surimi operation was started through a National Oceanic and Atmospheric Administration grant in 1985 and made surimi every year until 2003, before discontinuing surimi production due to market forces. Processing has become diversified over the years, and now (2016) includes salmon; groundfish, including pollock, cod, and flatfish; rockfish; halibut; black cod; herring; and crab, including both Bering Sea/Aleutian Islands (BSAI) crab and local Tanner crab, although the latter has not been open on a continuous basis recent years.

According to local plant management in 2010, Alaska Pacific Seafoods used to have a nonstop workflow with very few peaks and valleys, but maintaining this pattern had become more difficult since the late 1990s. While Alaska Pacific Seafoods used to commonly bring in employees from outside the community in the 1980s and early 1990s, when four cannery lines were in operation, the plant subsequently discontinued canning in favor of exclusively producing fresh and frozen product. Concurrent with the change in product form focus, in 2010 the plant reportedly had not used bunkhouses since the late 1990s, having moved to a workforce exclusively, or nearly exclusively, consisting of Kodiak residents. Use of local residents brought with it greater flexibility with respect to processing labor capacity/access and, as a result, Alaska Pacific Seafoods was processing more niche species, which enabled the plant to maintain a constant crew, better support the delivering fleet, and better control overhead.

In terms of an annual round, production as of 2010 closely followed the pattern described in the several earlier plant characterizations. January through March was characterized as a busy period as cod, pollock, sole, and some crab were processed. April saw sole and herring processing but was somewhat less busy, and May was a slow month. June picked up with rockfish, but the pattern had changed in then-recent years with the rockfish rationalization pilot program (implemented in May 2007), and July through August were peak activity months, due primarily to salmon being run in combination with rockfish and pollock. September and October featured mostly cod and pollock processing, and some crab processing has occurred toward the end of the year.

The current (2016) annual round at the plant is largely similar, although Tanner crab processing is not presently occurring due to fishery closures and, with the adoption of the Central GOA Rockfish Program in 2010 to replace the expiring pilot program (with fishing under the new program beginning in 2012), May and June are now busy months with the rockfish/Pacific Ocean perch processing. Additionally, cod and sole processing in November and December has brought more activity to that time of the year. BSAI crab that has been run at the plant in recent years has largely been a combination

of crab for which the plant has its own processor quota shares under the BSAI crab rationalization program and the use of processor quota shares controlled by the Kodiak Fisheries Development Association that have been obtained some years through an annual bid process, along with some "B" shares that are not linked to a specific processor.

In 2010, Alaska Pacific Seafoods was characterized as maintaining a core labor force of approximately 110 Kodiak residents. This stability reportedly benefitted the employees as well as the plant, as with steady employment came increased benefits, such as insurance. During the busy seasons, the crew increased to between 190 and 200 people, and the plant ran two shifts per day during the peak times. During slow periods, the number of crew on-site varied, depending on availability and volume of niche species, such as sole and herring. The trough of plant employment typically occurred in November and December when the plant maintained a small crew of six to eight people at 40 hours a week, as well as others to perform maintenance and cleanup for a few days per week, but this was somewhat variable with changes brought about by BSAI crab rationalization. At that time, Alaska Pacific Seafoods did not typically supply processing employee housing, but it did maintain a small bunkhouse that was often used as a transitional housing source for those new to the community or for peak housing demand, such as immediately after the completion of the Bristol Bay salmon season when 20 or 25 workers transitioned to Kodiak from other Alaska Pacific Seafoods facilities.

At present (2016), employment is characterized as holding steady throughout the year at approximately 240-250 employees from the Kodiak resident labor pool, roughly half of whom have been employed at the plant for 10 or more years, but with some fluctuation in hours worked seen during peak seasons. The plant typically runs two shifts per day throughout the year, with each 12-hour shift including about 10.5 hours of actual processing for most employees, once breaks and clean-up time is considered; foremen, key supervisors, quality assurance, and maintenance staff often will work somewhat longer shifts to have overlap between the shifts for continuity and efficiency of information transfer. The overall on-site workforce does diminish in late November and during December, as many employees will take annual leave during this time, typically to be with family elsewhere during the holiday period. During this time, annual maintenance and larger renovation projects typically occur, but this activity is segregated from the processing that continues to occur at the plant even during this relatively slow period.

While Alaska Pacific Seafoods still employs a Kodiak resident workforce at present, it does make a limited amount of company-owned housing available to employees in response to an ongoing shortage of affordable housing in the community. In addition to bunkhouse-type quarters at the plant itself, Alaska Pacific Seafoods relatively recently acquired an apartment-style bunkhouse a short distance away from the plant, neither of which are used on a regular basis for temporary/transient worker housing. For occasional temporary spikes in labor demand that may exceed trained local labor pool supply, Alaska Pacific Seafoods can share employees between seven different North Pacific Seafoods plants within Alaska, bringing workers to Kodiak (or sending workers from Kodiak to other facilities in the state) without needing to make new hires or invest relatively large amounts of time in training. The need to bring workers to Kodiak under these conditions, however, is characterized as minor.

In 2010, the plant was characterized as taking deliveries from approximately 160 vessels during a typical year, but there were about 20 "core" versatile vessels that delivered salmon and participated in

a range of other fisheries. According to plant management, there were another 20 or so multispecies vessels that are mid-range and relatively steady in their delivery volumes, with the balance of the delivering vessels supplying a smaller volume of landings to the plant. With regard to groundfish, at that time Alaska Pacific Seafoods maintained steady delivery relationships with six trawl catcher vessels and eight fixed gear pot and longline vessels. All but two of these had IFQs for halibut and black cod.

As of 2016, management characterized the fleet delivering to the plant as relatively stable, and similar to what was described in 2010. At present, the plant takes deliveries from approximately160-180 vessels annually, with about 20-25 of those being characterized as a core of multi-species, combination vessels. With respect to trawl catcher vessels specifically, five or six vessels make deliveries to the plant on a regular basis. Given its diversity of species processed, the Alaska Pacific Seafoods Kodiak facility is by nature not a single-gear type of facility, and every pound of fish is characterized as important to some component of the annual cycle of the plant; the balance between species in terms of relative economic importance to the plant varies somewhat from year to year based on fluctuations in the different fisheries and their respective markets. While earlier plant profiles had described the fresh halibut market as shifting toward Homer, in more recent years Kodiak and Homer have both contended for top halibut port in state, and fresh halibut (as well as salmon and cod) is regularly shipped from Kodiak to market by several different means, including via air freight from the local airport and via ferry on the Alaska Marine Highway system, among others.

Global Seafoods

Global Seafoods opened its doors in 1999 and operated for two years as a groundfish processing plant. Not financially solvent, Global was then shut down for two years and reopened in January 2003. Upon reopening, the plant diversified into other fisheries beyond groundfish, with plant management reporting a tripling of production between 2003 and 2004 through a combination of salmon and groundfish processing and marketing relatively underdeveloped species such as skate and arrowtooth flounder. In 2010, the Global management characterized the Kodiak facility as primarily a groundfish/flatfish plant, but with an additional strong emphasis on salmon; the plant did not run halibut or crab. There was also a continuing marketing effort for different groundfish products, such as livers, stomachs, and codheads, as well as several species that came into the plant as bycatch, such as grenadiers.

At present (2016), Global management reports that while the primary focus of the plant has remained on groundfish, and on marketing a range of groundfish products as in the past (although not livers recently), the role of salmon at the plant has varied in recent years. After several years during which salmon processing was limited to relatively low volumes of custom processing, Global returned to processing higher volumes of salmon in 2015 and plans to have a strong seasonal focus on salmon again in 2016. With several operational changes, the plant has gone from operating five months per year in recent years to operating eight months per year at present (2016), with a goal of operating 10 months per year in the future.

The fleet delivering to Global Seafoods in 2010 was reported to be similar to the delivering fleet described in 2004, which included three trawlers, 25 to 40 longline vessels, 10 to 15 jiggers/salmon seiners, and two

pot boats. A particular niche of the delivering fleet that Global noted as having developed was among Russian-speaking longline captains and owners, as the owner and local manager of Global was also fluent in Russian.

In more recent years, some components of the fleet delivering to Global have changed substantially. While currently (2016) three trawlers and two pot cod boats still deliver to the plant, as did four salmon seiners in 2015 (and it is planned that at least that many will deliver to the plant in 2016), the plant no longer includes longline or jig vessels in its delivery fleet. According to plant management, deliveries from longline vessels were discontinued after a strike year followed by a year of particularly poor longline fishing conditions; deliveries from jig vessels were discontinued around 2011/2012 with a shift in focus at the plant toward fish tendered from pot vessels.

In terms of an annual cycle as reported in 2010, January through April was a peak period for groundfish (about a month longer than reported in 2004), while the plant was typically closed to deliveries for most of May and into June. Around June 15, cod deliveries would resume, starting a busy period that reached a peak during July and August when salmon fisheries were in full swing, along with pollock and flatfish. During that time of year, production of other species would vary by the volume of salmon being processed, with Global characterized by management as small and agile enough to start and stop lines relatively efficiently for even small amounts of product as immediate needs dictate throughout the year. September and October were again busy months for groundfish, with things slowing to a stop during part of November and all of December. A then-relatively recent change that had occurred in the annual cycle was brought about by the Gulf of Alaska rockfish rationalization pilot program. Global did not qualify for participation in this program, although reportedly rockfish and particularly a couple of rockfish fishery bycatch species, Pacific Ocean perch and black cod, were considered relatively important to the plant.

The current (2016) annual cycle for the plant is similar to that described in 2010. In January, the plant typically focuses on pot cod before shifting to trawl cod and pollock in February. Cod and pollock continue to dominate into March, with pollock extending into April. May brings a focus on other groundfish, including rockfish and flats, with a particular emphasis on arrowtooth, including shallow- and deep-water complexes, in addition to cod and pollock. Toward the end of May, the plant will shut down for a couple of weeks for clean-up, before a shift to focus on salmon from June through August. In a variation from earlier described annual rounds, no flatfish are run in July and August during the peak of salmon production. Following salmon production, the plant will shut down for another two-week clean-up period before shifting to cod, pollock, and flatfish during the months of September and October and into the first week or two of November. The plant will then shut down for an extended period for clean-up and annual maintenance, with re-opening for production occurring either in late December or early January, depending on fishing conditions.

In 2010, Global Seafoods management reported employing about 120 people during peak seasons (down from the approximately 150 and 200 reported for peaks in 2008 and 2004, respectively), working two 12-hour shifts. Hires were typically drawn from the local labor pool, with individuals in the core crew reportedly either working at Global or, when seasonal layoffs occur, drawing unemployment benefits but remaining in the community. Approximately 20 to 40 extra workers from outside the community were, at that time, typically added during the summer salmon seasons, with these jobs being filled in then-recent years by foreign students (primarily from Turkey and the Ukraine). At that time,

Global had for several years been using a formal agreement with an agency to facilitate those hires, while in other years formal agreements were not utilized. In the years without formal agreements, a number of former student workers returned on their own, however, so this overseas labor pool had continued to be a source of seasonal help. Local management reports that if salmon got "particularly crazy" they would place job service postings, but typically did not need to do so, as individuals leaving other processors were sometimes available (and preferred not to do so if recruiting proved necessary, as the overseas student hires had reportedly typically proven to work out better than job service referrals). Global did not provide worker housing but would help outside hires find local housing. During off-seasons, employment at the plant dropped to 12 to 15 individuals, with a minimum of 6 to 8 maintenance workers and helpers present when production at the plant was completely stopped.

More recently, the level of employment at the Global Seafoods plant during peak seasons has declined, while the use of the local labor pool has increased. Global management reports that at present (2016), the plant employs about 35-40 employees per shift for eight months out of the year. The while quality control personnel and foremen typically work 13-hour shifts to facility information transfer with overlapping half-hours at the beginning and end of shifts, other production employees work 12-hour shifts, which include 10 hours of processing, one hour of breaks, and one hour of clean-up. During periods when the plant is closed, employment composition and levels remain the same as described for 2010. Global management reports that as of 2016, all employees are drawn from the local labor pool, with no outside workers brought in for peak seasons, nor have they been for "the last couple of years." Reportedly, this shift to exclusively local employment has helped with plant efficiency, by reducing the need to train new workers, and has produced a better work environment with longer-term employees feeling a greater personal investment in the community in general and the plant and their jobs in particular.

International Seafoods of Alaska, Inc.

International Seafoods of Alaska, Inc. (ISA) (formerly known as True World – International Seafoods) local plant management reports that although there have been several fluctuations in the meantime, their mix of processing species and products and levels of employment are currently (2016) generally similar to what was reported in 2010 (which, in turn, largely mirrored conditions reported in 2004 and 2008), with a number of exceptions as noted below.

According to plant management at the time, in 2010 during its busy period of January through March, the local ISA workforce was composed of approximately 200 people, while in the busy period of June through July, the total workforce could be somewhat larger. This contrasts with the 150 workers reported for both winter and summer peaks in 2008 but, according to plant management, changes in specific product demand can influence employment numbers in any season. For example, in a then-recent year the plant produced pink salmon fillets, adding between 60 and 80 staff over the course of that production period. In the interim slow seasons, around 40 to 50 employees worked at the plant, but labor demand was noted as being difficult to predict on a day-to-day basis as sometimes 16-hour days were followed by several days off between deliveries. During the quietest periods, when production was not occurring at the plant, approximately two dozen maintenance and dock workers were on-site. In general, ISA in 2010 had a smaller workforce than was utilized before the plant was shut down for about 6 months in 2002, during which time it changed hands and operations were reorganized. ISA

utilized a local workforce in 2010, although they did maintain group quarters in the form a single bunkhouse, left over from several years ago when peak employment demands at the plant were higher, which they rented to workers.

Currently (2016), the patterns of busy and slow periods, and accompanying fluctuation in labor demand, are generally similar what was described for 2010, with some marked variations. At present, the plant experiences a peak of activity from January through March and into early April with trawl and pot/fixed gear cod fisheries and pollock activity that typically runs through mid-March, but that can also extend into early April, depending on fishing conditions. While trawling is still occurring in deep water, and jigging can extend into May, the plant typically experiences a lull during much of April. With the adoption of the Central GOA Rockfish Program in 2010 to replace the expiring pilot program (with fishing under the new program beginning in 2012), May has become a busier month due to rockfish processing, which can also extend into June. From the beginning of June through approximately August 25, the plant exclusively focuses on salmon production, with the exception of rockfish and flatfish trawl deliveries as they can be fit in around salmon operations; a number of the vessels that deliver trawl-caught species to the plant during other times of the year typically switch over to salmon tendering for the plant during this period. Starting in the first week of September and running through early November, the focus of processing operations turns toward cod and pollock. From mid-November through the end of the year annual maintenance and plant improvement projects are undertaken, but processing continues to occur if at lower levels of activity, unless the projects involve the plant's freezing capability, which will cause processing to be suspended entirely. Processing levels are variable during this part of the year, based in part on how much trawl cod rolls over to provide additional opportunities for late-year pot/longline activity, which can extend well into December.

In terms of present (2016) annual workforce fluctuations, during the busy periods of January through May, July through August, and September through mid-November, the plant typically utilizes approximately 150 people on a 12-hour day shift and approximately 110-120 on a 12-hour night shift. Beginning in mid-July, approximately 50 additional personnel are added for the balance of the peak salmon season. Processing personnel are typically hired from the Kodiak residential labor pool, although ISA does maintain bunkhouse capacity that can accommodate off-Island workers. This includes the Eagle Lodge bunkhouse at ISA Plant 1, which can house 35 to 37 people, and a Larch Street four-plex that can house 19 to 22 people. This picture will likely change at least somewhat in the foreseeable future as ISA Plant 1 parcel, which has not been the site of production activities in recent years, and includes the Eagle Lodge bunkhouse, is currently (2016) part of a group of ISA-owned assets that are pending potential sale to another processing firm (Silver Bay Seafoods); these assets also include the ISA-owned Russian Heritage Inn in downtown Kodiak.

In 2010, ISA was characterized as producing a variety of products. From pollock, the plant produced fillet, head and gut, and fish in the round. Regarding salmon, ISA produced head and gut, fillets, and salmon rolls; for cod, products included fillet, head and gut, and round. As of 2010 the plant was not running any crab, nor had they done so since the early 1990s. Further, ISA was not canning any products in Kodiak, although the plant was originally designed to can approximately 50 percent of its output. Plant management reported in 2010 that the product mix had changed in then-recent years due to market demands, including a greater demand for head and gut going mostly to China, while the overall demand

for surimi had diminished as surimi production competition had increased supply. Fresh halibut had been produced in several then-recent years, but at the time was not a steady product for the plant.

At present (2016) the range of production has been characterized by plant management as being similar to that described in 2010, except salmon products are now fresh and frozen headed and gutted fish as well as fillets; surimi is no longer being produced at the plant; and in 2016 the plant was refocusing on halibut as a regular component of processing operations after several years of not doing so. Further, rockfish and black cod are also now important species for the plant.

In 2008, the fleet associated with the plant was described as consisting of 30 to 40 vessels, including a number of smaller jig and pot boats, four or five trawlers, and 15 to 20 longliners. Typically, around 15 salmon boats delivered to the plant. As described by plant management in 2010, the fleet had subsequently increased slightly due to favorable market conditions, but it was somewhat fluid based on economic demand. According to management interviews at the time, the plant had the capacity to accommodate a larger fleet when and if it made sense to do so. In 2010 some vessels that otherwise delivered to ISA also harvested Dungeness and local Tanner crab, which the ISA plant did not take; for those vessels ISA had secured a market at the adjacent Western Alaska plant for crab deliveries. Reportedly, at least some of those vessels felt that it was important to keep fishing for local Tanner although it may not have made immediate economic sense to do so, because they were more interested in building catch history in anticipation of a potential rationalization of that fishery than they were in immediate financial returns.

At present (2016), the regular ISA delivery fleet has consistently included four trawl catcher vessels in recent years (although one of the four is relatively new to ISA, having replaced another vessel that left the ISA delivery fleet). Approximately eight pot boats typically deliver to the plant, with this number being more variable by year based on price consideration than is the case for the trawlers that deliver to the plant. The plant typically takes deliveries from approximately 26 salmon vessels, mostly seiners, about half of which also jig for cod that is also delivered to the plant. The plant also takes normally takes deliveries from 10 to 12 longliners in the Russian fleet, which has had on ongoing informal affiliation with the plant for many years, dating back to when ISA provided seed money to that fleet in its early days of fishing. According to ISA management, few transient vessels deliver to the plant, aside from a few vessels that may deliver an occasional load of halibut or black cod.

Ocean Beauty Seafoods

Ocean Beauty Seafoods is a major producer of fresh, frozen, and canned salmon and participates in a range of other fisheries as well, including cod, pollock, flatfish, rockfish, Pacific ocean perch, halibut, and herring, along with Dungeness and local Tanner crab, although the latter has not been open on a consistent basis in recent years. Ocean Beauty management reports that the plant essentially runs all available commercial species. Production is year-round, except for a down period from mid-November through the end of the year. While in years past, plant management characterized about half of their business as related to salmon processing while groundfish made up almost all the remaining other half, there is considerable year-to-year variation, but most commonly neither salmon nor groundfish is below 40 nor above 60 percent of the business in any given year. With regard to groundfish, cod is the most economically important to the plant, with pollock, rockfish, and flatfish following. The importance of

halibut has increased in recent years, while Dungeness has tended to decrease in relative importance in recent years.

According to plant management at the time, in 2010 Ocean Beauty was one of the few shoreplants that still engaged in canning operations. It canned pink salmon, while all other species were sold frozen or fresh. Its busy seasons were January through March, when pollock and cod were processed; June through August during the salmon runs; and then again during the fall pollock and cod seasons in September and October. On-site employment peaked at around 225 during the January–March and June–August busy seasons, when employees could average 60- to 70-hour workweeks. Ocean Beauty's workers were drawn from the local residential workforce, except for a few machinists who were brought in for the summer busy season, but who were otherwise employed in the company's Pacific Northwest operations, and temporary processing hires that augmented the regular workforce during the highest peaks. The plant maintained about 20 to 25 people working 40-hour workweeks when processing was not occurring.

The current (2016) annual round at the plant is characterized by Ocean Beauty management as largely similar, with several exceptions. The busy season early in the year now extends into the first week of May with the processing of cod and flatfish; May sees some increased activity with rockfish/Pacific ocean perch processing; and the salmon processing busy period now often extends into the first or second week of September. Further, in 2016, pollock processing was down due to poor fishing conditions.

Employment levels also vary from those described for 2010. At present (2016), about 450 workers are on site from January through March before dropping to around 250 during from April through June, with people tending to take vacation in May, when plant employment can temporarily dip into the 125-150 range. With salmon processing, employment again ramps up to about 450 from the first week in July through the third week in August, before returning to the 250-300 persons range in September, October, and through the first half of November. From approximately November 15 through the end of the year, the plant is down to its skeleton crew of less than 100 when annual maintenance and various non-production projects are undertaken. A 24-hour per day operation, the plant runs two 12-hour shifts per day throughout the year except during summer salmon peaks when 16-18 hour shifts are not uncommon. All production workers at the plant are Kodiak residents, except for up to 40 workers who are lodged in the company bunkhouse facility near the plant. This facility is used exclusively for workers who are not residents of the community or are new workers who, having just moved to the community, and are in the process of transitioning to other housing.

In 2010, Ocean Beauty management characterized the plant as maintaining an ongoing and relatively steady relationship with the same delivering fleet every year, with the 2010 fleet reported to be very similar to the ones characterized in 2004 and again in 2008, although Ocean Beauty neither owned any vessels nor had formal contracts with delivering vessels. For groundfish, the 2010 fleet included four trawlers, 25 fixed gear vessels, a small number of pot gear vessels, and occasional deliveries from transient vessels. For salmon, approximately 55 seine vessels and 30 set gillnet site fishermen delivered to the plant at that time. Ocean Beauty also operated a seasonal plant at Alitak, near the village of Akhiok at the southern end of Kodiak Island. Open from April 15 until sometime in the latter half of September, this plant processed salmon delivered from 25 seiners and 30 set gillnet sites, along with

halibut, black cod, and herring. It also typically received some incidental deliveries of state water cod when readying for the salmon season.

At present (2016), Ocean Beauty management characterizes the non-salmon delivery fleet as typically consisting of six trawl catcher vessels, 14 pot vessels, three cod longliners, and between 10 and 32 halibut and black cod longliners, while salmon is provided to the Kodiak plant from approximately 70 seine vessels and between 19 and 25 set-net sites. The Alitak plant obtains salmon from 16 seiners it manages (which also deliver to the Kodiak plant; these 16 are a subset of the 70 seiners that deliver to that plant) as well as 30 set-net sites (which do not overlap with the set-net sites that provide salmon to the Kodiak plant). The Alitak plant does not process herring at present, but it does process Pacific cod; otherwise, the 2010 description of activities at that facility is still accurate for current activities.

As noted in the 2010 characterization of the plant, because Ocean Beauty's Kodiak shoreplant is geared for canning and freezing salmon, as well as processing groundfish and other niche species, it allows plant management the flexibility to "try and buy as much as we can, of anything we can, as long as it makes economic sense" to keep the facility running efficiently, which continues to be the case. This variability and diversity are typical of the mid-size plants, and some larger plants, on Kodiak. According to plant management in earlier years, whereas in the late 1970s, each plant seemed to have a special níche, because the profit margin is smaller now than in the past, there is a greater need to run a variety of fish to cover overhead. Plant personnel in 2010 reported that two changes had occurred in the then-recent past: through diversification, running both salmon and groundfish, Ocean Beauty was better able to spread the risk and lessen the potential of losing a particular market; and the demand for value-added processing, including fillet and portioning as well as then-relatively new products such as freezer pouches and pop-tops, had grown exponentially. At present (2016), additional Ocean Beauty specialty products include vacuum packed sockeye and halibut, pink salmon block products for specialty markets, cod portions specialty products. The Ocean Beauty plant is now the only plant in the City of Kodiak that cans salmon, and is only one of three such plants on Kodiak Island, with the other two being Ocean Beauty's Alitak plant and an Icicle Seafoods plant in Larsen Bay.

Pacific Seafoods

The plant now operating as Pacific Seafoods, initially known as Island Seafoods, has been in Kodiak since 1995. It did not, however, operate in 1998, changed ownership in 1999, and was acquired by its current owner, Pacific Seafood Group, in 2003. While Pacific Seafoods is the smallest commercial fisheries processor in Kodiak, according to plant management, Pacific Seafood Group is a vertically integrated firm that owns processing and distribution facilities, is one of North America's largest seafood companies, and continues to grow locally as well. Pacific Seafoods commercially processes Pacific cod, skates, and rockfish; halibut; black cod; Pacific ocean perch, and salmon.

According to plant management in 2010, the delivery fleet had changed in the previous few years. An overall strategy, particularly in the first few years following the ownership change, was to work primarily with vessels that are not serviced by the larger Kodiak processors, including a relatively large number of small-volume, entry-level jig vessels. The number of these small vessels delivering to the plant had, however, subsequently declined sharply, to perhaps a quarter in 2008 of what was seen in 2004. The plant also took deliveries from longliners and pot boats as well as a couple of trawlers at that

time, and there had been an increase in the deliveries from larger vessels at the plant in the then-most recent years. In an interview for a 2008 operation profile, plant management reported that overall tonnage through the plant has increased by perhaps 40 percent in the period 2004–2008. In 2010, plant management reported that tonnage had continued to grow each year since that period. Part of the strategy in this fleet mix was to be well-positioned as a sustainable fishery participant in anticipation of future fishery management changes. In 2010, Pacific Seafoods was obtaining its salmon from multiple set-net site owners, which had markedly increased in number in the preceding years, and from two salmon vessels (an increase of one over what was reported in 2008).

At present (2016), the fleet delivering to Pacific Seafoods includes one trawl catcher vessel and five pot vessels that deliver on a regular basis, with trawl-caught deliveries limited to Pacific ocean perch/rockfish only, along with another approximately 20 jig vessels and 20 longline vessels. The plant obtains its salmon from deliveries by eight seine vessels as well as from eight set-net sites.

In addition to being of a smaller scale, Pacific Seafoods plant differentiates itself from other local processing businesses by being diversified into other business activities through its Island Seafoods subdivision, which includes retail sales and catering to the sport charter fishing industry by processing and shipping sport-caught fish for the visitor trade. The Island Seafoods component of Pacific Seafoods also prepares corporate gift packs and sells its products via a website. Related ventures include operating as a Federal Express facility. These various ventures, while initially a core part of the business have more recently been characterized by plant management primarily as “add-on sales.” In terms of the relative dependency on different business components, Pacific Seafoods management in 2010 estimated that less than 10 percent of its local total gross sales came from the Island Seafoods sportfishing-related and retail side of the business, while over 90 percent remained in commercial seafood production. This relative dependency split was confirmed by plant management as being unchanged as of 2016.

Like other processors, Pacific Seafoods has a distinct annual cycle, but with different historical roots. The company (then Island Seafoods) began processing sportfishing products only, and, as time went on, it filled in the remaining portions of the year with commercial production, until that became the dominant aspect of the plant production. According to plant management at the time, in 2010 the plant maintained a core workforce of 60 full-time employees (an increase of 15 employees over the level reported in 2008, which itself was over twice the number reported in 2004) from January through November, with the workforce increasing to about 90 employees during peak salmon season from July through mid-September (about a one-third increase over the peak number reported in 2008, which itself was about a one-third increase over the 2004 reported number). As is the case with other plants, December was a dead period with only a skeleton crew performing maintenance and cleanup tasks. Pacific Seafoods segregates its Island Seafoods sportfish processing operation from its regular Pacific Seafoods commercial operation not only in terms of physical processing but also in terms of its workforce; in 2010, eight of nine of the summer peak season employees work solely with sportfish processing.

At present (2016), Pacific cod is run at the plant primarily from January through April, along with accompanying skates and rockfish, while halibut and black cod are commonly run from March through November. Trawl-caught Pacific ocean perch are typically run in May only, while salmon is run from

June through August and into September. The slowest period at the plant occurs in December and January, with the plant typically shutting down for two weeks during this period. Fresh and frozen products are produced at the plant, and include headed and gutted, round, fillet, and block product forms.

Also at present (2016), Pacific Seafoods employs a base crew of 40-50 individuals year-round, with the plant running two 12-hour shifts per day, starting at 7:00 a.m. and 7:00 p.m., although the plant closed down night crew work for approximately one month in April 2016 due to poor fishing conditions that resulted in less input than normal being delivered to the plant. In the summer, approximately 200 people are typically employed at the plant from June 1 through September 1 for the peak processing demand created by salmon production. These workers are drawn from the local (Kodiak) labor pool with few exceptions; in 2016 it is estimated that about 15 people will be flown into Kodiak from outside to top off the plant's summer workforce. In part, the use of outside workers is limited by a lack of affordable housing in the community, temporary or otherwise. Pacific Seafoods does maintain company housing that accommodates up to 20 Kodiak non-residents among three separate facilities (housing 10, six, and four people, respectively). The company does not maintain housing for its Kodiak resident workers. The Island Seafoods subdivision of the plant, which includes sportfish processing and retail sales, employs two persons year-round. During the summer sportfishing peak, Island Seafoods adds another three or four seasonal employees, with the summer crew rounded out with another two or three employees temporarily transferred/loaned to Island Seafoods from the Pacific Seafoods commercial processing side of the house.

Trident Seafoods

In 2010, Trident Seafoods was characterized as processing a range of groundfish species, including pollock, Pacific cod, and flatfish, as well as rockfish, halibut, and salmon at its Kodiak facility, with salmon, at that time, being a new addition to the plant's processing portfolio. Trident had purchased salmon from other processing facilities in Kodiak in 2007, 2008, and 2009 at times when those other plants exceeded their efficient functional capacity, but 2010 was the first year the plant began purchasing its own salmon. In another change from operations in earlier times described in the 2010 profile, Trident installed a crab line in the mid-2000s and was running Dungeness crab in the summer and local Tanner crab in the winter.

Trident was described in 2010 as seeking to differentiate itself through the production of top grade surimi and value-added products through their own packaging. Most their products were frozen, such as H&G, fillets (frozen, shatter pack, block), and surimi, although fresh fillets were also produced. Trident's peak periods were reported to have changed in then-recent years, and overall processing was characterized as steadier throughout the year than in the past. This leveling of processing effort seen by 2010 was reportedly facilitated to a substantial degree by the rockfish pilot rationalization program that began in May 2007 and shifted rockfish from a summer peak fishery to primarily a May through June fishery. Busier periods, if not as dramatic as in the past, were still seen around pollock and Pacific cod openings. The plant also processed halibut and black cod, but these were characterized as not representing peak fisheries.

At present (2016), the processing focus of the plant has remained largely consistent with that described for 2010, with a notable exception being the growing importance of salmon in the plant's processing portfolio, having now become a core element of operations at the plant. Peaks in activity still occur around pollock and cod season openers, as well as during summer salmon seasons. With the adoption of the Central GOA Rockfish Program in 2010 to replace the expiring pilot program (and fishing under the new program beginning in 2012), May and June have remained busy months for rockfish processing. The plant has not run local Tanner crab in recent years due to fishery closures, but it has run some GOA brown king crab and relatively small amounts of BSAI king crab, having obtained BSAI crab rationalization program processor quota shares formerly owned by Alaska Fresh Seafoods and, in some years, obtaining the use of processor quota shares controlled by the Kodiak Fisheries Development Association on an annual bid process basis.

The largest changes in local Trident Seafoods operations, however, include the construction of the new Kodiak Near Island (KNI) plant that became operational in the summer of 2015, and the acquisition of the former Alaska Fresh Seafoods and Western Alaska Fisheries plants in 2014 and 2015, respectively. Trident operated the former Alaska Fresh Seafoods physical plant for about a year after its acquisition before razing the structure, which was adjacent to existing Trident facilities, to allow the construction of the KNI plant. Around that same time, both the Alaska Fresh Seafoods and Western Alaska Fisheries operations (and their respective processing portfolios) and their respective personnel were folded into Trident operations in general and into the new KNI plant when it started production in the summer of 2015. In the last few years Alaska Fresh Seafoods was operating as an independent processor, operations were largely focused on custom processing product for a single key client; Trident has continued this custom processing with largely the same workforce as at the former Alaska Fresh Seafoods facility. According to Trident staff, the delivering fleets of both the former Alaska Fresh Seafoods and Western Alaska Fisheries facilities have also been utilized and supported at the KNI plant.

The KNI plant was constructed in large part due to desired expansion of capacity in pollock processing and an increased focus on the salmon fishery, along with the desire to increase the energy efficiency of processing operations while meeting demand for frozen product. KNI plant operations are built primarily around production of pan frozen headed and gutted fish, with that production largely focused on cod, pollock, and salmon.

The former Western Alaska Fisheries plant at the time of preliminary fieldwork (early June 2016) was not in production, but was undergoing renovations that include upgrading the ammonia system and installing a new salmon processing line, such that plans were to open that facility for salmon processing early in the 2016 salmon season. According to Trident management, processing at the former Western Alaska Fisheries facility will focus exclusively on value added processing of salmon for the foreseeable future. The facility will also be used for other, non-processing support activities, such as providing gear storage, bait, and ice to the catcher vessel fleet. It is planned that the processing and support staff utilized to re-staff the former Western Alaska Fisheries facility will be drawn from the existing Trident workforce (which, in turn, includes former Alaska Fresh Seafoods and Western Alaska Fisheries staff).

In 2010, local Trident management staff reported a relatively stable workforce throughout the year of about 250 individuals, of whom about 200 were Kodiak residents on-call and approximately 50 of whom were brought to the community on a 6-month contract basis. The latter group was recruited out

of Trident offices in Seattle and lived in Trident bunkhouse facilities (which then had a capacity of 75 individuals) during their stay in Kodiak (while the Kodiak resident processing workers did not stay in company housing). The specific number of workers on-site on any given day was described as a function of how fish deliveries came into the plant. This is quite a different pattern than was described by plant management in 2004, when workers were shifted between Trident plants in Kodiak and elsewhere to balance workforce requirements across plants in different communities that had different peak demand cycles. In 2010, an additional 20 to 30 workers would at times be brought into Kodiak on a temporary basis during particularly busy times, but this was not a regular occurrence. During the peak periods, there were typically two 12-hour shifts run, although shifts could last up to 16 hours.

At present (2016), the Trident Kodiak resident workforce is characterized as including roughly 350 employees total, as measured by the number of individuals appearing as current Kodiak resident employees in the Trident human resources system, of which about 250 are regular, full-time workers. Peak labor demand is seen from February through April (primarily pollock), July and August (primarily salmon), and September and October (primarily pollock).

Trident is currently expanding their housing capacity to be able to meet peak demands, which can add another 250 full-time, limited duration workers to the staff. This can push the total number of individuals in the system to approximately 600 persons at the highest peaks, exceeding the number of potential workers interested/available in the local labor pool. At present, Trident can house approximately 75 persons at the plant between facilities on the Star of Kodiak and a bunkhouse structure on the dock. In 2014 Trident moved to increase company-owned housing capacity in the community with the purchase of the Kodiak Plaza/Kashevaroff Apartments complex. Containing 66 apartments and multiple office spaces, the complex will provide housing capacity and other personnel services, including a dining facility. Trident plans on continuing to use this housing to help provide affordable housing for key local workers as well as accommodations for temporary workers that are needed during times of peak production.

In 2010, the Trident Kodiak plant was characterized as having for quite a few years maintained a steady relationship with the same dozen pollock, cod, and rockfish vessels, some of which also participated in hake fishery in the Pacific Northwest. At present (2016), the fleet delivering to Trident Seafoods in Kodiak has been characterized by Trident management as consisting of a core of approximately 20 trawl catcher vessels, 30 seiners, 10 pot cod vessels, and 10 long line vessels that deliver to the plant on a steady basis out of over 200 privately owned vessels in total that typically deliver to the plant in a given year.

Other Kodiak Processors

Kodiak Island WildSource, a part of Sun'aq Tribal Enterprises, is a relative small processor currently (2016) operating out of a portion of the former East Point processing facility in Kodiak. Started as an independent mail order direct-to-consumer operation in 2005, WildSource was purchased by the Sun'aq Tribe in 2010 and, according to management, the business now consists of roughly 25 percent direct-to-consumer sales and 75 percent wholesale direct sales to a variety of enterprises, including restaurants, microbreweries, and health food stores. While products include cod and rockfish, WildSource does not normally take GOA trawl-caught deliveries, instead typically taking deliveries of

these species from jig boats. In general, however, salmon is the main focus of WildSource and, also in general, it caters to the local small boat fleet, offering custom processing and the ability to brand per the wishes of the small boat fishermen. At the time of preliminary fieldwork (June 2016), WildSource was in the process of relocating and expanding its operations, having obtained the Ursin property, a waterfront parcel close to several other processors and fishery support businesses, for the construction of new facilities to include ice house as well as processing capacity. Currently (2016) operating year-round with approximately six employees, according to management the relocation was driven in part by a need to have better control of dock space (with the entirety of East Point facility being of too large a scale to suit the needs of WildSource) and the opportunity for expansion being facilitated to a degree by the exit of Alaska Fresh Seafoods from the local marketplace, as that processor also had a focus on serving the local small boat fleet (although WildSource does obtain fish from other local processors [which may include at least some GOA trawl-caught fish] as well as direct from small boat fishermen).

A second relatively small processor, Alaska Seafood Systems, is also currently (2016) operating out of a portion of the former East Point processing facility in Kodiak. Alaska Seafood Systems, reportedly largely focused on specialty processing for the Korean market, has accepted delivery of GOA trawl-caught fish the majority of the years it is shown being operational in the 2003-2014 dataset.

As noted in the detailed processor descriptions above, Silver Bay Seafoods, which has plants elsewhere in Alaska, may be a new entrant into the Kodiak shore-based processing sector as they are currently (2016) pursuing the purchase of a range of assets from a currently locally operating processor. At the time of preliminary fieldwork (June 2016), this sale was pending and Silver Bay's potential operational plans for a Kodiak facility are unknown. *<< this paragraph to be revisited/expanded following direction coming out of the December 2016 Council meetings and the ultimate decision on fieldwork and/or other follow-up in the community >>*

GOA Trawl-Caught Processing

Based on a count of intent to operate numbers, a total of 14 unique shore-based processors in Kodiak accepted GOA trawl-caught deliveries over the years 2003-2014.[35] When the data for processing entities known to be associated with a single physical plant are combined (merging both intent to operate numbers and name variations), however, a total of 10 Kodiak shore-based processing entities accepting GOA trawl-caught deliveries over the years 2003-2014 results. These processors accrued a total of 86 shore-based processor participation years over this 12-year span, with the participation of individual processors ranging from three to 12 years:

- *Kodiak Processor A*, 2003-2014 (12 years) *[1 ITO number and 1 name in the data]*
- *Kodiak Processor B*, 2003-2014 (12 years) *[1 ITO number and 4 names in the data]*

[35] As noted in Section 4.1.3, when processor names are used rather than intent to operate codes, a total of 24 unique Kodiak shore-based processors accepted GOA trawl-caught deliveries during the period 2003-2014, with an annual average of 8.1 processors participating in the fishery over that time span. This type of wide discrepancy is unique to Kodiak among the communities discussed in this document, where multiple names of processing entities associated with three different physical plants in Kodiak appear in the data, inflating the community processor count.

- *Kodiak Processor C,* 2003-2014 (12 years) *[2 ITO numbers and 3 names in the data]*
- *Kodiak Processor D,* 2003-2014 (12 years) *[3 ITO numbers and 3 names in the data]*
- *Kodiak Processor E,* 2003-2014 (12 years) *[1 ITO number and 3 names in the data]*
- *Kodiak Processor F,* 2003-2014 (12 years) *[2 ITO numbers and 5 names in the data]*
- *Kodiak Processor G,* 2004 and 2006-2014 (10 years) *[1 ITO number and 2 names in the data]*
- *Kodiak Processor H,* 2003-2004 and 2006-2011 (8 years) *[1 ITO number and 1 name in the data]*
- *Kodiak Processor I,* 2007-2011 (5 years) *[1 ITO number and 1 name in the data]*
- *Kodiak Processor J,* 2012-2014 (3 years) *[1 ITO number and 1 name in the data]*

First wholesale gross revenues from GOA trawl-caught deliveries for Kodiak shore-based processors averaged approximately $41.7 million annually over the period 2003-2014, ranging from approximately $29.5 million (2009) to approximately $52.6 million (2014) in any given year.

In terms of reliance or dependency, for Kodiak shore-based processors, on an annual average basis for the years 2003-2014, ex-vessel gross revenues associated with GOA trawl-caught deliveries accounted for approximately 28 percent of all ex-vessel gross revenues generated by landings at those processors from all deliveries from all fisheries in all areas caught by all gear types for the period as a whole, with year-to-year variation ranging from about 22 percent (2009) to about 38 percent (2014). Importantly, these figures are (1) derived from a different data source than first wholesale gross revenues noted in the immediately preceding paragraph and (2) are based on ex-vessel gross revenues rather than first-wholesale gross revenues (unlike the preceding paragraph), with both differences resulting from limitations within available processor (both shore-based processor and catcher processor) diversity data. Thus, these data should be used as a relative gauge of diversity rather than used in direct comparison to the data presented in the preceding paragraph.

For the Kodiak shore-based processing sector as a whole (including all shore-based processors, even those that did not accept GOA trawl-caught deliveries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues associated with GOA trawl-caught deliveries accounted for approximately 26 percent of all ex-vessel gross revenues generated by landings at all Kodiak shore-based processors for the period as a whole, with year-to-year variation ranging from about 21 percent (2009) to about 37 percent (2014). Note that the data in this paragraph are derived from the same data source as the preceding paragraph, and the same data interpretation caveats detailed above equally apply.

Table 47 provides information on the "community footprint" of the catcher vessels that made GOA trawl-caught deliveries to the Kodiak shore-based processors 2003-2014, based on catcher vessel ownership address. As shown, deliveries were accepted from Alaska, Oregon, and Washington vessels, with the distribution of participation relatively evenly spread across these geographies. Of the 79 unique

vessels that made GOA trawl-caught deliveries to Kodiak shore-based processors during this period, 36 were from Alaska, 21 were from Oregon, and 34 were from Washington, but when looked at from an annual average number of catcher vessels delivering to Kodiak processors, those figures were approximately 16, 15, and 14 vessels, respectively. Also, as shown, the large majority of Alaska resident-owned vessels making GOA trawl-caught deliveries to Kodiak shore-based processors were Kodiak resident-owned vessels (about 15 of the 16 vessels that delivered to the community on an annual average basis). The Kodiak-centric nature of delivery fleet may be further seen in the fact that after 2005, only two Alaska resident-owned vessels from outside of Kodiak made GOA trawl-caught deliveries to Kodiak shore-based processors, and then for a single year each: one Sand Point resident-owned vessels made at least one delivery in 2006 and one Petersburg resident-owned vessel made at least one delivery in 2010 (and no catcher vessel owned by a resident of any community in Alaska other than Kodiak has made GOA trawl-caught deliveries to a Kodiak shore-based processor in the most recent four years covered by dataset [2011-2014]). In the case of Oregon resident-owned vessels, annual average participation in making GOA trawl-caught deliveries to Kodiak shore-based processors is relatively evenly split between catcher vessels owned by residents of Newport and catcher vessels owned by residents of all other Oregon communities; similarly, in the case of Washington resident-owned vessels, annual average participation in making GOA trawl-caught deliveries to Kodiak shore-based processors is relatively evenly split between catcher vessels owned by residents of the Seattle MSA and catcher vessels owned by residents of all other Oregon communities.

Table 47. Catcher Vessels Making GOA Trawl-Caught Deliveries to Kodiak Shore-Based Processors, by Community of Vessel Owner Residence and Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Anchorage	1	1	1	0	0	0	0	0	0	0	0	0	0.3	0.5%	1
Homer	2	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4%	2
King Cove	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Kodiak	18	15	14	13	12	15	14	15	14	15	15	18	14.8	32.3%	29
Petersburg	1	1	0	0	0	0	0	1	0	0	0	0	0.3	0.5%	2
Sand Point	0	0	1	1	0	0	0	0	0	0	0	0	0.2	0.4%	1
All Other AK*	2	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4%	2
Alaska Total	24	17	16	14	12	15	14	16	14	15	15	18	15.8	34.5%	36
Newport	9	9	7	7	7	7	6	6	8	5	4	4	6.6	14.3%	10
All Other OR	10	11	10	11	9	8	8	8	9	9	7	6	8.8	19.2%	14
Oregon Total	19	20	17	18	16	15	14	14	17	14	11	10	15.4	33.6%	21
Seattle MSA	6	5	6	7	7	8	5	6	6	12	14	14	8.0	17.4%	22
All Other WA	10	8	7	5	3	4	4	6	6	7	6	6	6.0	13.1%	14
Washington Total	16	13	13	12	10	12	9	12	12	19	20	20	14.0	30.5%	34
All Other States	1	1	2	1	1	1	1	0	0	1	1	1	0.9	2.0%	3
Grand Total	60	51	48	45	39	43	37	42	42	48	47	49	45.9	100.0%	79

*One catcher vessel owned by a resident of Anchor Point and one catcher vessel owned by a resident of Nikolaevsk made at least one GOA trawl-caught delivery to Kodiak in 2003.
Source: AKFIN 2016b

GOA Trawl Shore-Based Processor Workers

Processor worker data for shore-based processors accepting GOA trawl-caught deliveries are available from two primary sources: EDR data that were collected for 2015[36] and AFSC GOA trawl fishery social survey data that were collected in 2014. Both are summarized in this section.

2015 EDR Shoreside Processor Employee Data

Data collected through the EDR program are available 2015 for both processing and non-processing employees at shoreside[37] processors in Kodiak and elsewhere. As described earlier, several changes in Kodiak shore-based processing took place in 2015 that could make 2015 somewhat different for local operations than immediately preceding for following years, including the new Trident Seafoods KNI plant becoming operational in the summer of 2015 and operations at the former Western Alaska Fisheries facility changing with the acquisition of that plant by another processor during that same year.

Table 48 provides labor payment information for processing workers at shoreside processors in Kodiak and elsewhere that accepted GOA trawl-caught groundfish deliveries in 2015. While the shoreside processors in Kodiak consisted exclusively of shore-based processing plants, the shoreside processors outside of Kodiak that accepted GOA trawl-caught deliveries in 2015 included shore-based plants in Sand Point, King Cove, and False Pass, plus three stationary floating processors for which processing location information is not readily available.

- Among non-Kodiak communities with shore-based processors accepting GOA trawl-caught deliveries in 2015, False Pass alone does not appear in the primary dataset used for this SIA analysis as the location of a shore-based processor that accepted GOA trawl-caught deliveries in any year 2003-2014.

- Of the three stationary floating processors accepting GOA trawl-caught deliveries in 2015, one is associated with a firm that was been engaged in shore-based processing of GOA trawl-caught deliveries each year 2003-2014 and two are associated with a firm that was less consistently engaged in shore-based processing of GOA trawl-caught deliveries during that period.

[36] Some of the caveats noted for catcher vessel EDR data also apply to these shoreside processor EDR data, including: 2015 was the first year these EDR data were collected; only one year of data is available; and the available data are unaudited.

[37] The term “shoreside” in this document is used exclusively in the context of EDR data. In those data (and the EDR forms that were used to collect those data), the term “shoreside” is used to refer to both shore-based processors and stationary floating processors. In the individual community discussions in this document, the distinction is made between shore-based processors and stationary floating processors where applicable.

Table 48. Kodiak and Other Shoreside Processor Hours and Labor Payments for Groundfish Processing Employees by Housing Type, by Month, 2015

Month	Number of Federal Processor Permits	Number of Groundfish Processing Employees	Processing Labor Person-Hours		Processing Labor Payment	
			Housed	Not Housed	Housed	Not Housed
Kodiak						
January	7	1,422	34,440	182,484	$326,052	$2,165,849
February	7	1,645	127,474	214,655	$1,339,541	$2,659,635
March	7	1,686	126,612	315,540	$2,390,093	$3,958,886
April	7	1,567	82,725	213,604	$954,102	$2,785,893
May	7	1,136	25,805	160,411	$286,175	$1,874,488
June	7	1,123	18,898	119,953	$225,211	$1,478,947
July	7	533	6,714	83,271	$82,558	$1,024,004
August	7	532	6,903	78,400	$97,876	$952,292
September	7	1,447	98,001	264,578	$1,095,659	$3,411,559
October	7	1,403	107,747	244,705	$1,272,712	$3,172,959
November	7	1,108	28,320	100,738	$340,911	$1,286,226
December	7	407	4,768	46,271	$68,512	$579,133
Total	--	--	668,407	2,024,610	$8,479,402	$25,349,871
All Other Geographies						
January	6	890	109,932	0	$1,228,038	$0
February	6	1,201	255,023	101	$2,810,615	$1,446
March	6	1,186	364,564	627	$4,417,681	$1,395
April	5	1,017	260,233	0	$3,100,578	$0
May	5	176	27,440	0	$322,100	$0
June	5	500	31,835	0	$392,269	$0
July	5	474	124,382	0	$1,575,885	$0
August	5	488	97,974	0	$1,260,775	$0
September	5	601	250,365	0	$3,053,302	$0
October	5	544	192,045	0	$2,291,918	$0
November	5	236	13,558	0	$168,687	$0
December	5	0	0	0	$0	$0
Total	--	--	1,727,351	728	$20,621,848	$2,841

Source: National Marine Fisheries Service 2016a

Table 49 provides wage and salary information for non-processing workers at shoreside processors in Kodiak and elsewhere that accepted GOA trawl-caught deliveries in 2015. Like the previous table, while the shoreside processors in Kodiak consisted exclusively of shore-based processing plants, the shoreside processors outside of Kodiak included shore-based processors in Sand Point, King Cove, and False Pass, plus three stationary floating processors.

Table 49. Kodiak and Other Shoreside Processor Wages and Salaries for Non-Processing Employees, by Month, 2015

Community	Number of Non-Processing Employees	Total Wages and Salaries
Kodiak	105	$6,046,418
All Others	687	$11,109,935
Total	**792**	**$17,156,353**

Source: National Marine Fisheries Service 2016a

AFSC 2014 Social Survey Processing Worker Data

Of the processing workers at Kodiak shore-based processors that accepted GOA trawl-caught deliveries who participated (n=1,169, for all processor employees; n=1,158 for questions oriented toward "line" workers only) in the 2014 AFSC GOA trawl fishery social survey (National Oceanic and Atmospheric Administration 2015) and answered the specific questions relevant to the following demographic, industry participation, and employment topics:

- 64.3 percent were male.
- Average age was 46.8 years (with a standard deviation of 14.0).
- 6.0 percent identified themselves as white/Caucasian, 0.9 percent identified themselves as Alaska Native or American Indian, 0.9 percent identified themselves as Native Hawaiian or Other Pacific Islander, 6.2 percent identified themselves as black/African American, 79.0 percent identified themselves as Asian, and 7.0 percent identified themselves as being some other race or two or more races. 19.1 percent identified themselves as Hispanic or Latino.
- On average, 2.7 other members of their household worked as processing employees (with a standard deviation of 2.2).
- 50.6 percent indicated that they worked as a processing employee 10-12 months per year.
- 29.8 percent indicated that they worked as a processing employee 7-9 months per year.
- 10.5 percent indicated that they worked as a processing employee 4-6 months per year.
- 9.0 percent indicated that they worked as a processing employee 0-3 months per year.
- Most individuals (56.5 percent) were unemployed during the months when not working at their current processing employer, but 18.5 percent were working at a different processor during those months.
- 44.1 percent indicated that 76-100 percent of their combined family income came from their participation in processing activities.
- 14.1 percent indicated that 51-75 percent of their combined family income came from their participation in processing activities.
- 12.9 percent indicated that 26-50 percent of their combined family income came from their participation in processing activities.
- 12.7 percent indicated that 10-25 percent of their combined family income came from their participation in processing activities.
- 16.2 percent indicated that 0-9 percent of their combined family income came from their participation in processing activities.

- On average, 3.7 people were supported financially with the money the respondent earned as a processing employee (with a standard deviation of 2.8).
- Over half (51.6 percent) were U.S. citizens, 74.6 percent had immediate family living in the U.S.
- Survey responses indicated that a substantial percentage of respondent's salaries were sent to family members that live elsewhere in the United States or in another country.

For additional detail on selected AFSC survey questions and responses, please see Table 112 in Attachment 4.

GOA Halibut Processing

According to the dataset, a total of 22 unique shore-based processors in Kodiak accepted GOA halibut deliveries over the years 2003-2014, averaging approximately nine shore-based processors participating per year, ranging between seven processors (2012 and 2014) and 12 processors (2007) operating in Kodiak participating in the fishery in any given year.

First wholesale gross revenues from GOA halibut deliveries for Kodiak shore-based processors averaged approximately $36.0 million annually over the period 2003-2014, ranging from approximately $16.5 million (2014) to approximately $48.5 million (2007) in any given year.

In terms of reliance or dependency, for Kodiak shore-based processors, on an annual average basis for the years 2003-2014, ex-vessel gross revenues associated with GOA halibut deliveries accounted for approximately 25 percent of all ex-vessel gross revenues generated by landings at those processors from all deliveries from all fisheries in all areas for the period. Importantly, this figure (1) is derived from a different data source than first wholesale gross revenues noted in the immediately preceding paragraph and (2) is based on ex-vessel gross revenues rather than first-wholesale gross revenues (unlike the preceding paragraph), with both differences resulting from limitations within available processor (both shore-based processor and catcher processor) diversity data. Thus, these data should be used as a relative gauge of diversity rather than used in direct comparison to the data presented in the preceding paragraph.

For the Kodiak shore-based processing sector (including all shore-based processors, even those that did not accept GOA halibut deliveries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues associated with GOA halibut deliveries accounted for approximately 22 percent of all ex-vessel gross revenues generated by landings at all Kodiak shore-based processors for the period. Note that the data in this paragraph are derived from the same data source as the preceding paragraph, and the same data interpretation caveats detailed above equally apply.

GOA Chinook Salmon Processing

According to the dataset, a total of 20 unique shore-based processors in Kodiak accepted GOA Chinook salmon deliveries over the years 2003-2014, averaging approximately eight shore-based processors

participating per year, ranging between seven processors (2003 and 2014) and 10 processors (2007) operating in Kodiak participating in the fishery in any given year.

First wholesale gross revenues from GOA Chinook salmon deliveries for Kodiak shore-based processors averaged approximately $155 thousand annually over the period 2003-2014, ranging from approximately $43 thousand (2014) to approximately $315 thousand (2006) in any given year.

In terms of reliance or dependency, for Kodiak shore-based processors, on an annual average basis for the years 2003-2014, ex-vessel gross revenues associated with GOA Chinook salmon deliveries accounted for approximately 0.1 percent of all ex-vessel gross revenues generated by landings at those processors from all deliveries from all fisheries in all areas for the period. Importantly, this figure (1) is derived from a different data source than first wholesale gross revenues noted in the immediately preceding paragraph and (2) is based on ex-vessel gross revenues rather than first-wholesale gross revenues (unlike the preceding paragraph), with both differences resulting from limitations within available processor (both shore-based processor and catcher processor) diversity data. Thus, these data should be used as a relative gauge of diversity rather than used in direct comparison to the data presented in the preceding paragraph.

For the Kodiak shore-based processing sector as a whole (including all shore-based processors, even those that did not accept GOA Chinook salmon deliveries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues associated with GOA Chinook salmon deliveries accounted for approximately 0.1 percent of all ex-vessel gross revenues generated by landings at all Kodiak shore-based processors for the period. Note that the data in this paragraph are derived from the same data source as the preceding paragraph, and the same data interpretation caveats detailed above equally apply.

5.2.1.5 Sport Fishing Engagement

Overview

Halibut Charter and Non-Charter

As of 2016, in Kodiak 36 individual permit holders held a total of 64 sport charter halibut fishing permits. All of these permits were for Area 3A.

ADFG data for sport charter and non-charter harvests for Kodiak for the period 2011-2014 indicate that on average, annual halibut charter harvest was approximately 186,000 pounds, ranging between approximately 172,000 pounds (2012) and 207,000 pounds (2013) in any given year. During this same period, on average, annual halibut non-charter harvest was about 134,000 pounds, ranging between approximately 105,000 pounds (2013) and 155,000 pounds (2014) in any given year.

Chinook Salmon Charter and Non-Charter

ADFG data for sport harvests for Kodiak for the period 2003-2014 indicate that on average, annual Chinook salmon harvest was approximately 9,260 fish, ranging between approximately 6,440 fish

(2010) and 11,800 fish (2006) in any given year. No information differentiating between charter and non-charter harvests of Chinook salmon for the community of Kodiak is readily available.

5.2.1.6 Subsistence Fishing Engagement

Overview

According to a survey conducted by ADFG in 1992 (Alaska Department of Fish and Game 2016a), which is the most recent, most comprehensive, and considered to be the most representative survey available, subsistence harvesting in Kodiak is an important aspect of the local economy and social life. The ADFG survey was able to solicit responses from 5.3 percent of the households present in Kodiak at the time, which was calculated as 319 total people out of an estimated total population of 6,058. The results showed that 99.0 percent of the households used wild subsistence resources in one form or another, and 87.6 percent of all households actively harvested subsistence resources. The average Kodiak household harvested 458.9 pounds of useable weight of wild resources, 39.7 percent of which were fish other than salmon, 31.3 percent were salmon, 15.4 percent were land mammals, 6.6 percent were wild plants, and 6.3 percent were marine invertebrates. The breakdown in the use of non-salmon subsistence species in 1992, which is still considered to be the most representative year, show that 85.7 percent of all households surveyed used halibut, while other highly used species included char (42.9 percent), Dolly Varden (40.0 percent), cod (38.1 percent), and rockfish (38.1 percent). Data on marine mammal subsistence harvesting in 1992 report that the extent of marine mammal subsistence in Kodiak was an estimate 38 sea otters; no harbor seals or sea lions were harvested in the community. More recent harvest figures suggest that harbor seal subsistence is present in the community, however, with 125 harbor seals harvested for 2008, the most recent year available.

Halibut Subsistence

The most recent halibut subsistence study conducted by ADF&G estimated that a total of 763 halibut were harvested in 2014, representing an estimated 118,123 total pounds (Alaska Department of Fish and Game 2016a). Over the 11-year period 2003-2012 plus 2014 (no data are available for 2013), an estimated annual average of 850 Kodiak subsistence fishermen caught roughly 8,400 halibut per year, or about 168,000 pounds of halibut per year. The estimated number of subsistence fishermen ranged between about 650 (2003) and 960 (2006 and 2008) in any given year during this time. The estimated number of subsistence halibut caught ranged between about 6,400 fish (2014) and 10,700 fish (2005) in any given year, while the estimated weight of subsistence halibut caught ranged between about 118,000 pounds (2014) and 211,000 pounds (2005) in any given year over this same period (Table 33).

Chinook Salmon Subsistence

A recent subsistence study conducted by ADFG concerned with salmon use shows that Kodiak residents harvested approximately 31,405 salmon in 2013, with the vast majority of salmon caught for subsistence being sockeye (88.4 percent) and coho (8.0 percent). Complicating this measurement, however, is the vast number of people engaging in subsistence harvesting without a permit (Alaska Department of Fish and Game 2016e). Interviews conducted by ADFG in 2001 suggest that a substantial amount of subsistence harvests occurred without permits in those areas off the Kodiak Island

road system, which included Akhiok, Karluk, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions. A recent study of communities on Kodiak Island concludes that almost all households used salmon for subsistence purposes, using gillnets, seines, rod and reel, and the removal of salmon from commercial harvests for personal use. Salmon is smoked, dried, or jarred for use throughout the year (Alaska Department of Fish and Game 2016b).

Over the period 2010-2013, the most recent years for which time series estimates are readily available, Kodiak had an estimated annual average of about 1,440 returned households/permits in the subsistence and personal use salmon fishery, with an estimated annual average harvest of about 120 Chinook salmon, and an estimated annual average harvest of about 25,200 salmon (all species) overall. The estimated annual number of Kodiak returned households/permits ranged between about 1,340 (2013) and 1,520 (2011) in any given year during this period. The estimated annual number of subsistence and personal use Chinook salmon harvested in Kodiak ranged between about 76 fish (2011) and 153 fish (2010) in any given year during this period (Table 43).

5.2.1.7 Support Services Sector

Beyond the magnitude of its direct harvesting and processing engagement in a wide range of fisheries, the community of Kodiak is distinguished from most other Alaskan fishing ports by the number and range of support service businesses that cater in whole or in part to the commercial fishing industry. In Kodiak, this sector has businesses that focus on a range of subsectors within the fishing industry including: shoreplant support, such as the local fishmeal plant; vessel support services, including marine hardware/gear supply, hydraulics, welding, marine electronics, marine mechanical, marine fuel sales, general stores, boatyard services, electrical services; and shipping, among others. This sector is described in detail in earlier NPFMC documents (especially AECOM 2010), including business attributes, seasonal fluctuations, and employment information for the individual enterprises in the various sectors. While Kodiak has consistently been a center for support service provision for the commercial fishing industry, the level and nature of service provision have not been consistent, with changes in the fishery driving changes in the support sector, and the earlier NPFMC documents also note that there are a range indirect service providers that still depend to a degree on fisheries-related activities, such as accounting and bookkeeping services and vehicle rental enterprises. In addition, there are also several educational and governmental entities that operate fisheries-related research facilities in Kodiak. *<< As this type of detailed, sector-wide information is time-consuming and labor intensive to compile, not all of which is central to the current analytic tasks, pending direction coming out of the December 2016 Council meetings and the ultimate decision on fieldwork in the community, the discussion in this section will be expanded to focus on changes that have occurred since the earlier noted document was compiled for the businesses most directly associated with support of the GOA trawl fishery in particular, given the "local multiplier" effect of these businesses both in terms of local re-spending of fisheries dollars and the employment opportunities generated thereby. >>*

New information has, however, recently become available on utility service demand generated by the local shore-based processing sector entities. Table 50 provides information on water and electric utilities demand, by month, for Kodiak shore-based processors that accepted GOA trawl-caught deliveries in the 2015 calendar year. As shown, demand for both water and electricity varies considerably by month. It should be noted, however, that some caution should be exercised in the

interpretation of these data as a time series is not available[38] and, as described earlier, several changes in local shore-based processing took place in 2015 that could make 2015 somewhat different than immediately preceding for following years. These included the new Trident Seafoods KNI plant becoming operational in the summer of 2015 and operations at the former Western Alaska Fisheries facility changing with the acquisition of that plant by another processor during that same year.

Table 50. Kodiak Shore-Based Processor Utility Consumption and Cost, by Month, 2015

Month	Number of Federal Processor Permits	Water		Electricity	
		Gallons	Cost	Kilowatt Hours	Cost
January	7	41,627,474	$84,715	1,931,880	$322,885
February	7	91,487,974	$156,397	3,691,719	$586,592
March	7	123,356,473	$209,867	4,462,765	$683,605
April	7	92,980,469	$159,655	4,233,005	$656,635
May	7	45,452,867	$82,655	2,449,247	$412,534
June	7	41,219,398	$75,371	2,419,315	$396,793
July	7	61,040,266	$115,242	2,479,839	$411,298
August	7	93,461,196	$173,716	4,084,302	$650,630
September	7	137,343,909	$251,818	5,001,116	$775,570
October	7	88,878,626	$164,013	4,154,224	$647,818
November	7	43,819,324	$83,531	2,262,488	$389,970
December	7	19,909,980	$39,793	1,068,910	$132,365
Total	7	880,577,956	$1,596,773	38,238,810	$6,066,695

Source: National Marine Fisheries Service 2016a

5.2.1.8 Public Revenues

Detailed information on local fish tax revenues specific to GOA trawl caught-landings cannot be readily disaggregated from available data, but are known to be substantial based on patterns of landings. At the time the detailed community profile was compiled for the BSAI crab rationalization 5-year program review (AECOM 2010), local operating revenues generated by taxes had generally increased each year since 2001; shared fish taxes showed a more complex pattern when calculated with 2006 constant dollars. Although all subsequent years were higher than the figure for 2003, the state shared fish tax revenues for 2004 were higher than those for 2005 and 2006, but lower than those for 2007 (the then-most recent year for which state-compiled data comparable to that provided for other communities were available). Kodiak harbor revenues showed annual increases from 2004 to 2009.

In more recent years, general fund revenues (in nominal figures) ranged between $14.7 million (2011) to $20.1 million (2015). Revenues fell from $15.6 million in 2010 to $14.7 million in 2011 before steady increasing from 2012 to 2015. The general fund revenue budget for 2016 was over $22.5 million.

[38] Some of the caveats noted for catcher vessel EDR data also apply to these shoreside processor EDR data, including: 2015 was the first year these EDR data were collected; only one year of data is available; and the available data are unaudited.

Fisheries business tax revenues since 2010 have generally been higher than totals seen in previous years, with totals above $1.0 million for all years 2010–2015, except for 2011. The budgeted business tax revenue for 2016 was nearly $1.3 million. Kodiak harbor operating services have fluctuated between approximately $2.3 million and $2.5 million from 2011–2015, with a 2016 budget of over $2.1 million. Kodiak has also been the beneficiary of a number harbor improvement projects in recent years, including major improvements to Pier III, which have included installation of a Matson 100-gauge crane that arrived in Kodiak in August 2015 (Northern Economics 2016).

According to a recent study completed on behalf of the KIB and the City of Kodiak, seafood producers located in the city of Kodiak used approximately one-third of all electricity generated by the Kodiak Electrical Association and half of the water treated and collected by the City of Kodiak (McDowell Group 2016). The relationship between seafood processing demand for power and water and local infrastructure systems and public revenues, both for the KIB and the City of Kodiak, is treated at length in the economic analysis in the main body of the Regulatory Impact Review, to which this social impact assessment is an appendix. Please see the "Investment in Kodiak's Utility Infrastructure" discussion in that document, which is not recapitulated here.

5.2.2 Sand Point

5.2.2.1 Introduction, Location, and History

Sand Point is located on Humboldt Harbor on Popof Island in the Shumagin Islands group off the southern shore of the Alaska Peninsula in the Gulf of Alaska. Sand Point is approximately 560 miles southwest of Anchorage, approximately 350 miles southwest of Kodiak, and approximately 75 miles east of King Cove. Sand Point is incorporated as a First Class City within the Aleutians East Borough (AEB). The community is only accessible by air and sea, and is served seasonally by ferry on the Aleutian Chain route of the Alaska Marine Highway system. Sand Point is adjacent to the Western GOA Regulatory Area (610), as well as halibut regulatory area 3B, roughly 60 miles west of the western boundary of Central GOA Regulatory Area, Chirikof District (620).

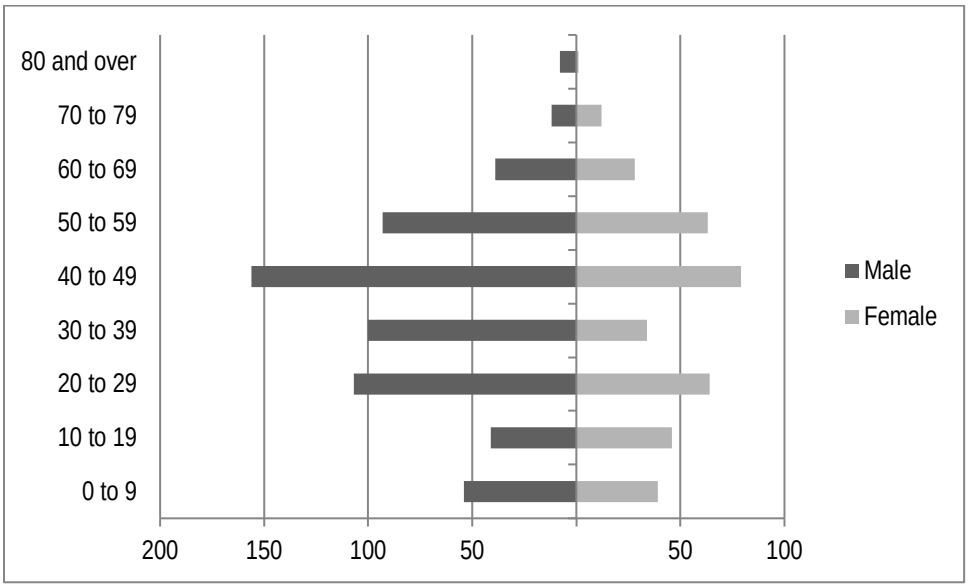
Sand Point is in an area that is part of the traditional territory of the Unga people. The community of Sand Point was founded in 1898 by a San Francisco fishing company as a trading post and cod fishing station. Unangans or Aleuts from surrounding villages and Scandinavian fishermen were the first residents of the contemporary community of Sand Point. The first settlers combined fishing and trading with fox farming and Sand Point served as a repair and supply center for gold mining during the early 1900s, but fish processing became the dominant activity in the area in the 1930s (AECOM 2008). Aleutian Cold Storage built a halibut processing plant in the community, the forerunner of contemporary processing in the community, in 1946 (National Oceanic and Atmospheric Administration 2013).

5.2.2.2 Community Demographics

According to U.S. Census figures from 2010, a total of 976 people reside in Sand Point. There were proportionally more males in the population than in most of the communities profiled, as demonstrated in Figure 6, and the largest cohort of residents consisted of individuals aged 40 to 49. The gender composition of Sand Point varies widely from state and national averages as it is heavily influenced by the large local seafood processing operation, which in demographic terms may be described as an industrial enclave type of development, with its workforce drawn virtually exclusively from outside of the community (AECOM 2013).

Census figures from 2010 show that 17.0 percent of the residents of Sand Point identified themselves as White, while the largest racial group was American Indian or Alaska Native at 39.0 percent. Approximately 2.5 percent identified themselves as Black/African American, 34.7 percent as Asian, 0.2 percent as Pacific Islander, and 6.5 percent as “some other race” or “two or more races.” Finally, 6.2 percent of the residents of any race in Sand Point identified themselves as Hispanic. Based on race and ethnicity combined, 86.1 percent of Sand Point’s total population was composed of minority residents (that is, all residents other than those identified as White/non-Hispanic [race/ethnicity]). In general, Sand Point’s population was in part typical of a historic Alaska Native community, with a relatively large Alaska Native population segment. Additionally, the relatively large Asian/Pacific Islander/Other population segment is emblematic of larger seafood processing operations, particularly in the AEB and the Aleutian and Pribilof Islands region in general, that draw a proportionately large number of workers from a non-local labor pool (AECOM 2013).

Figure 6. Sand Point 2010 Population Structure



Source: U.S. Census Bureau 2011

Housing data from the U.S. Census, as shown in Table 51, indicate that 64.1 percent of all Sand Point residents lived in non-group quarters housing, with total housing units in Sand Point numbering 290. Of those housing units, approximately 84.8 percent were occupied. Family households number 168, with an average household size of 2.54 persons. The large proportion of residents living in group quarters is indicative of a relatively transient population segment living in group housing associated with the large local seafood processing operation (AECOM 2013).

Table 51. Sand Point 2010 Housing Information

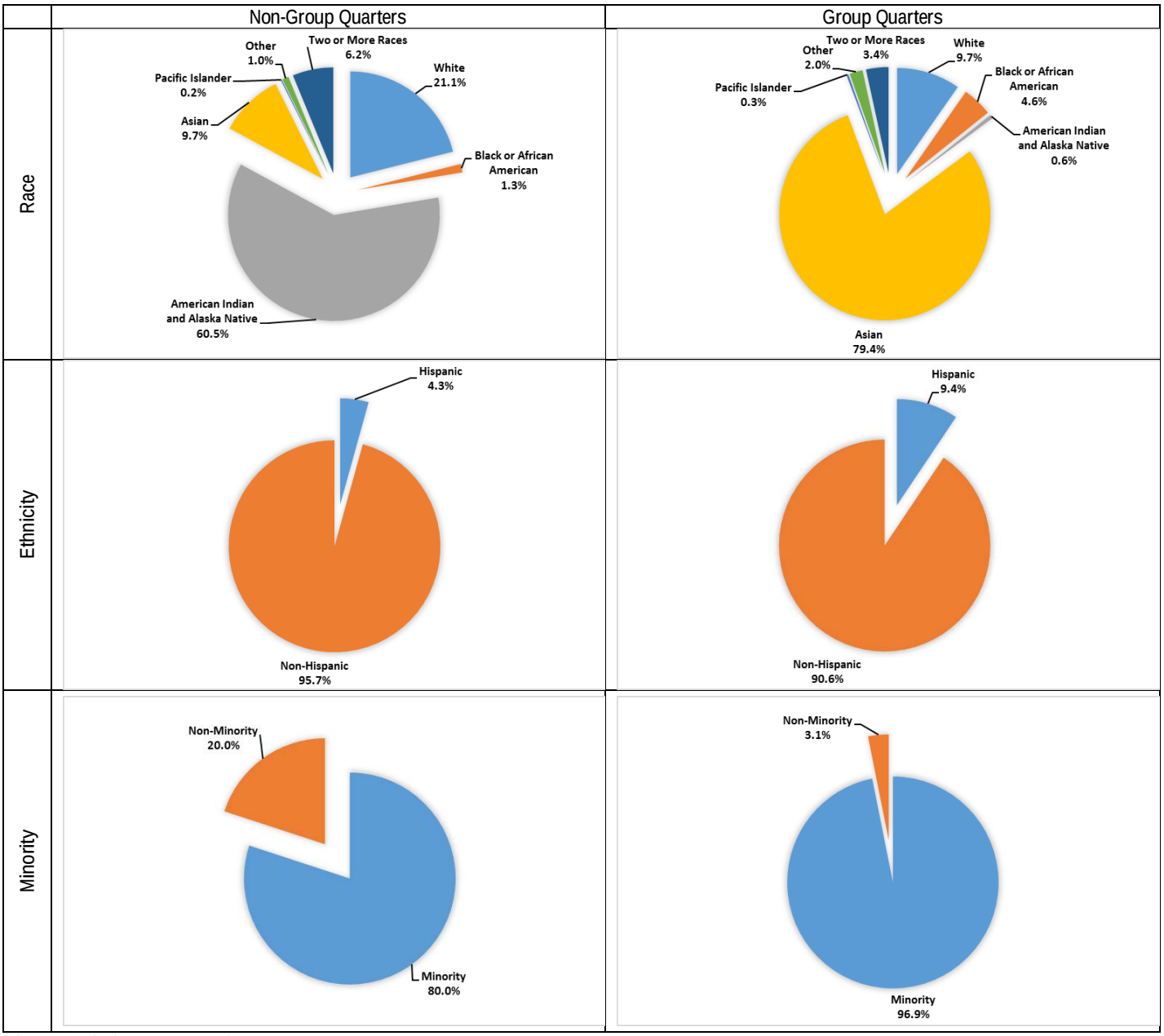
Category	Number	Percent
Total Population	976	100%
Living in Non-Group Quarters	626	64.1%
Living in Group Quarters	350	35.9%
Total Housing Units	290	100%
Occupied Housing (Households)	246	84.8%
Vacant Housing	44	15.2%
Family Households	168	68.3%
Average Household Size	2.54	na

na = not applicable

Source: U.S. Census Bureau 2011

Figure 7 provides a comparison of selected demographic indices for race, ethnicity, and minority status by housing type for Sand Point. As shown, the demographics of the portion of the population living in non-group quarters is quite different from the portion of the population living in group quarters. Alaska Native residents make up a relatively large proportion of the non-group quarters population and a relatively small proportion of the group quarters population, with the opposite being true for persons of Asian/Pacific Islander/Other descent. Group quarter housing in Sand Point, with its relatively large processing capacity, is primarily processor housing that, in turn, houses a substantial number of persons relative to the total population of the community.

Figure 7. Selected Demographic Indices by Housing Type, Sand Point, 2010



Source: U.S. Census Bureau 2011

5.2.2.3 Local Economy and Socioeconomic Context

Sand Point is almost wholly dependent on commercial fishing and governmental economic sectors, which together provide the large majority of long-term employment in the community. Additionally, virtually everyone in Sand Point is directly or indirectly connected to the local commercial fishing vessel fleet, the community's large seafood processing operation, or service businesses that rely at least to some degree on fishing-related economic activity. Various construction projects provide important short- to medium-term employment. In contrast to a number of other communities profiled in this section (e.g., Anchorage, Homer, and Kodiak), tourism does not play much of a role in the local economy and the economic output of the community is closely tied to the overall output of the commercial fishery (AECOM 2013).

As fishing seasons cycle through the year, employment rates fluctuate. The latest employment estimates based on the 2010-2014 U.S. Census American Community Survey suggest that 1,007 people were employed in Sand Point, with an unemployment rate of 3.6 percent. Per capita income for people in Sand Point was estimated at $26,266, median household income was $55,938, and median family income was $54,531. An estimated 17.6 percent of Sand Point's residents were considered low-income, defined as those individuals living below the poverty level threshold (Alaska Department of Labor and Workforce Development 2016). Table 52 displays the top five occupations in Sand Point.

Table 52. Sand Point Top Five Occupations, 2014

Rank	Occupation
1	Meat, Poultry, and Fish Cutters and Trimmers
2	Material Moving Workers
3	Office Clerks
4	Teachers and Instructors
5	Bartenders

Source: Alaska Department of Labor and Workforce Development 2016

It is important to recognize that compatibility between fishing and non-fishing opportunities in the community are considered by some as an important part of an integrated yet diversified employment and income strategy (which, in turn, is consistent with preferred family/social arrangements). This "employment pluralism" strategy may be seen as an adaptive approach to fishing (and non-fishing) employment and income opportunities that vary considerably over time based on both short- and long-term resource fluctuations (as well as political/economic fluctuations that, in turn, result in fluctuations in various employment-producing opportunities such as major construction project funding). This is especially true for small communities, such as Sand Point (and King Cove), where alternative employment options are limited by small-scale, relatively undiversified economies and subsistence pursuits are of relatively high importance (for cultural as well as sustenance reasons), but it is also true for communities like Kodiak, where crew members may use economic returns from one fishery to capitalize relatively small-scale owner-operator participation in other fisheries, with seasonal (and

multi-season) fluctuations again influencing changes in relative dependence on individual fisheries (Northern Economics 2016).[39,40]

5.2.2.4 Commercial Fisheries Engagement

Overview

While the Sand Point area has been the site of traditional settlements for thousands of years, the contemporary community of Sand Point traces its current demographic and socioeconomic form to the development of commercial fishing, both harvesting and processing, in the area in the late 1800s. A recent study for the AEB emphasizes the continuing central place of commercial fishing in Sand Point (and King Cove) as a "fundamental, organizational, cultural, and economic foundation that often encompasses subsistence practices" (Reedy 2015), building on the concept that residents of these communities ultimately, in a number of ways, depend culturally and individually upon "entangled livelihoods" (Reedy-Maschner 2009) encompassing interdependent commercial and subsistence lifestyle components.

While Sand Point is economically built upon the commercial fishing industry, it has a modest direct commercial fisheries support service sector, consisting mostly of a handful of local business owners who specialize in marine-focused industries; community residents report that there used to be more independent providers in years past when fisheries were more active during longer periods of the year. Though a major processing port, Sand Point differs markedly from Kodiak in that Sand Point's lone shoreplant has historically provided a variety of fleet support services that are generally provided by outside vendors in larger communities. Nevertheless, outside of school, public works, village ANCSA corporation, and tribal employment, there are arguably few local employment opportunities that are not directly linked back to supporting the fishing sector of the economy (AECOM 2008).

[39] An "income pluralism" strategy, if not an employment pluralism strategy, has also proven important over time for vessel owner/operators, particularly in communities with long-established commercial fishing traditions. The ability of vessel owners to move between commercial fisheries in response to both short- and long-term resource and economic fluctuations has been noted as an integral part of an adaptive approach to earning a living in a number of these communities for generations. There have been concerns expressed in at least some communities (such as Sand Point and King Cove) that fishery management programs that may serve to limit this type of flexibility, such as the BSAI crab rationalization program, may not be in the long-term best interests of communities that are dependent on an established residential fleet that is proportionately large compared to other local economic sectors. This would appear to be particularly of concern in those communities that are neither CDQ communities nor sizable enough to support a large vessel fleet with greater effective fishing ranges (and therefore at least some greater degree of spatial adaptability) and where relatively fluid lateral movements such as between salmon and crab fisheries and between salmon and halibut fisheries, even on a weekday/weekend switch basis during seasons, are well-remembered, and diversification, flexibility, and continuing access to a range of resources is considered critical to both individual and community well-being if not survival.

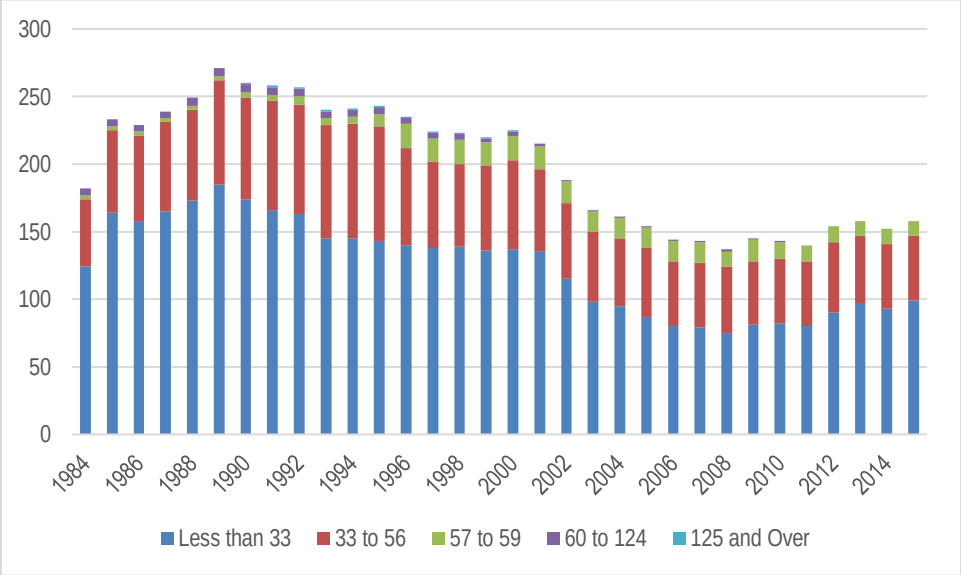
[40] For additional information on the cultural role of commercial fishing, its articulation with subsistence pursuits, and social changes associated with limited access fishery programs in a contemporary Eastern Aleutian community (King Cove), see Reedy-Maschner (2010).

Harvest Sector

General

Figure 8 shows changes in the number of locally owned commercial fishing vessels, by size class, for the period 1984 through 2014. As shown, there was a general decreasing trend in the number of resident-owned commercial fishing vessels in the community from around 1989 through 2011, with overall fleet numbers plateauing in more recent years, well below the peak seen roughly 25 years ago. A detailed, if now somewhat dated, overview of the Sand Point fleet, including types of vessels and their associated annual rounds, distribution of permit holders, catch and earnings estimates, and landings inside and outside of the community, along with an analysis of the spatial distribution of the fishing effort of the local fleet is available in an earlier NPFMC community profile (AECOM 2008). As updating this information is effort intensive and not central to the current GOA trawl bycatch management-oriented community analysis, this overarching characterization has not been updated here. Rather, the more qualitatively oriented and GOA trawl specific-focused discussion has been expanded below. Limited parallel information is also provided on the local fleet sectors engaged in the GOA halibut and GOA Chinook salmon fisheries.

Figure 8. Number of Commercial Fishing Vessels Owned by Sand Point Residents, by Length Category, 1984-2015.



Source: Commercial Fisheries Entry Commission 2016

From 2003 through 2014, the annual number of Sand Point resident-owned commercial fishing vessels participating in all fisheries, using all gear types in all areas combined (i.e., the community commercial fishing fleet), varied from 71 (in 2007) to 84 (in 2013), with an annual average of 76.0 resident-owned commercial fishing vessels over this time span. The annual ex-vessel gross revenues for these vessels ranged from $11,820,926 (in 2014) to $23,126,926 (in 2008), with an annual average of $18,106,187 ex-vessel gross revenues over this period. In 2014, the most recent year for which data are available, Sand Point had 75 resident-owned vessels.

GOA Trawl Catcher Vessels

A total of 14 unique Sand Point resident-owned GOA trawl catcher vessels participated in the fishery over the years 2003-2014, averaging approximately 9.5 vessels participating per year, ranging between seven vessels (2011-2014) and 13 vessels (2003) in any given year. These vessels accrued a total of 113 vessel participation years over this 12-year span, with the participation of individual vessels under Sand Point resident ownership ranging from one to 12 years:

- Two vessels participated one year (2003)
- One vessel participated two years (2007 and 2008)
- Two vessels participated five years (2003-2006 and 2009)[41]
- One vessel participated seven years (2003-2007, 2009, and 2010)[42]
- One vessel participated eight years (2003-2010)
- Seven vessels participated all 12 years (2003-2014)

Over the years 2003-2014, the Sand Point resident-owned GOA trawl catcher vessel fleet consisted largely of vessels 60 feet or less, with these vessels accounting for 105 of the 113 Sand Point resident-owned catcher vessel GOA trawl fishery participation years during this time. Of the 14 unique catcher vessels with Sand Point resident ownership that participated in the GOA trawl fishery during this period, two were in the less than 57 feet LOA category (one was 49 feet and the other was 51 feet LOA, and were the shortest vessels from any community that regularly participated in the fishery during this period); 10 were in the 57-59 feet LOA category (all were 58 feet LOA); and two were in the 60-124 feet LOA category (one was 68 feet and the other was 90 feet LOA, with the former vessel participating one year during the period and the latter foot vessel participating seven of the 12 years in the period as a Sand Point resident-owned vessel and four other years variously as a Seattle MSA, other Washington community, and Kodiak resident-owned vessel). None were in the greater than or equal to 125 feet LOA category.

GOA trawl-caught ex-vessel gross revenues for Sand Point resident-owned GOA trawl catcher vessels averaged approximately $4 million annually over the period 2003-2014, ranging from approximately $2 million (2011 and 2013) to approximately $5 million (2005, 2006, 2008, and 2012) in any given year.

Half of the Sand Point resident-owned GOA trawl catcher vessels that participated in the fishery in any of the years 2003-2014 did not participate in the fishery in the four most recent years covered by the

[41] Both of these vessels participated in the GOA trawl fishery in each year 2003-2014, but are shown in the dataset as having Seattle MSA resident ownership in the years 2007, 2008, and 2010-2014.

[42] This vessel participated in the GOA trawl fishery a total of 10 of the 12 years 2003-2014, but is shown in the dataset as having Washington resident ownership in 2011-2013 (within the Seattle MSA 2012-2013 and outside of the Seattle MSA in 2011).

dataset (2011-2014). The Sand Point resident-owned catcher vessels that did participate in the fishery in most recent four years covered by the dataset were those vessels that participated in the fishery in all 12 years covered by the dataset. Why Sand Point vessel owners chose to participate in the GOA trawl fishery some years and not others remains an open question. As noted above, of the seven vessels that participated in the GOA trawl fishery under Sand Point resident ownership at least some years 2003-2014 but not the most recent four years covered by the data, three of those vessels did participate in the fishery under ownership attributed to Washington following their participation in the fishery as Sand Point resident-owned vessels. The reason for the apparent shift of GOA trawl catcher vessel ownership away from Sand Point also remains an open question. *<< this paragraph to be revisited/expanded following direction coming out of the December 2016 Council meetings and the ultimate decision on fieldwork and/or other follow-up in the community >>*

In terms of reliance or dependency, for Sand Point resident-owned GOA trawl catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 38 percent of all ex-vessel gross revenues generated by those vessels for the period with year-to-year variation ranging from about 18 percent (2011) to about 50 percent (2012). For the Sand Point resident-owned community fleet (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 21 percent of all ex-vessel gross revenues generated by those vessels for the period with year-to-year variation ranging from about 8 percent (2011) to about 30 percent (2006).

Table 53 provides information on the "delivery footprint" of the Sand Point resident-owned GOA trawl fleet. As shown, there were GOA trawl-caught deliveries made by Sand Point resident-owned catcher vessels to five different communities over the 2003-2014 period, with three of those (Akutan, Kodiak, and Seattle [likely a floating processor operating in Alaska waters]) having an average of less than one Sand Point vessel per year making deliveries. In contrast, the greatest continuity of deliveries by the Sand Point resident-owned fleet was to Sand Point itself, with deliveries by no fewer than five Sand Point resident-owned catcher vessels in every year covered by the data, followed by King Cove, with deliveries by no fewer than three Sand Point resident-owned catcher vessels in any given year covered by the data. The central importance of Sand Point as the delivery port for Sand Point resident-owned GOA trawl catcher vessels may also be seen in the fact that a total of 13 unique Sand Point resident-owned GOA trawl catcher vessels delivered to Sand Point over the 2003-2014, which was one short of the grand total of Sand Point resident-owned GOA trawl catcher vessels delivering to all communities during this period, meaning all but one of the Sand Point resident-owned catcher vessels delivering to any community also delivered to Sand Point over this period. A review of yearly unique vessel counts, however, unlike Kodiak, shows considerable year-to-year variability, with between one and four Sand Point resident-owned catcher vessels making GOA trawl caught deliveries to some community(ies) other than Sand Point and not delivering to Sand Point in the same year for 11 of the 12 years covered by the data. In an average year, about 80 percent of the active Sand Point resident-owned GOA trawl catcher vessels made trawl-caught deliveries to Sand Point, while about 40 percent made GOA trawl-caught deliveries to King Cove. (On an annual average basis, slightly more Sand Point resident-owned than King Cove resident-owned GOA trawl catcher vessels made GOA trawl-caught deliveries to King Cove over the period 2003-2014.)

Table 53. Community of GOA Trawl-Caught Deliveries by Catcher Vessels Owned by Sand Point Residents by Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Akutan	0	0	0	1	0	0	0	3	0	1	2	3	0.8	8.8%	5
King Cove	4	4	5	4	4	3	6	4	3	4	3	3	3.9	41.6%	8
Kodiak	0	0	1	1	0	0	0	0	0	0	0	0	0.2	1.8%	1
Ninilchik	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Sand Point	10	9	9	9	8	7	8	7	5	5	7	6	7.5	79.6%	13
Seward	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Unalaska/Dutch Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
All Other AK	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Seattle	0	0	0	0	0	0	0	0	0	1	1	1	0.3	2.7%	2
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Grand Total	13	11	11	11	10	8	12	9	7	7	7	7	9.4	100.0%	14

Source: AKFIN 2016b

GOA Trawl Catcher Vessel Crew

GOA trawl catcher vessel crew data are available from two primary sources: EDR data that were collected for 2015[43] and AFSC GOA trawl fishery social survey data that were collected in 2014. Both are summarized in this section.[44]

2015 EDR Catcher Vessel Crew Data

GOA Trawl Crew Positions Held by Sand Point Residents on all GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, a total of 40 unique Sand Point residents held crew positions on GOA trawl catcher vessels, including 18 individuals who held CFEC gear operator permits and 22 individuals who held ADFG crew licenses.

- If crew positions are counted rather than unique individuals (as some individuals worked on more than one GOA trawl catcher vessel during the year), in 2015 a total of 43 crew positions were held by Sand Point residents, including 20 positions held by individuals with CFEC gear operator permits and 23 positions held by individuals with ADFG crew licenses. These included:

    - 34 on vessels owned by Sand Point residents (18 CFEC gear operator permit holders and 16 ADFG crew license holders).

    - 1 on a vessel owned by a King Cove resident (0 CFEC gear operator permit holders and 1 ADFG crew license holder).

    - 8 on vessels owned by Seattle MSA residents (2 CFEC gear operator permit holders and 6 ADFG crew license holders).

[43] As noted elsewhere, multiple caveats apply to catcher vessel EDR data, including: 2015 was the first year EDR catcher vessel crew data were collected; only one year of data is available; the available data have not been verified and audited (as audits typically rely on multiple years of data to identify outliers); and data are missing (have not yet been submitted) for 10 GOA trawl catcher vessels, which includes four vessels that were apparently active in the fishery in 2015 and six that were not (n = 68 catcher vessels in the EDR data). Additionally, one vessel appears in the data twice, as it changed ownership during the year (i.e., there are 67 unique catcher vessels in the EDR data), and there are some minor inconsistencies in crew (n = 365 unique persons) and vessel counts specific to crew position and compensation data relative to other fields in the data (e.g., n = 387 crew positions for most variables, but 386 crew positions for compensation variables). Specific to community level analysis, residence community information is not available for 55 unique individual crew members (1 CFEC gear operator permit holder and 54 ADFG crew license holders) who held 56 crew positions (1 CFEC gear operator permit holder and 55 ADFG crew license holders). Nevertheless, these data are the best available and are presented here as an indication of relative if not exact crew employment and, to the extent possible within data confidentiality constraints, compensation patterns across communities.

[44] *Pending direction coming out of the December 2016 Council meetings and an ultimate decision on fieldwork in Kodiak, Sand Point, and King Cove, 2015 data on trawl catcher vessels and crew will be revisited and supplemented with input from field interviews regarding the classification of vessels affiliated with these three centrally important GOA trawl communities based on ownership community, delivery port, homeport, and crew residence.*

Crew Positions and Payments to Labor on Sand Point Resident-Owned GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, there were a total of 48 crew positions on Sand Point resident-owned GOA trawl catcher vessels, including 19 positions whose occupant held a CFEC gear operator permit and 29 positions whose occupant held an ADFG crew license. Of these positions:
    - 34 were held by Sand Point residents (18 CFEC gear operator permit holders and 16 ADFG crew license holders).
    - 3 were held by residents of other Alaska communities, including Anchorage and King Cove (1 CFEC gear operator permit holder and 2 ADFG crew license holders).
    - 11 were held by individuals whose residence location was unknown (0 CFEC gear operator permit holders and 11 ADFG crew license holders).
- EDR data indicate that in 2015, for the 8 GOA trawl catcher vessels identified as having Sand Point ownership, a total of 45 crew members on those vessels received $2,264,642 in total labor payments from the GOA trawl fishery, including $807,459 to captains and $1,457,183 to other crew members.

For additional detail on EDR GOA trawl catcher vessel crew data, please see Table 103, Table 104, and Table 105 in Attachment 3.

AFSC 2014 Social Survey Catcher Vessel Crew Data

Of Sand Point GOA trawl catcher vessel owners and crew members (n=27)[45] who participated in the 2014 AFSC GOA trawl fishery social survey (National Oceanic and Atmospheric Administration 2015) and answered the specific questions relevant to the following demographic, industry participation, and employment topics:

- 100 percent were male.
- Average age was 47.6 years (with a standard deviation of 14.9).
- 51.9 percent identified themselves as white/Caucasian, 44.4 percent identified themselves as Alaska Native or American Indian, 0.0 percent identified themselves as Native Hawaiian or Other Pacific Islander, 0.0 percent identified themselves as black/African American, 0.0 percent identified themselves as Asian, and 3.7 percent identified themselves as being some other race or two or more races. 0.0 percent identified themselves as Hispanic or Latino.

[45] This number includes all catcher vessel owners and crew associated with vessels for which Sand Point was determined to be the primary port of mooring. The primary port of mooring was determined via the AFSC survey and/or through key person interviews during the AFSC survey effort. The vessel's primary port of mooring is not necessarily the same as the catcher vessel owners' and/or crews' place of residence.

- 63.0 percent indicated their family historically participated in commercial fishing or processing activities.
- Their families had been participating in commercial fishing or processing activities for an average of 3.4 generations (with a standard deviation of 1.1).
- On average, they were 14.2 years old when they started to work in commercial fishing or processing activities (with a standard deviation of 4.2).
- They had been working in the GOA groundfish trawl fishery an average of 16.8 years (with a standard deviation of 9.1).
- 80.8 percent indicated that 76-100 percent of their combined family income came from their participation in fishing activities.
- 11.5 percent indicated that 51-75 percent of their combined family income came from their participation in fishing activities.
- 3.8 percent indicated that 26-50 percent of their combined family income came from their participation in fishing activities.
- 3.8 percent indicated that 10-25 percent of their combined family income came from their participation in fishing activities.
- 14.8 percent indicated they maintained a job outside of commercial fishing or processing industry.

For additional detail on selected AFSC survey questions and responses, please see Table 110 in Attachment 4.

GOA Halibut

A total of 56 unique Sand Point resident-owned catcher vessels participated in the GOA halibut fishery over the years 2003-2014, averaging approximately 23 vessels participating per year, ranging between 17 vessels (2013) and 29 vessels (2003) participating in the fishery under Sand Point resident ownership in any given year.

GOA halibut ex-vessel gross revenues for Sand Point resident-owned catcher vessels averaged approximately $2.1 million annually over the period 2003-2014, ranging from approximately $0.6 million (2013) to approximately $3.4 million (2003) in any given year.

In terms of reliance or dependency, for Sand Point resident-owned GOA halibut catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA halibut deliveries accounted for approximately 20 percent of all ex-vessel gross revenues generated by those vessels for the period. For the Sand Point resident-owned community fleet (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA halibut deliveries accounted for approximately 11 percent of all ex-vessel gross revenues generated by those vessels for the period.

GOA Chinook Salmon

A total of 98 unique Sand Point resident-owned catcher vessels participated in the GOA Chinook salmon fishery over the years 2003-2014, averaging approximately 49 vessels participating per year,

ranging between 41 vessels (2008 and 2014) and 57 vessels (2011) participating in the fishery under Sand Point resident ownership in any given year.

GOA Chinook salmon ex-vessel gross revenues for Sand Point resident-owned catcher vessels averaged approximately $42 thousand annually over the period 2003-2014, ranging from approximately $14 thousand (2003) to approximately $64 thousand (2009) in any given year.

In terms of reliance or dependency, for Sand Point resident-owned GOA Chinook salmon catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA Chinook salmon deliveries accounted for approximately 0.3 percent of all ex-vessel gross revenues generated by those vessels for the period. For the Sand Point resident-owned community fleet (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA Chinook salmon deliveries accounted for approximately 0.2 percent of all ex-vessel gross revenues generated by those vessels for the period.

Processing Sector

General

From 2003 through 2014, according to the dataset, the annual number of Sand Point shore-based processors varied from 1 (in 2003) to 2 (in 2004-2014), based on a count of intent to operate codes, with an annual average of 1.9 shore-based processors operating over this time span (although there is only a single physical plant operating in the community).[46] All first wholesale gross revenues associated with shore-based processing in Sand Point over this period are confidential.

As described in earlier operational profiles (e.g., EDAW 2008), the processing plant in Sand Point is owned and operated by Trident Seafoods. In general, in previous profiles Trident management has characterized the Sand Point facility as a “whitefish plant” in terms of its dependency on cod, pollock, and halibut, in contrast to the higher volumes of salmon run in other communities, such as King Cove. While salmon is run in Sand Point, salmon production has dropped substantially from that seen in the 1980s when the local salmon fishery was particularly prosperous. In addition to taking deliveries directly to the plant, in recent years Trident also has at times provided tendering services for cod fishermen who “camp out” on the grounds during the season as well as for state waters cod fishermen in the Chignik area.

A buying station for Peter Pan is also present in Sand Point, with the physical processing taking place in King Cove. The buying station typically purchases cod, pollock, halibut, and salmon, giving local fishermen in Sand Point a second market for their catch. Some custom processing takes place between Peter Pan and Trident, specifically of salmon.

[46] A third processing entity operates a local buying station in the community, which also offers some vessel support services, but does not conduct processing operations in Sand Point.

Additionally, Aleutia, a Regional Seafood Development Association that does not have its own processing capacity, purchases fish in Sand Point, which is typically custom processed at the Trident plant. The local operations of each of these three entities are briefly profiled below.

Trident Seafood Processing Operations

In terms of a typical annual cycle for the Trident plant, according to plant management the year kicks off with the federal cod opening on January 1. In reality, however, the plant has started to gear up for this opening in late December, as the plant needs to be prepared and workers brought in for the new seasons, building up from the small group of 20 to 30 core employees who handle winter cleanup and maintenance activities at the plant during the end of year period when no production is taking place. During some years, the winter cleanup and maintenance crew is also supplemented with construction crews for special projects.

During a typical year, the buildup to the January openings occurs over time, in part due to the constraints imposed by air transportation. Processing workers are recruited out of Seattle and from the workforces of other Alaska Trident plants that may have excess labor capacity at the time of need in Sand Point, with worker retention being about 40 percent from season to season. According to company management, whatever seats are available on regularly scheduled service (PenAir) are utilized, but the company also sometimes charters other aircraft to bring in 35 to 50 people a day if needed. The specifics of demand for processing capacity, and therefore processing workers, varies somewhat from year to year while other recent changes have accompanied changes in fisheries management. Since the implementation of the BSAI crab rationalization program, for example, Bristol Bay red king crab and Bering Sea snow crab are no longer processed at the plant, changing worker demand flows in both the earlier and later parts of the year. In general, however, around 350 workers have typically been needed at the Sand Point facility by the January 20 pollock A season opening, but variation in the mix of product form has raised this number to 420 in some years. Before the pollock A opening, the plant has the flexibility to optimize the use of different size workforces by adjusting product forms. With the "race for fish" that still occurs during pollock and cod seasons, however, peak workforce is necessary to keep up with the flow of fish through the plant. Bering Sea AFA pollock may be sent to the plant during any lulls in GOA seasons, with processing continuing as long as it makes sense in terms of balancing operations with Trident's Bering Sea facility in Akutan.

Cod and pollock processing remain at high levels through federal and state openings, before things begin to slow down around the second or third week of April. Employment at the plant is normally stepped down at the end of April, but timing depends on a variety of factors. Processing workers typically sign a 6-month employment commitment and rotate out at that point, but work may be extended depending on processing conditions. Typically, by May, around 180 workers are needed at the Sand Point plant to support groundfish processing.

Several Sand Point boats fish their halibut IFQs during May. Both halibut and black cod remain "backdrop" fisheries through the first week of November, however, as transient vessels pass through the area to fish their IFQ shares.

The period from mid-June through the end of July can be a busy period for salmon processing, and in recent years this has required about 290 workers on-site. The workers brought in to ramp up to this level are typically a combination of new contract workers and ones that have extended their contracts from A season. Dungeness crab deliveries start up at the facility around the end of June or early July. Salmon processing continues into September. Pollock C season ensuing on August 25th and the beginning of B season cod on September 1st necessitates the need to increase the number of personnel on site to roughly 320 to handle the amount of groundfish that can come in until the end of D season pollock, which closes on November 1st. After the pollock closure the workforce is usually reduced to handle what is usually a more limited amount of cod deliveries. There is, generally speaking, little or no effort from the trawl sector during the fall. By the end of November, there is no more production being done at the Sand Point Trident plant, with effort shifting to cleanup and maintenance activities.

Given seasonal labor force fluctuations, Trident varies the number and duration of daily shifts. During slow periods of the year, a single shift may be run with the duration of that shift being variable, depending on the availability of fish. During the busiest time of the year, three overlapping shifts of up to 16 hours each are run per day, meaning that at a given time up to the equivalent of two full shifts may be running simultaneously.

The vast majority of Trident workers live in group quarters housing on-site. At present, Trident housing can accommodate between 410 and 420 workers during production peaks, as in addition to the production line people working on-site during peak periods there is always a need to accommodate additional individuals, such as buyers, observers, technicians, and others. During off-peak times, effective capacity is reduced as senior people are not asked to share rooms, some rooms feature double rather than triple occupancy, and the like. In addition to the workers housed in the processing plant complex itself, there are between 20 and 30 salaried employees and their family members living in residences elsewhere in the community, according to plant management. Trident owns two multi-unit housing structures (a four-plex and a tri-plex) in the community outside the main footprint of the plant, along with three single-family houses (occupied by the plant superintendent, the fuel dock manager, and the meal plant manager) that were former government housing, including Navy and Federal Aviation Administration units.

Trident Seafoods Support Service Operations

In addition to its facilities in the downtown area, Trident also owns land on the west side of the downtown area as well as a sizeable piece of developable waterfront property in the community near the airport. According to Trident management, the land near the airport was the site of a cannery that burned prior to World War II and was owned by the New England Fisheries Company before being acquired by several local fishermen and subsequently passing into Trident's hands in a transaction that was separate from its acquisition of the main plant in the community. Through a complex series of transactions, a part of this land was sold to Peter Pan, which had previously leased in the area but had been displaced by an airport expansion project. A number of the old cannery outbuildings remain on the site and have been used by Trident for storage, but this use has become more limited over time as the buildings have continued to deteriorate. At present, the use of the land is primarily devoted to open space pot and other gear storage.

Trident provides a number of support services to the vessels that deliver to the plant. In addition to the typical logistical support, including handling mail, expediting parts, arranging for emergency repairs on the grounds, and the like. Trident engineers will also assist vessels with maintenance and repairs if needed. When specialized services are required, Trident will arrange for those types of services as well. These services include, for example, having refrigeration or electronics technicians or Caterpillar mechanics come to the community. Trident will also make these specialized types of services available to local vessels that deliver elsewhere after first prioritizing the needs of its own fleet, and in other ways acts as a general source of support for local vessels. For example, the Trident store is a source of marine hardware in the community. Trident also provides pot and other gear storage to delivering vessels. While Trident does not charge gear storage fees to vessels that deliver to the plant, there is a per pot round-trip charge for pot hauling services, with fees varying depending on the nature of the relationship of the vessel to the plant.

Trident is also the only supplier of marine fuel in Sand Point, as well as the only supplier of automotive fuel to the community. While in the past, automotive fuel sold dockside, more recently Trident opened a modern fuel station and adjacent store upland from its waterfront infrastructure. The new store, replacing a smaller company convenience store that while open to the public was relatively difficult to access, is open to the public and carries a much broader range of food, clothing, and other goods than the store it replaced.

Peter Pan Seafoods Buying Station

While Trident operates the only shore-based processing plant in Sand Point, Peter Pan Seafoods operates a buying station in Sand Point at a site near the airport. Typically, fish purchased by Peter Pan in Sand Point are then tendered to King Cove for processing at the Peter Pan plant in that community. Peter Pan buys cod, pollock, and salmon in Sand Point (but, like Trident, also takes other species that are caught as bycatch during these targeted fisheries). In addition to tendering fish to its own facility at King Cove, Peter Pan also arranges for some of its salmon to be custom processed at the Sand Point Trident plant. Peter Pan also buys halibut from local Sand Point fishermen, but typically this is done through having the fishermen make direct deliveries to the King Cove plant rather than through purchases in Sand Point that are then tendered to King Cove. According to Peter Pan personnel, it is not unusual for local vessels to deliver halibut to a wider area than is the case for other, lower value species such that if the price differential is great enough, Sand Point boats may deliver fresh halibut all the way to Homer and combine the trip with vessel services in that larger community.

As a buying station, employment at the Peter Pan Sand Point facility is limited. During the winter, a total of four employees work at the station: the office manager, an office assistant, a dispatcher/tender coordinator and a stockroom manager. Tendering is performed by vessels under contract to Peter Pan. In general, the size of quotas or runs, price structure, market demands, and the speed of the fishery all affect how much tendering takes place in Sand Point as opposed to direct delivery to the King Cove plant.

Peter Pan Seafoods Support Service Operations

In addition to purchasing catch, Peter Pan supports its vessels through pot and gear storage, and it has a dock that is utilized for gear changes and limited resupply. Equipment made available free of charge

to vessels includes a bobcat and a flatbed truck for pot hauling, as well as land and warehouse space for gear storage. Other vessel support services include vessel accounting, financial and logistical services, such as arranging for insurance prior to fishing, expediting parts up to and including replacement engines, and coordinating other needed services, such as grocery orders. Typically, the vessels that utilize the Peter Pan dock also have slips in the City boat harbor, and that is where vessel work is performed along with most resupply.

There is also a bunkhouse facility on-site. The bunkhouse consists of a private residence that houses the office manager's family and an attached group quarters facility that consists of seven units with private bedrooms and baths, plus shared common room, kitchen, laundry, and storage areas. At present, housing remains in relatively short supply in the Sand Point and the excess Peter Pan bunkhouse capacity is sometimes utilized to house Peter Pan fishing fleet support service workers and workers on various non-Peter Pan related construction projects in the community.

Peter Pan also has a marine hardware store/stockroom on its site, which is open for sales to the public. This facility also sells a limited amount of clothing and consumer electronic goods. Additionally, the individual who runs the marine hardware store for Peter Pan also runs a separate small (one person) business, Wastec, which supplies and services marine and home electronics and has done so for over 30 years.

Aleutia

In addition to the Trident and Peter Pan operations, Aleutia is a third market entity in town that buys fish from fishermen on a regular basis. Aleutia was established as a legal entity by the AEB in 2001 and was initially operated through a 3-year state grant administered by the Alaska Fisheries Development Foundation, supplemented by AEB funding. Following the expiration of the original grant, the AEB has continued its involvement with Aleutia, which was recognized by the State of Alaska in 2008 as a Regional Seafood Development Association.

While the Aleutia brand is essentially owned by the AEB, Aleutia in general represents the fruits of a local area (Alaska Peninsula and Aleutian Islands) branding and marketing initiative. Aleutia was founded on the idea of producing consistently premium quality product with a consistent approach of live bled salmon immediately iced with quality control provided by third-party inspection. Run by a seven-member board of directors representing each of the fishing communities within the AEB who bring local harvester and business experience to their positions, Aleutia was locally created, is locally managed, and has been designed by the AEB and the communities of Sand Point and King Cove to represent borough and local community fishing interests in several different fisheries, as noted below. A non-profit entity, Aleutia employs two year-round staff members and two to four others who work seasonally, including a third-party inspector during the summer salmon season. (A more detailed history and profile of Aleutia is provided in an earlier produced set of community profiles [EDAW 2008]).

Aleutia, initially focused on salmon, does not have its own processing capacity, but rather has its salmon products custom processed at the Trident plant in Sand Point, with some secondary processing (filleting) occurring in Seattle. Aleutia later came to own processor quota shares under the BSAI crab rationalization program through its status as the designated Eligible Crab Community Organization,

holding rights of first refusal for processor quota shares affiliated with King Cove (and Port Moller), as described in the King Cove community profile, below. Aleutia also serves as the Community Quota Entity (CQE) for Sand Point and King Cove, and is thereby eligible to purchase commercial IFQ halibut and sablefish quota share for lease to community residents; additionally, Aleutia has the ability to obtain Pacific cod endorsements for non-trawl groundfish licenses for lease to residents.[47] While Aleutia has not to date (2016) obtained halibut or sablefish IFQ, it has been active in obtaining and leasing Pacific cod endorsements to pot fishermen in both Sand Point and King Cove.

Aleutia began operations in Sand Point by purchasing early season sockeye salmon that were sold to high-end restaurant markets. Subsequently, late run sockeye and silvers were added as they represent a unique opportunity for the premium trade, given that no other area of Alaska has runs that last into October or even November. Currently (2016), Aleutia's primary market consists of premium grocery store chains, with white tablecloth restaurants representing an important secondary focus. About 80 percent of local purchases are from set netters, with the balance purchased from seiners.

Current products marketed under the Aleutia brand include a range of salmon product forms produced in the Trident Sand Point plant, including fresh and frozen "head and gut," fillets, individual portions, and smoked products. Other products include BSAI crab produced in the King Cove Peter Pan plant. While currently focused on salmon and crab, there is potential interest in expanding the Aleutia brand to halibut and cod in the future.

GOA Trawl-Caught Processing

Sand Point's direct engagement in the GOA trawl fishery processing sector during 2003-2014 was limited to the single unique shore-based processor that operated in the community during that time. This processor accepted GOA trawl-caught deliveries each year 2003-2014 (i.e., the community averaged 1.0 processors participating in the fishery per year). This processor (*Sand Point Processor A)* accrued a total of 12 shore-based processor participation years over this 12-year span.

Given that only a single shore-based processor participated in the fishery, all first wholesale gross revenue information related to the processing of GOA trawl-caught deliveries to Sand Point is confidential. A general knowledge of the industry and previous community analyses would suggest, however, that during the 2003-2014, these revenues were undoubtedly a substantial component of overall processing first wholesale gross revenues for Sand Point shore-based processing, although these revenues likely varied considerably from year to year. It is generally understood that the processing of GOA trawl-caught deliveries is (1) a key component of the annual processing round of the Sand Point plant, (2) is important to the operational flow of the plant and provides an important source of labor hours for processing staff, and (3) is a strategically important component of the processors' efforts to maintain a desired flexibility and diversity of operations and to maintain mutually beneficial relationships with some of its delivery fleet that also participates in other fisheries with the plant.

[47] The maximum number of Pacific cod endorsed non-trawl groundfish licenses that may be assigned in the Western GOA groundfish regulatory area is 14 for the community of Sand Point and nine for the community of King Cove.

Table 54 provides information on the "community footprint" of the catcher vessels that made GOA trawl-caught deliveries to Sand Point shore-based processors 2003-2014, based on catcher vessel ownership address. As shown, deliveries were accepted from Alaska, Oregon, and Washington vessels, but the distribution of participation was not evenly spread across these geographies. Of the 55 unique vessels that made GOA trawl-caught deliveries to Sand Point shore-based processors during this period, 26 were from Alaska, 2 were from Oregon, and 30 were from Washington. Looked at from an annual average number of catcher vessels delivering to Sand Point processors, of the approximately 22 vessels that made GOA trawl-caught deliveries to Sand Point processors on an annual average basis, about 10 were vessels owned by Alaska residents and about 12 were vessels owned by Washington residents. Also, as shown, the large majority of Alaska resident-owned vessels making GOA trawl-caught deliveries to Sand Point shore-based processors were Sand Point resident-owned vessels (about eight of the 10 Alaska resident-owned catcher vessels that delivered to the community on an annual average basis). It should be noted, however, that Kodiak resident-owned catcher vessels made GOA trawl-caught deliveries to Sand Point shore-based processors in eight out of the 12 years 2003-2014, including seven of the eight most recent years covered by the dataset; further, multiple Kodiak resident-owned vessels made deliveries in four of the years covered by the dataset (2003 and 2012-2014). Petersburg resident-owned catcher vessels also made GOA trawl-caught deliveries to Sand Point shore-based processors in the five most recent years covered by the dataset (2010-2014). In the case of Washington resident-owned vessels, the annual average participation in making GOA trawl-caught deliveries to Sand Point shore-based processors was concentrated among Seattle MSA resident-owned catcher vessels, with Seattle MSA resident-ownership accounting for approximately 10 of the 12 annual average catcher vessels with Washington resident ownership making GOA trawl-caught deliveries to Sand Point shore-based processors.

Table 54. Catcher Vessels Making GOA Trawl-Caught Deliveries to Sand Point Shore-Based Processors, by Community of Vessel Owner Residence and Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Anchorage	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.4%	1
Homer	1	0	1	1	0	0	0	0	0	0	0	0	0.3	1.1%	1
King Cove	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Kodiak	2	0	0	0	1	1	0	1	1	5	3	2	1.3	6.1%	9
Petersburg	0	0	0	0	0	0	0	1	1	1	1	2	0.5	2.3%	2
Sand Point	10	9	9	9	8	7	8	7	5	5	7	6	7.5	34.2%	13
All Other AK*	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4%	1
Alaska Total	14	9	10	10	9	8	8	9	7	11	11	11	9.8	44.5%	26
Newport	1	0	0	0	0	0	0	0	1	0	0	0	0.2	0.8%	2
All Other OR	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Oregon Total	1	0	0	0	0	0	0	0	1	0	0	0	0.2	0.8%	2
Seattle MSA	8	10	10	10	11	11	8	9	9	11	14	11	10.2	46.4%	27
All Other WA	2	2	1	1	1	1	1	1	3	3	2	2	1.7	7.6%	5
Washington Total	10	12	11	11	12	12	9	10	12	14	16	13	11.8	54.0%	30
All Other States	0	0	0	0	1	1	0	0	0	0	0	0	0.2	0.8%	1
Grand Total	25	21	21	21	22	21	17	19	20	25	27	24	21.9	100.0%	55

*One catcher vessel owned by a resident of Juneau made at least one GOA trawl-caught delivery to Sand Point in 2003.
Source: AKFIN 2016b

GOA Halibut Processing

According to the dataset, a single unique shore-based processor in Sand Point accepted GOA halibut deliveries over the years 2003-2014, with one shore-based processor participating in the fishery each year. All first wholesale gross revenue data related to processing GOA halibut at the single processor and ex-vessel gross revenue data for deliveries of GOA halibut to the single processor in Sand Point cannot be disclosed due to data confidentiality constraints. Similarly, relative reliance or dependency of the single processor in the community on GOA halibut cannot be disclosed.

GOA Chinook Salmon Processing

According to the dataset, two unique shore-based processors in Sand Point accepted GOA Chinook salmon deliveries over the years 2003-2014, with an average of 1.6 shore-based processors participating in the fishery each year. All first wholesale gross revenue data related to processing GOA Chinook salmon at these processors and ex-vessel gross revenue data for deliveries of GOA Chinook salmon to these processors in Sand Point cannot be disclosed due to data confidentiality constraints. Similarly, relative reliance or dependency of these processors in Sand Point on GOA Chinook salmon cannot be disclosed.

5.2.2.5 Sport Fishing Engagement

Overview

Unlike a number of other communities farther eastward in the Gulf of Alaska, such as Kodiak, Homer, Seward, and Petersburg, that were also engaged in the GOA trawl fishery during the period 2003-2014, Sand Point is not widely known as a sport fishing destination for persons from outside the community.

Halibut Charter and Non-Charter

No Sand Point residents hold sport charter halibut fishing permits. Sand Point is in area 3B, which is not subject to management under sport charter regulations.

No comprehensive halibut sport harvest information specific to the community of Sand Point is readily available. In statewide halibut sport fishing data reporting, data for Sand Point is lumped into the "Alaska Peninsula/Aleutian Islands" region, which had estimated an annual average halibut sport harvest of 2,736 fish during the period 2003-2014 (Table 91).

Some data on sport fishing of halibut, however, are reported through ADFG Division of Subsistence, but only for those individuals who also hold Subsistence Halibut Registration Certificates (SHARCs). In other words, these data may not represent the entire sport harvest for a community, as they would not include individuals who may have sport fished but did not obtain SHARCs. Over the 11-year period 2003-2012 plus 2014 (no data are available for 2013), an estimated annual average of 22 Sand Point SHARC holders sport fished for halibut, and sport harvested an estimated 1,900 pounds of halibut per year. The estimated number of SHARC holding fishermen with sport fished halibut ranged between 3 (2014) and 50 (2004) in any given year during this time. The estimated weight of sport harvested halibut

ranged between about zero pounds (2014) and 6,300 pounds (2006) in any given year over this same period (Fall and Lemons 2016).

Chinook Salmon Charter and Non-Charter

No Chinook salmon sport harvest information specific to the community of Sand Point is readily available. In statewide reporting, Chinook salmon sport fishing data for Sand Point is lumped into the "Alaska Peninsula/Aleutian Islands" region, which had estimated an annual average halibut sport harvest of 2,773 fish during the period 2003-2014 (**Error! Reference source not found.**).

5.2.2.6 Subsistence Fishing Engagement

Overview

According to a survey conducted by ADFG in 1992 (Alaska Department of Fish and Game 2016a), which is the most recent, most comprehensive, and considered to be the most representative survey available, subsistence harvesting in Sand Point was an important aspect of the local economy and social life. The ADFG survey was able to solicit responses from 51 percent of the households present in Sand Point at the time, which was calculated as 309 total people out of an estimated total population of 606. The results showed that 100.0 percent of the households used wild subsistence resources in one form or another, and 94.2 percent of all households actively harvested subsistence resources. The average Sand Point household harvested 759.8 pounds of useable weight of wild resources, 53.8 percent of which were salmon, 21.1 percent were fish other than salmon, 11.3 percent were land mammals, 7.0 percent were marine invertebrates, and 2.3 percent were birds and eggs. The breakdown in the use of non-salmon subsistence species in 1992, which is still considered to be the most representative year, showed that 89.4 percent of all households surveyed used halibut, while other highly used species included cod (59.6 percent), char and Dolly Varden (both 51.0 percent), and red rockfish (49.0 percent). Data on marine mammal subsistence harvesting from the 1993 report that an estimate 33 harbor seals were harvested for subsistence, and that 18.3 percent of all households used harbor seals for subsistence. More recent harvest figures suggest that harbor seal and Steller sea lion subsistence has increased, with 62 harbor seals harvested and 3 sea lions harvested in 2008, the most recent year available.

Joint production opportunities, where commercial gear or fishing vessels are used for subsistence pursuits are known to be important for Sand Point residents, involving both subsistence fishing, hunting, and other resource use. These activities may include separate trips, additional activities while on a single trip, or retention of fish for subsistence/personal use out of what is otherwise a commercial harvest (AECOM 2010). As noted in the King Cove profile below, other research in the region has shown that opportunities for joint production may have declined due to changes in fishery management for at least some commercial fisheries in recent years (Reedy and Maschner 2014).

Halibut Subsistence

The most recent halibut subsistence study conducted by ADFG estimated that a total of 64 halibut were harvested in 2014, representing an estimated 6,387 total pounds (Alaska Department of Fish and Game 2016e). Over the 11-year period 2003-2012 plus 2014 (no data are available for 2013), an estimated

annual average of 88 Sand Point subsistence fishermen caught roughly 780 halibut per year, or about 13,900 pounds of halibut per year. The estimated number of subsistence fishermen ranged between about 21 (2003) and 136 (2007) in any given year during this time. The estimated number of subsistence halibut caught ranged between about 225 fish (2003) and 1,500 fish (2008) in any given year, while the estimated weight of subsistence halibut caught ranged between about 4,800 pounds (2003) and 25,000 pounds (2008) in any given year over this same period (Table 33).

Chinook Salmon Subsistence

A recent subsistence study conducted by ADFG concerned with salmon use shows that Sand Point residents harvested approximately 4,431 salmon in 2013 (Alaska Department of Fish and Game 2015). Forty-nine salmon permits were issued and 45 were returned. The clear majority of salmon caught for subsistence were sockeye (51.4 percent) and pink (20.4 percent). Complicating this measurement, however, is the vast number of people engaging in subsistence harvesting without a permit. Interviews conducted by ADFG in 1992 suggest that 41 percent of households harvested salmon without a permit. Other interviews suggested that 45 percent of the salmon used for subsistence were removed from commercial harvests and that this trend was generally higher when salmon prices were depressed.

Over the period 2010-2013, the most recent years for which time series estimates are readily available, Sand Point had an estimated annual average of about 40 returned households/permits in the subsistence and personal use salmon fishery, with an estimated annual average harvest of about 200 Chinook salmon, and an estimated annual average harvest of about 5,000 salmon (all species) overall. The estimated annual number of Sand Point returned households/permits ranged between about 35 (2010 and 2011) and 46 (2013) in any given year during this period. The estimated annual number of subsistence and personal use Chinook salmon harvested in Sand Point ranged between about 164 fish (2013) and 274 fish (2011) in any given year during this period (Table 43).

5.2.2.7 Support Services Sector

The fishing-related support services sector of the Sand Point economy has relatively few independent providers and the shore-based processing plant in the community has historically provided a variety of fleet support services (as noted in the shore-based processor discussion above) that the plants in Kodiak typically no longer provide with the development of comparatively large support sector.

Direct fishery support services represented in Sand Point include: shipping enterprises; vessel support businesses, including independent, resident welding, mechanical, and shipwright services, as well as other providers who are in the community on a seasonal basis; general and hardware/marine supply stores; the Shumagin Corporation, the local ANCSA village corporation that provides a number of support services, including lodging services; other lodging and food and beverage providers; and a number of miscellaneous small-scale service providers. There are also some other limited private sector business activities that are more indirectly related to fishing support in the community, and there are several public service sectors that derive a portion of their service population and demand from fisheries-related activities including clinic and public safety services. This sector is described in detail in earlier NPFMC documents (especially EDAW 2008), including business attributes, seasonal fluctuations, and employment information for the individual enterprises in the various sectors. << *As*

this type of detailed, sector-wide information is time-consuming and labor intensive to compile, not all of which is central to the current analytic tasks, pending direction coming out of the December 2016 Council meetings and the ultimate decision on fieldwork in the community, the discussion in this section will be expanded to focus on changes that have occurred since the earlier noted document was compiled for the businesses most directly associated with support of the GOA trawl fishery in particular, given the "local multiplier" effect of these businesses both in terms of local re-spending of fisheries dollars and the employment opportunities generated thereby. >>

5.2.2.8 Public Revenues

Detailed information on local fish tax revenues related to GOA trawl caught-landings cannot be disclosed. At the time the detailed community profile was compiled for the BSAI crab rationalization 5-year program review (AECOM 2010), however, Sand Point local tax revenues as a whole had fluctuated dramatically preceding few years, from as low as $287,282 in 1999 to as high as about $1.3 million in 2008. As an example of the volatility of this revenue source, local tax revenue dropped from close to $1 million in 2004 to under $500,000 in 2005 before rebounding past $1 million in 2006, 2007, and 2008. During this same period, overall total operating revenues did not show the same degree of variability, however, and between 2004 and 2008 they ranged from $2.4 million and $3.0 million.

In more recent years, the total revenue budget for Sand Point was nearly $4.6 million in 2015 and $4.4 million in 2016. The general fund revenue was over $2.1 million in 2010 before increasing to $2.6 million by 2012. The general fund revenue declined slightly in 2013 to $2.5 million before increasing again to nearly $3.1 million in 2014. Recent fishery-related changes in the community have included a rehabilitation of the small boat harbor, completed in 2014, that included the addition of power and lighting to uplands. A second project that would result in the doubling of dock space on the city dock is currently in the design phase, with construction scheduled for 2017 (Northern Economics 2016).

The local shore-based processor provides its own power and water services to the plant and other structures on its main site in Sand Point, including housing. Some of its housing near the site is provided with one or the other of these services, but shore-based processor-owned housing away from the site is provided with municipal water services and power by TDX Power (a Tanadgusix company, the local ANCSA village corporation of St. Paul), the private supplier of power to the rest of the community. The shore-based processor does purchase sewer and solid waste service from the municipality of Sand Point for all its facilities.

5.2.3 King Cove

5.2.3.1 Introduction, Location, and History

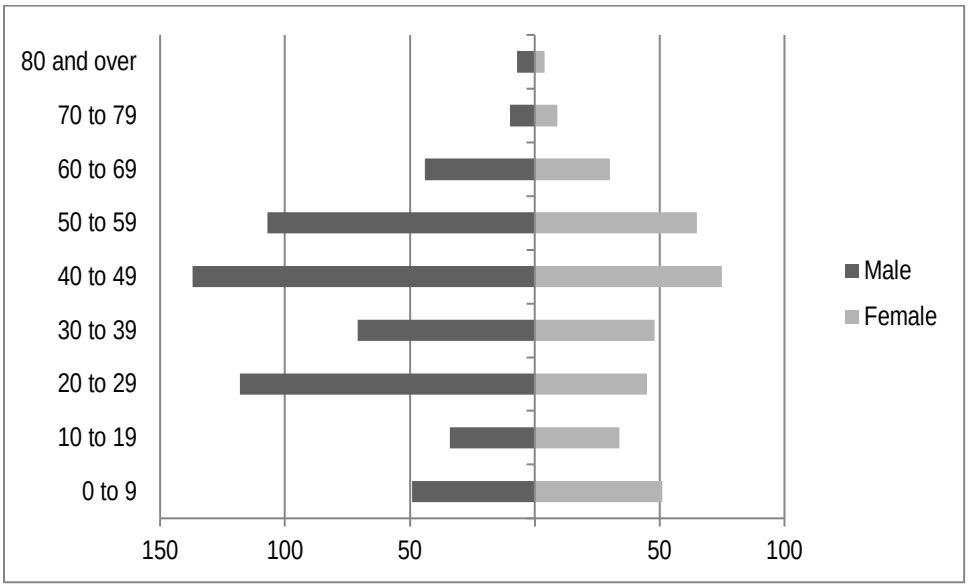
King Cove is located on a sand spit fronting Deer Passage and Deer Island in the Gulf of Alaska on the south side of the Alaska Peninsula near its western tip. King Cove is approximately 625 miles southwest of Anchorage, approximately 425 miles southwest of Kodiak, and approximately 75 miles west of Sand Point. King Cove, like Sand Point, is incorporated as a First Class City within the AEB. The community is only accessible by air and sea, and is served seasonally by ferry on the Aleutian Chain route of the Alaska Marine Highway system; it is about 20 miles southeast of Cold Bay, which has an airport that can accommodate larger aircraft and remain operational across a much broader range of frequently occurring inclement weather conditions than the King Cove air strip, but the two communities are not road connected. King Cove, like Sand Point, is adjacent to the Western GOA Regulatory Area (610), as well as halibut regulatory area 3B.

Archaeological evidence suggests that Aleut (Unangan and Alutiiq) peoples have occupied the Alaska Peninsula for approximately 9,000 years, while excavation of a village site near the middle of King Cove suggests that Aleut people have been utilizing this site for at least 4,000 years (National Oceanic and Atmospheric Administration 2013). Although numerous pre-contact sites exist throughout the area, the contemporary community of King Cove traces its name to the 1800s when English immigrant Robert King married a local woman, became a trapper and sea otter hunter, and moved with his family to the cove. The beginnings of the contemporary community can be traced to 1911 when Pacific American Fisheries built a salmon cannery on the present-day town site. The cannery operated continuously between 1911 and 1976, when it was partially destroyed by fire (AECOM 2010); sold to its present owner a decade before the fire, it was rebuilt and continues to operate in the community (National Oceanic and Atmospheric Administration 2013).

5.2.3.2 Community Demographics

According to U.S. Census figures from 2010, a total of 938 people reside in King Cove. There were proportionally more males in the population than in most of the communities profiled, as demonstrated in Figure 9, and the largest cohort of residents consisted of individuals aged 40 to 49. The gender composition of King Cove varies widely from state and national averages as it is heavily influenced by the large local seafood processing operation, which in demographic terms may be described as an industrial enclave type of development, with its workforce drawn virtually exclusively from outside of the community (AECOM 2013).

Figure 9. King Cove 2010 Population Structure



Source: U.S. Census Bureau 2011

Census figures from 2010 show that 16.2 percent of the residents of King Cove identified themselves as White, while the largest racial group was American Indian or Alaska Native at 38.4 percent. Approximately 1.0 percent identified themselves as Black/African American, 36.5 percent as Asian, 0.2 percent as Pacific Islander, and 7.8 percent as "some other race" or "two or more races." Finally, 11.2 percent of the residents of any race in King Cove identified themselves as Hispanic. Based on race and ethnicity combined, 89.9 percent of King Cove's total population was composed of minority residents (that is, all residents other than those identified as White/non-Hispanic [race/ethnicity]). In general, King Cove's population is in part typical of a historic Alaska Native community, with a relatively large Alaska Native population segment. Additionally, the relatively large Asian/Pacific Islander/Other population segment is emblematic of larger seafood processing operations, particularly in the AEB and the Aleutian and Pribilof Islands region in general, that draw a proportionately large number of workers from a non-local labor pool (AECOM 2013).

Housing data from the U.S. Census, as shown in Table 55, indicate that 53.3 percent of all King Cove residents lived in non-group quarters housing, with total housing units in King Cove numbering 229. Of those housing units, approximately 79.0 percent were occupied. Family households number 119, with an average household size of 2.76 persons. The large proportion of residents living in group quarters is indicative of a relatively transient population segment living in group housing associated with the large local seafood processing operation (AECOM 2013).

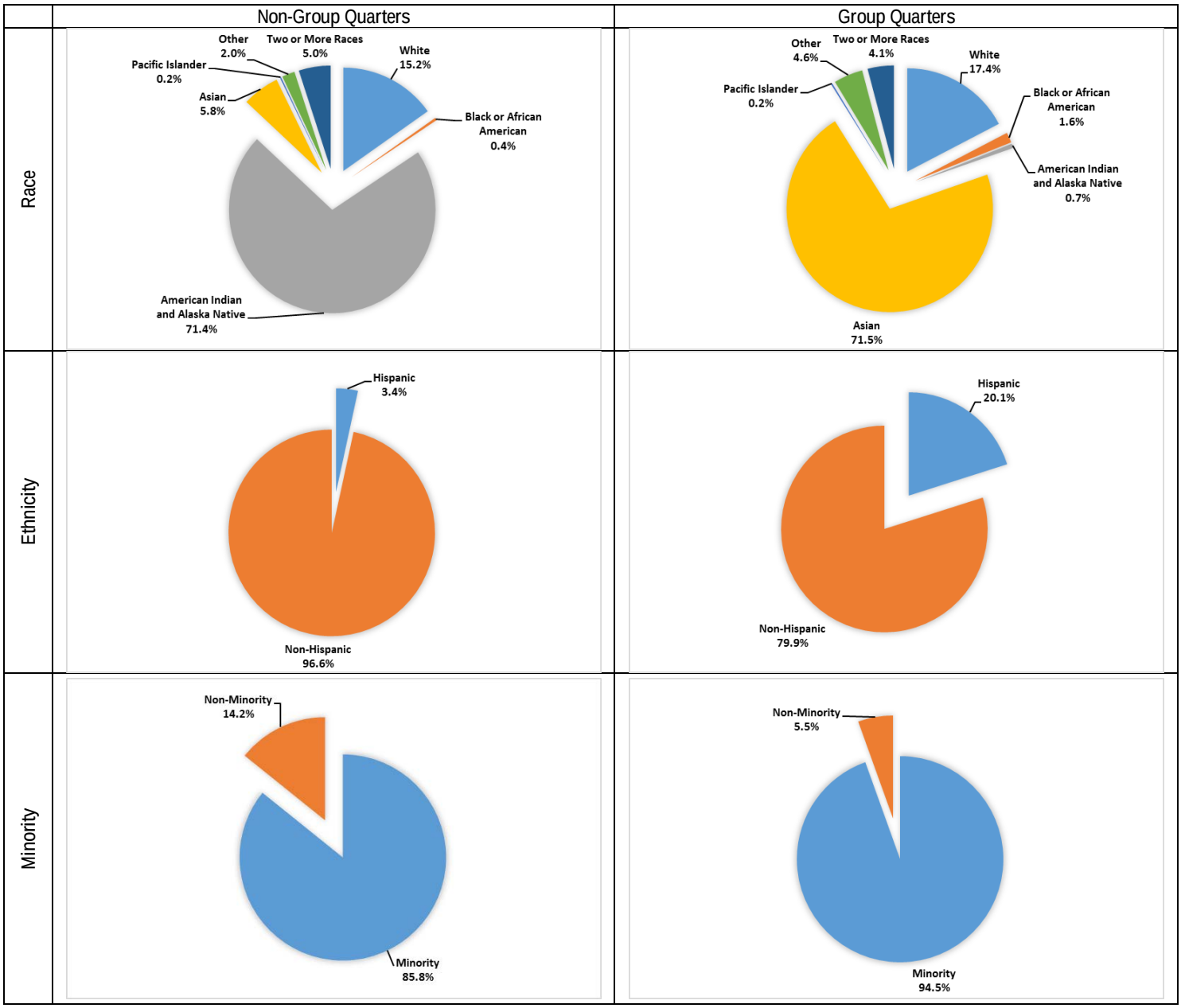
Table 55. King Cove 2010 Housing Information

Category	Number	Percent
Total Population	938	100%
Living in Non-Group Quarters	500	53.3%
Living in Group Quarters	438	46.7%
Total Housing Units	229	100%
Occupied Housing (Households)	181	79.0%
Vacant Housing	48	21.0%
Family Households	119	65.7%
Average Household Size	2.76	na

na = not applicable
Source: U.S. Census Bureau 2011

Figure 10 provides a comparison of selected demographic indices for race, ethnicity, and minority status by housing type for King Cove. As shown, the demographics of the portion of the population living in non-group quarters is quite different from the portion of the population living in group quarters. Alaska Native residents make up a relatively large proportion of the non-group quarters population and a relatively small proportion of the group quarters population, with the opposite being true for persons of Asian/Pacific Islander/Other descent. Group quarter housing in King Cove, with its relatively large processing capacity, is primarily processor housing that, in turn, houses a substantial number of persons relative to the total population of the community.

Figure 10. Selected Demographic Indices by Housing Type, King Cove, 2010



Source: U.S. Census Bureau 2011

5.2.3.3 Local Economy and Socioeconomic Context

As discussed by AECOM (2010:2-125), King Cove is almost wholly dependent on commercial fishing; virtually everyone in the community is directly or indirectly connected to the local commercial fishing vessel fleet, the community's large seafood processing operation, or service businesses that rely at least to some degree on fishing-related economic activity. In contrast to several other communities profiled in this section (e.g., Anchorage, Homer, and Kodiak), tourism does not play much of a role in the local economy and the economic output of the community is closely tied to the overall output of the commercial fishery.

As fishing seasons cycle throughout the year, employment rates fluctuate. The latest employment estimate based on the 2010-2014 U.S. Census American Community Survey suggests that 646 were employed in King Cove, with an unemployment rate of 2.0 percent. Per capita income for people in King Cove was estimated at $26,900, median household income was $64,000, and median family income was $63,750. An estimated 17.9 percent of King Cove's residents were considered low-income, defined as those individuals living below the poverty level threshold (Alaska Department of Labor and Workforce Development 2016). Table 56 displays the top five occupations in King Cove.

Table 56. King Cove Top Five Occupations, 2014

Rank	Occupation
1	Cashiers
2	Meat, Poultry, and Fish Cutters and Trimmers
3	Laborers and Freight, Stock, and Material Movers
4	Maintenance and Repair Workers
5	Teachers and Instructors

Source: Alaska Department of Labor and Workforce Development 2016

5.2.3.4 Commercial Fisheries Engagement

Overview

Similar to the case described for Sand Point, while the King Cove area has been the site of traditional settlements for thousands of years, the contemporary community of King Cove traces its current demographic and socioeconomic form to the development of commercial fishing, both harvesting and processing, in the area in the late 1800s. As noted in the Sand Point profile above, a recent study for the AEB emphasizes the continuing central place of commercial fishing in King Cove (and Sand Point) as a "fundamental, organizational, cultural, and economic foundation that often encompasses subsistence practices" (Reedy 2015), building on the concept that residents of these communities ultimately, in a number of ways, depend culturally and individually upon "entangled livelihoods" (Reedy-Maschner 2009) encompassing interdependent commercial and subsistence lifestyle components.

Similar to the situation described for Sand Point, while King Cove is economically built upon the commercial fishing industry, it has a modest direct commercial fisheries support service sector, consisting mostly of a handful of local business owners who specialize in marine-focused industries. Though a major processing port, King Cove, like Sand Point, differs markedly from Kodiak in that

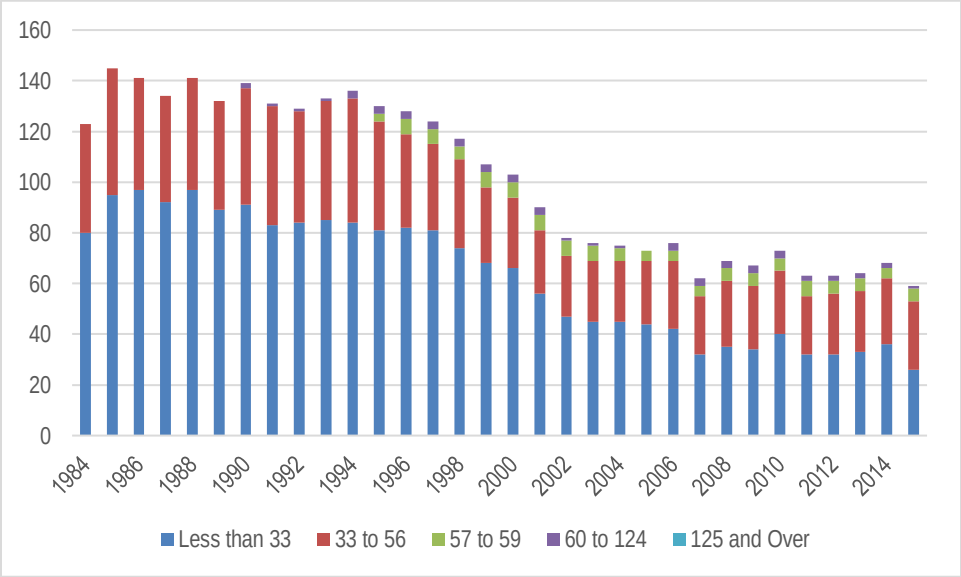
King Cove's lone shoreplant has historically provided a variety of fleet support services that are generally provided by outside vendors in larger communities. Nevertheless, outside of school, public works, village ANCSA corporation, and tribal employment, there are arguably few local employment opportunities that are not directly linked back to supporting the fishing sector of the economy (AECOM 2010).

Harvest Sector

General

Figure 11 shows changes in the number of locally owned commercial fishing vessels, by size class, for the period 1984 through 2014. As shown, there was a general decreasing trend in the number of resident-owned commercial fishing vessels in the community from around 1985 through 2015, the most recent year for which data are available. Detailed, if now somewhat dated, overviews of the King Cove fleet, including types of vessels and their associated annual rounds, distribution of permit holders, catch and earnings estimates, and landings inside and outside of the community, along with an analysis of the spatial distribution of the fishing effort of the local fleet are available in earlier NPFMC community profiles (AECOM 2010; EDAW 2005). As updating this information is effort intensive and not central to the current GOA trawl bycatch management-oriented community analysis, this overarching characterization has not been updated here. Rather, the more qualitatively oriented and GOA trawl specific-focused discussion has been expanded below. Limited parallel information is also provided on the local fleet sectors engaged in the GOA halibut and GOA Chinook salmon fisheries.

Figure 11. Number of Commercial Fishing Vessels Owned by King Cove Residents, by Length Category, 1984-2015.



Source: Commercial Fisheries Entry Commission 2016

From 2003 through 2014, the annual number of King Cove resident-owned commercial fishing vessels participating in all fisheries, using all gear types in all areas combined (i.e., the community commercial fishing fleet), varied from 29 (in 2005) to 35 (in 2003), with an annual average of 32.3 resident-owned commercial fishing vessels over this time span. The annual ex-vessel gross revenues for these vessels

ranged from $6,332,728 (in 2014) to $13,633,536 (in 2008), with an annual average of $9,152,810 ex-vessel gross revenues over this period. In 2014, the most recent year for which data are available, King Cove had 30 resident-owned vessels.

GOA Trawl Catcher Vessels

A total of six unique King Cove resident-owned GOA trawl catcher vessels participated in the fishery over the years 2003-2014, averaging approximately 3.5 vessels participating per year, ranging between two vessels (2003 and 2004) and five vessels (2009) in any given year. These vessels accrued a total of 40 vessel participation years over this 12-year span, with the participation of individual vessels ranging from two to 11 years:

- One vessel participated two years (2009 and 2010)
- One vessel participated three years (2012-2014)
- One vessel participated six years (2003 and 2005-2009)
- Two vessels participated nine years (2003-2011 for one vessel; 2005-2009 and 2011-2014 for the other)
- One vessel participated 11 years (2004-2014)

Over the years 2003-2014, the King Cove resident-owned GOA trawl catcher vessel fleet consisted exclusively of vessels 60 feet or less LOA. Of the six unique catcher vessels with King Cove resident ownership that participated in the GOA trawl fishery during this period, none were in the less than 57 feet LOA category and all were in the 57-59 feet LOA category (five were 58 feet and one was 59 feet LOA). None were in either the 60 feet to 124 feet LOA category or in the greater than or equal to 125 feet LOA category.

GOA trawl-specific ex-vessel gross revenues for King Cove resident-owned vessels participating in the participating in the fishery 2003-2014 cannot be disclosed due to data confidentiality considerations.[48]

Half of the King Cove resident-owned GOA trawl catcher vessels that participated in the fishery in any of the years 2003-2014 did not participate in the fishery in the most recent few years covered by the dataset: one did not participate in the most recent five years, one did not participate in the most recent four years, and one did not participate in the most recent three years covered by the data. On the other hand, one King Cove resident-owned GOA trawl catcher vessel participated in each of the three most recent years covered by the data, but not in the previous nine years covered by the data; the two other vessels that participated in the most recent three years covered by the dataset were two of the three

[48] Data confidentiality restrictions apply due to (1) too few King Cove resident-owned vessels participating in the fishery during seven of the 12 years 2003-2014 to permit disclosure and (2) for the remaining years for which King Cove resident-owned GOA trawl catcher vessel ex-vessel revenues would otherwise be disclosable (2005-2009), these ex-vessel gross revenue values have elsewhere in this document been combined with the GOA trawl ex-vessel gross revenues from all other Alaska communities outside of Kodiak and Sand Point to allow the disclosure of Alaska state resident-owned catcher vessel GOA trawl ex-vessel gross revenue totals.

vessels with greatest continuity of participation over the 2003-2014 period. Why King Cove vessel owners chose to participate in the GOA trawl fishery some years and not others remains an open question. It is known that one vessel was heavily damaged at sea during the 2003-2014 period and had not been put back into service as of 2014, the most recent year covered by the data. In the larger picture, however, it is important to note that King Cove differs from Kodiak and Sand Point in that none of the vessels that participated in the GOA trawl fishery as King Cove resident-owned vessels show up in the dataset as having ownership in other communities in any year, even if they participated in the fishery a minimal number of years under King Cove resident ownership. In other words, in both Kodiak and Sand Point, it is not uncommon for a vessel that participated a minimal number of years in the GOA trawl fishery under Kodiak or Sand Point resident ownership to show up dataset as participating in the fishery other years with ownership residence in those other years attributed to different community, but there are no instances of that happening in the case of King Cove. In all instances, if a King Cove resident-owned vessel stopped participating in the GOA trawl fishery, it did not reappear as participating in the fishery under a different community of ownership. *<< this paragraph to be revisited/expanded following direction coming out of the December 2016 Council meetings and the ultimate decision on fieldwork and/or other follow-up in the community >>*

In terms of reliance or dependency, for King Cove resident-owned GOA trawl catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 17 percent of all ex-vessel gross revenues generated by those vessels for the period with year-to-year variation ranging from about 5 percent (2009) to about 41 percent (2012). For the King Cove resident-owned community fleet as a whole (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, the percentage of ex-vessel gross revenues from GOA trawl-caught deliveries relative to all ex-vessel gross revenues generated by those vessels is confidential, but it is known that the GOA trawl fishery is a major winter fishery for the community fleet, providing employment and income that is a key part of the community's annual commercial fishing round.

Table 57 provides information on the "delivery footprint" of the King Cove resident-owned GOA trawl fleet. As shown, in a pattern different than those seen in other communities, GOA trawl-caught deliveries made by King Cove resident-owned catcher vessels during the period 2003-2014 were limited exclusively to King Cove itself, except for one vessel in one year that also delivered to Seattle (likely a floating processor operating in Alaska waters) in addition to King Cove. A total of six unique King Cove resident-owned GOA trawl catcher vessels were active during the 2003-2014 period, with between two and five vessels participating in any given year.

Table 57. Community of GOA Trawl-Caught Deliveries by Catcher Vessels Owned by King Cove Residents by Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Akutan	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
King Cove	2	2	4	4	4	4	5	3	3	3	3	3	3.3	100.0%	6
Kodiak	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Ninilchik	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Sand Point	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Seward	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Unalaska/Dutch Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
All Other AK	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Seattle	0	0	0	0	0	0	0	0	0	1	0	0	0.1	2.5%	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Grand Total	2	2	4	4	4	4	5	3	3	3	3	3	3.3	100.0%	6

Source: AKFIN 2016b

GOA Trawl Catcher Vessel Crew

GOA trawl catcher vessel crew data are available from two primary sources: EDR data that were collected for 2015[49] and AFSC GOA trawl fishery social survey data that were collected in 2014. Both are summarized in this section.[50]

2015 EDR Catcher Vessel Crew Data

GOA Trawl Crew Positions Held by King Cove Residents on all GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, a total of 9 unique King Cove residents held crew positions on GOA trawl catcher vessels, including 4 individuals who held CFEC gear operator permits and 5 individuals who held ADFG crew licenses.

- If crew positions are counted rather than unique individuals (as some individuals worked on more than one GOA trawl catcher vessel during the year), in 2015 a total of 9 crew positions were held by King Cove residents, including 4 positions held by individuals with CFEC gear operator permits and 5 positions held by individuals with ADFG crew licenses. These included:

    - 8 on vessels owned by King Cove residents (4 CFEC gear operator permit holders and 4 ADFG crew license holders).

    - 1 on a vessel owned by a Sand Point resident (0 CFEC gear operator permit holders and 1 ADFG crew license holder).

[49] As noted elsewhere, multiple caveats apply to catcher vessel EDR data, including: 2015 was the first year EDR catcher vessel crew data were collected; only one year of data is available; the available data have not been verified and audited (as audits typically rely on multiple years of data to identify outliers); and data are missing (have not yet been submitted) for 10 GOA trawl catcher vessels, which includes four vessels that were apparently active in the fishery in 2015 and six that were not (n = 68 catcher vessels in the EDR data). Additionally, one vessel appears in the data twice, as it changed ownership during the year (i.e., there are 67 unique catcher vessels in the EDR data), and there are some minor inconsistencies in crew (n = 365 unique persons) and vessel counts specific to crew position and compensation data relative to other fields in the data (e.g., n = 387 crew positions for most variables, but 386 crew positions for compensation variables). Specific to community level analysis, residence community information is not available for 55 unique individual crew members (1 CFEC gear operator permit holder and 54 ADFG crew license holders) who held 56 crew positions (1 CFEC gear operator permit holder and 55 ADFG crew license holders). Nevertheless, these data are the best available and are presented here as an indication of relative if not exact crew employment and, to the extent possible within data confidentiality constraints, compensation patterns across communities.

[50] *Pending direction coming out of the December 2016 Council meetings and an ultimate decision on fieldwork in Kodiak, Sand Point, and King Cove, 2015 data on trawl catcher vessels and crew will be revisited and supplemented with input from field interviews regarding the classification of vessels affiliated with these three centrally important GOA trawl communities based on ownership community, delivery port, homeport, and crew residence.*

Crew Positions and Payments to Labor on King Cove Resident-Owned GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, there were a total of 13 crew positions on King Cove resident-owned GOA trawl catcher vessels, including 4 positions whose occupant held a CFEC gear operator permit and 9 positions whose occupant held an ADFG crew license. Of these positions:
    - 8 were held by King Cove residents (4 CFEC gear operator permit holders and 4 ADFG crew license holders).
    - 1 was held by a resident of another Alaska community, Sand Point (0 CFEC gear operator permit holders and 1 ADFG crew license holder).
    - 1 was held by a resident of a Washington community (Everson) other than the Seattle MSA (0 CFEC gear operator permit holders and 1 ADFG crew license holder).
    - 3 were held by individuals whose residence location was unknown (0 CFEC gear operator permit holders and 3 ADFG crew license holders).
- EDR data indicate that in 2015, for the 3 GOA trawl catcher vessels identified as having King Cove ownership, a total of 12 crew members on those vessels received labor payments from the GOA trawl fishery, but the value of those payments cannot be disclosed due to data confidentiality considerations.

For additional detail on EDR GOA trawl catcher vessel crew data, please see Table 103, Table 104, and Table 105 in Attachment 3.

AFSC 2014 Social Survey Catcher Vessel Crew Data

Of King Cove GOA trawl catcher vessel owners and crew members (n=11)[51] who participated in the 2014 AFSC GOA trawl fishery social survey (National Oceanic and Atmospheric Administration 2015) and answered the specific questions relevant to the following demographic, industry participation, and employment topics:

- 100 percent were male.
- Average age was 41.2 years (with a standard deviation of 14.6).
- 45.5 percent identified themselves as white/Caucasian, 45.5 percent identified themselves as Alaska Native or American Indian, 0.0 percent identified themselves as Native Hawaiian or Other Pacific Islander, 0.0 percent identified themselves as black/African American, 0.0

[51] This number includes all catcher vessel owners and crew associated with vessels for which King Cove was determined to be the primary port of mooring. The primary port of mooring was determined via the AFSC survey and/or through key person interviews during the AFSC survey effort. The vessel's primary port of mooring is not necessarily the same as the catcher vessel owners' and/or crews' place of residence.

percent identified themselves as Asian, and 9.1 percent identified themselves as being some other race or two or more races. 0.0 percent identified themselves as Hispanic or Latino.

- 72.7 percent indicated their family historically participated in commercial fishing or processing activities.
- Their families had been participating in commercial fishing or processing activities for an average of 2.6 generations (with a standard deviation of 0.9).
- On average, they were 16.2 years old when they started to work in commercial fishing or processing activities (with a standard deviation of 6.5).
- They had been working in the GOA groundfish trawl fishery an average of 13.8 years (with a standard deviation of 8.3).
- 72.7 percent indicated that 76-100 percent of their combined family income came from their participation in fishing activities.
- 9.1 percent indicated that 51-75 percent of their combined family income came from their participation in fishing activities.
- 9.1 percent indicated that 10-25 percent of their combined family income came from their participation in fishing activities.
- 9.1 percent indicated that 0-9 percent of their combined family income came from their participation in fishing activities.
- 27.3 percent indicated they maintained a job outside of commercial fishing or processing industry.

For additional detail on selected AFSC survey questions and responses, please see Table 111 in Attachment 4.

GOA Halibut

A total of 16 unique King Cove resident-owned catcher vessels participated in the GOA halibut fishery over the years 2003-2014, averaging approximately six vessels participating per year, ranging between four vessels (2013 and 2014) and eight vessels (2009) participating in the fishery under Sand Point resident ownership in any given year.

GOA halibut ex-vessel gross revenues for King Cove resident-owned catcher vessels averaged approximately $0.9 million annually over the period 2003-2014, ranging from approximately $0.3 million (2014) to approximately $1.4 million (2003) in any given year.

In terms of reliance or dependency, for King Cove resident-owned GOA halibut catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA halibut deliveries accounted for approximately 38 percent of all ex-vessel gross revenues generated by those vessels for the period. For the King Cove resident-owned community fleet (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA halibut deliveries accounted for approximately 10 percent of all ex-vessel gross revenues generated by those vessels for the period.

GOA Chinook Salmon

A total of 46 unique King Cove resident-owned catcher vessels participated in the GOA Chinook salmon fishery over the years 2003-2014, averaging approximately 22 vessels participating per year, ranging between 18 vessels (2003) and 26 vessels (2010) participating in the fishery under King Cove resident ownership in any given year.

GOA Chinook salmon ex-vessel gross revenues for King Cove resident-owned catcher vessels averaged approximately $8 thousand annually over the period 2003-2014, ranging from approximately $1 thousand (2003 and 2004) to approximately $20 thousand (2009) in any given year.

In terms of reliance or dependency, for King Cove resident-owned GOA Chinook salmon catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA Chinook salmon deliveries accounted for approximately 0.1 percent of all ex-vessel gross revenues generated by those vessels for the period. For the King Cove resident-owned community fleet (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA Chinook salmon deliveries accounted for approximately 0.1 percent of all ex-vessel gross revenues generated by those vessels for the period.

Processing Sector

General

Based on a count of intent to operate codes, a single unique shore-based processing entity operated in King Cove 2003-2014.[52] While specific volume and value information, including all first wholesale gross revenue data, associated with the plant is confidential for all commercial fisheries, a general knowledge of the industry and previous community analyses would indicate that the plant is relatively diversified in its operations; city officials, on multiple occasions, have noted that local fish taxes, while varying from year-to-year are often a rough balance between crab, salmon, and groundfish.[53]

The shore-based processing plant in King Cove is owned and operated by Peter Pan Seafoods. A relatively recent, detailed profile of the Peter Pan King Cove shore plant is available elsewhere (AECOM 2010); this section provides a more general overview of the plant as well as some key updates regarding changes that have occurred since the time of that earlier profile. Additionally, Aleutia, a Regional Seafood Development Association that does not have its own processing capacity (previously described in the Sand Point profile, above), purchases fish in King Cove, which is typically custom processed in the community, as is the BSAI crab rationalization program processor quota that Aleutia owns. The local operations of both entities are briefly profiled below.

[52] During the years 2003-2006, a second processing entity shows up as a King Cove shore-based processor in some datasets; this entity was floating platform-based and, as it was affiliated with the entity that owns and operates the physical shore-based processor in the community, is not considered in this community discussion.

[53] Percentage dependency for major species groups ranged widely on an annual basis between FY 2000 and FY 2015, based on relative fishing success and variable market (price) conditions. During this time span, crab ranged between roughly 30 and 50 percent, salmon accounted for between roughly 15 and 40 percent, and groundfish between roughly 25 and 50 percent of total local landing taxes in any given year.

Peter Pan Seafoods Processing Operations

The King Cove shore-based processing plant was built around the local salmon fisheries. The King Cove plant is a major processor of both frozen and canned salmon. Over the years, crab was added as a strong secondary species, followed by halibut, and then cod and pollock. Through time, the plant has maintained a diversity of processing, with interspecies dynamics being somewhat fluid.

Today (2016), as was the case in 2010, in addition to its salmon operations, the plant takes a substantial volume of deliveries of cod and pollock from both the Gulf of Alaska and the BSAI regions. It also processes a substantial volume of both Bristol Bay red king crab and Bering Sea Tanner and Opilio crab. While the plant similarly continues to process halibut on a regular basis, and herring and other species less often, information from earlier plant profiles would suggest that, while still important to the plant, the relative importance of halibut to overall operations has declined somewhat from historical levels, due at least in part to changes that accompanied implementation of the halibut IFQ program. Over the years, the distribution and peak of employment effort at the plant has fluctuated in response to both stock and management changes, with noted examples of the latter being implementation of the American Fisheries Act and the BSAI crab rationalization program.

Detailed production figures cannot be disclosed because of confidentiality restrictions, but with respect to groundfish specifically it is generally understood within the industry that King Cove is somewhat unusual among the four key regional groundfish ports of Unalaska, Akutan, King Cove, and Sand Point as it has a relatively higher dependency on Pacific cod among the various species of groundfish landed than is seen at the other plants recognizing that the relative dependence of the plants on different groundfish species has varied over time for multiple reasons. In King Cove, Gulf of Alaska pollock is obtained primarily from the local small boat fleet but BSAI pollock is obtained exclusively from larger-capacity boats; a roughly similar type of split is seen in the pattern of deliveries by the cod fleet.

The current annual cycle of the plant as described in 2010 was relatively consistent with a pattern that had at that time been in place for several years. The year begins with the fixed gear opening on January 1, with the first deliveries of pot cod arriving in the community between January 5 and 10. Crab-related activity has changed since the implementation of the rationalization program, but the first opilio deliveries still occur in mid-January. Around January 20, trawl seasons open up for Bering Sea pollock and cod, as well as for Western Gulf of Alaska cod and pollock. The King Cove plant schedules deliveries of Bering Sea pollock after the Gulf of Alaska fisheries can be prosecuted, something that co-op conditions facilitate, to allow the plant to optimize their work on the other fisheries. Depending on season particulars, early season deliveries of Bering Sea cod may be taken, even if pollock is not, but boats may wait for fish to school up at the end of January. Western Gulf pollock activity may only last about a week, while Bering Sea pollock may last through the end of February. After trawl season in the Gulf, there is a 1-week stand-down, followed by the state cod fixed gear fishery, with most local activity related to that fishery lasting about 3 weeks to the end of March or so. The 15 percent hold-back for jig gear in this fishery, if fishing is slow, may last until the first or second week of May.

There are reportedly few halibut IFQ landings (or sablefish IFQ landings either) apparently due to lack of ability to pay the prices given at ports that are more accessible to the road system and have better

capabilities to quickly move fresh product. Some flatfish are also processed at the plant, but not on a regular basis, and there are apparently challenges in that market as well.

Summer activity at the plant begins early in June with the June 7 opening of salmon season and the June 10 opening of Bering Sea AFA inshore pollock B season. In June and July, the salmon fleet tends to focus on sockeye salmon catch. From late July through August the fleet focuses on pink salmon catch. August typically picks up again with the pink salmon runs, and August 25 is also the time of C season pollock opening in the Gulf of Alaska. Scheduling flexibility brought about by AFA co-op conditions also allows the plant to maintain at least some activity to help tide over the slow times in midsummer. If local runs are particularly weak, which happens infrequently, Peter Pan may tender pink salmon out of Kodiak and other areas, balancing operations and adjusting supply to capacity in King Cove and Valdez. In some years, there has been limited local activity related to the Dutch Harbor July 15 herring food/bait opening, but this is dependent on the plant's bait needs.

On September 1, the final portion of the year's cod is released, but there has been little activity in King Cove related to this opener as fishing has not been especially productive recently, although a few vessels typically participate. Crab activity resumes with preparation for the October 15 Bristol Bay red king crab and Bering Sea Bairdi openings. IFQ activity lasts through mid- to late November and then, from mid- (or late-) November to January 1, activity at the plant is confined to maintenance operations.

Employment levels at the plant vary considerably by season, but the overall cycle has remained relatively stable for a number of years. According to detailed information obtained from the plant in the course of a previous study, over the 5-year period from 1998 through 2002, employment peaks were seen from late January through March, with most weeks at or near 500 total employees on-site. Secondary peaks of approximately 400 or somewhat more employees were common from mid-June through mid-August, but this was more variable, with some weeks in some years hitting 500 or more, and some weeks in other years being considerably less than 400 during this same period. On-site employee counts drop to about 30 persons during the year-end maintenance work. Employee counts between the winter and summer busy seasons vary considerably from week to week and year to year, from the mid-100s up to near peak levels, depending on the variability of activity associated with particular species fisheries in any given year. According to an interview with senior plant management, this pattern has remained consistent through 2008 and again through 2016.

With the slowing down and spreading out of crab seasons since BSAI crab rationalization, the number of workers present on-site has not changed appreciably, but the number of workers dedicated to crab at any one time has. For example, where Bering Sea crab may have been run 24 hours per day during race-for-fish conditions, in more recent years there may be one shift running crab rather than two during the crab processing window. As the Peter Pan plant is a multispecies, multiproduct form operation, the plant can adjust product forms for different species, which vary in their labor intensity to produce, during busy times in other fisheries. In addition to direct processing employees and physical plant staff, the core management and administrative staff at the plant include desk/clerical, fisherman's accounting, payroll, office manager, plant manager, production manager, housing, and chief engineer positions.

Peter Pan owns most of the land in and around its processing operation in King Cove, and housing is provided for workers on-site. The vast majority of workers at the plant are transient with respect to

establishing a long-term residence in King Cove outside of the Peter Pan complex but, according to senior plant staff, several families have established roots in the community. In general, however, it is reportedly hard to establish a family in the community or to move a family into the community on average processing wages due to a relatively high cost of living in King Cove.

Peter Pan Support Service Operations

Peter Pan, in addition to its core processing function, also serves as a support service provider to local and outside fishermen, as well as the community of King Cove in general, in a number of other ways. For example, the Peter Pan port engineer has been made available for boat work in the past, the plant sells bait to fishermen on an ongoing basis, and the plant also facilitates supply of vessels by receiving those supplies across its dock and storing them in its facilities until they are picked up by the vessels themselves. Peter Pan also serves as a vessel support business through their storeroom marine hardware facility; open to the public, this facility represents the only source of a range of marine hardware in the community. Peter Pan also runs a small store on its premises that largely functions as a convenience store for its employees, stocking a variety of food items as well as a limited selection of clothing, plus boots, rain gear, and other processing (and to a lesser extent fishing) work-related items, but it is also open to the public. Further, Peter Pan is the only provider of marine fuel services in the community as well as the only provider of everyday vehicle fuel needs in the community.

Peter Pan also serves as host to a number of other support service providers when they are in the community. For example, marine mechanical services are provided in King Cove by a one-man operation (J&L Marine Repair), supplemented with temporary local hires for larger jobs. A generalist, in addition to handling mechanical repairs, this individual also does some hydraulic work (as do Peter Pan engineers/mechanics) as well as some electrical work. Peter Pan typically has one electrician on-site, but outside of these individuals, there are no vessel systems support personnel in King Cove on a long-established basis. Housing for the J&L Marine Repair mechanic is supplied through Peter Pan, as is tool and van storage space, and access to other facilities as needed. Other marine service technicians/specialists also typically work out of Peter Pan facilities when they are in the community, if on a less frequent basis.

Aleutia

As described in some detail the Sand Point community profile above (which is not recapitulated here), Aleutia does not have its own processing capacity, but serves as another market/processing entity in the region in general and in King Cove and Sand Point specifically. Originally focused exclusively on salmon, Aleutia, through its status as the "eligible crab community entity" for processor quota shares in King Cove, later came to own processor quota shares of Bristol Bay red king, Eastern Bering Sea Tanner, and Western Bering Sea Tanner crab fisheries under the BSAI crab rationalization program.[54]

[54] Aleutia has been designated the "eligible crab community entity" for right of first refusal purposes under the auspices of the crab rationalization program for King Cove and the AEB since the inception of that program. The City of King Cove signs an annual agreement with Aleutia designating Aleutia as its right of first refusal entity; the AEB designated Aleutia as its right of first refusal entity for King Cove and Port Moller by assembly resolution (Resolution 05-14) in April 2005. When a post-crab rationalization change in the corporate ownership structure of Peter Pan triggered the need for Peter Pan to divest a portion of its King Cove-affiliated Bristol Bay red king crab processor quota shares under the provisions of the rationalization program, Aleutia exercised its

While Sand Point is the location of Aleutia's salmon processing activity, King Cove is the location of Aleutia's crab processing activity, with Aleutia's BSAI crab processor quota regularly being processed at the Peter Pan King Cove plant under a custom processing agreement. As noted above, Aleutia also serves as the CQE for King Cove and Sand Point, and has been active in obtaining and leasing Pacific cod endorsements to pot fishermen in King Cove as well as Sand Point.

GOA Trawl-Caught Processing

King Cove's direct engagement in the GOA trawl fishery processing sector during 2003-2014 was limited to the single unique shore-based processor that operated in the community during that time. This processor accepted GOA trawl-caught deliveries each year 2003-2014 (i.e., the community averaged 1.0 processors participating in the fishery per year). This processor *(King Cove Processor A)* accrued a total of 12 shore-based processor participation years over this 12-year span.

Given that only a single shore-based processor participated in the fishery, all first wholesale gross revenue information related to the processing of GOA trawl-caught deliveries to King Cove is confidential. A general knowledge of the industry and previous community analyses would suggest, however, that during the 2003-2014, these revenues were likely a relatively modest component of overall processing first wholesale gross revenues for King Cove shore-based processing, although it is important to note that (1) these revenues likely varied considerably from year to year and may well have been substantial in absolute terms at least some years, (2) the timing of this processing may have been important to the operational flow of the plant and provided an important source of labor hours for processing staff, and (3) this processing may have been a strategically important component of maintaining a desired flexibility and diversity of operations at the plant and to maintaining mutually beneficial relationships with some of its delivery fleet that participated in other fisheries with the plant.

Table 58 provides information on the "community footprint" of the catcher vessels that made GOA trawl-caught deliveries to the King Cove shore-based processor 2003-2014, based on catcher vessel ownership address. As shown, deliveries were accepted from Alaska, Oregon, and Washington vessels, as well as from a vessel with ownership in a state other than Alaska, Oregon, or Washington, but the distribution of participation was not evenly spread across these geographies. Of the 35 unique vessels that made GOA trawl-caught deliveries to the King Cove shore-based processor during this period, 21 were from Alaska, one was from Oregon, 14 were from Washington, and one was from a state other than Alaska, Oregon, or Washington. Looked at from an annual average number of catcher vessels delivering to the King Cove shore-based processor, of the approximately 14 vessels that made GOA trawl-caught deliveries to the King Cove processor on an annual average basis, about nine were vessels owned by Alaska residents, about three were vessels owned by Washington residents, and about one was a vessel owned by a resident of a state other than Alaska, Oregon, or Washington.

Also, as shown, among Alaska resident-owned vessels making GOA trawl-caught deliveries to the King Cove shore-based processor, participation was relatively widely distributed among different communities. While multiple King Cove resident-owned and multiple Sand Point resident-owned

right of first refusal to obtain those shares. Aleutia has also come to own processing quota shares in Eastern Bering Sea Tanner and Western Bering Sea Tanner crab fisheries, both of which are managed under the BSAI crab rationalization program.

catcher vessels made GOA trawl-caught deliveries to the King Cove shore-based processor each year 2003-2014, catcher vessels owned by residents of other Alaska communities also made GOA trawl-caught deliveries on a continuing basis over this period. Anchorage resident-owned catcher vessels made GOA trawl-caught deliveries to the King Cove shore-based processor in 11 out of the 12 years covered by the dataset (and multiple Anchorage resident-owned catcher vessels did so in two of those years); further, Petersburg resident-owned catcher vessels made GOA trawl-caught deliveries to the King Cove shore-based processor in nine out of the 12 years covered by the dataset. There were marked concentrations of participation in GOA trawl-caught deliveries to the King Cove shore-based processor by King Cove and Sand Point resident-owned vessels compared to vessels owned by residents of other communities in Alaska, however, both in terms of the annual average number of vessels participating and the number of unique vessels participating over the 2003-2014, with Sand Point participation being somewhat higher than King Cove participation as gauged by both metrics.

In the case of Washington resident-owned vessels, the annual average participation in making GOA trawl-caught deliveries to the King Cove shore-based processor was heavily concentrated among Seattle MSA resident-owned catcher vessels, with multiple Seattle MSA resident-owned catcher vessels made GOA trawl-caught deliveries to the King Cove shore-based processor each year 2003-2014. Further, 12 of the 14 unique vessels with Washington resident ownership that made GOA trawl-caught deliveries to the King Cove shore-based processor were owned by Seattle MSA residents. Also of note is the fact that a catcher vessel owned by a resident of a state other than Alaska, Oregon, or Washington made GOA trawl-caught deliveries to the King Cove shore-based processor each year covered by the dataset (2003-2014).

Table 58. Catcher Vessels Making GOA Trawl-Caught Deliveries to King Cove Shore-Based Processors, by Community of Vessel Owner Residence and Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Anchorage	1	0	1	1	1	1	1	1	1	1	2	2	1.1	7.9%	3
Homer	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
King Cove	2	2	4	4	4	4	5	3	3	3	3	3	3.3	24.4%	6
Kodiak	0	0	0	0	0	0	0	0	1	0	0	1	0.2	1.2%	2
Petersburg	1	1	1	1	1	1	1	1	0	0	0	1	0.8	5.5%	3
Sand Point	4	4	5	4	4	3	6	4	3	4	3	3	3.9	28.7%	8
All Other AK	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Alaska Total	8	7	11	10	10	9	13	9	8	8	8	10	9.3	67.7%	21
Newport	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6%	1
All Other OR	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Oregon Total	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6%	1
Seattle MSA	3	4	4	4	3	3	2	4	4	2	3	2	3.2	23.2%	12
All Other WA	1	0	0	0	0	0	0	0	1	0	0	0	0.2	1.2%	2
Washington Total	4	4	4	4	3	3	2	4	5	2	3	2	3.3	24.4%	14
All Other States	1	1	1	1	1	1	1	1	1	1	1	1	1.0	7.3%	1
Grand Total	14	12	16	15	14	13	16	14	14	11	12	13	13.7	100.0%	35

Source: AKFIN 2016b

GOA Halibut Processing

According to the dataset, a single unique shore-based processor in King Cove accepted GOA halibut deliveries over the years 2003-2014, with one shore-based processor participating in the fishery each year. All first wholesale gross revenue data related to processing GOA halibut at the single processor and ex-vessel gross revenue data for deliveries of GOA halibut to the single processor in King Cove cannot be disclosed due to data confidentiality constraints. Similarly, relative reliance or dependency of the single processor in the community on GOA halibut cannot be disclosed.

GOA Chinook Salmon Processing

According to the dataset, a single unique shore-based processor in King Cove accepted GOA Chinook salmon deliveries over the years 2003-2014, with one shore-based processor participating in the fishery each year. All first wholesale gross revenue data related to processing GOA Chinook salmon at the single processor and ex-vessel gross revenue data for deliveries of GOA Chinook salmon to the single processor in King Cove cannot be disclosed due to data confidentiality constraints. Similarly, relative reliance or dependency of the single processor in the community on GOA Chinook salmon cannot be disclosed.

5.2.3.5 Sport Fishing Engagement

Overview

Unlike several other communities farther eastward in the Gulf of Alaska, such as Kodiak, Homer, Seward, and Petersburg, that were also engaged in the GOA trawl fishery during the period 2003-2014, King Cove is not widely known as a sport fishing destination for persons from outside the community.

Halibut Charter and Non-Charter

No King Cove residents hold sport charter halibut fishing permits. King Cove is in area 3B, which is not subject to management under sport charter regulations.

No comprehensive halibut sport harvest information specific to the community of King Cove is readily available. In statewide reporting, halibut sport fishing data for King Cove is lumped into the “Alaska Peninsula/Aleutian Islands” region, which had estimated an annual average halibut sport harvest of 2,736 fish during the period 2003-2014 (Table 33).

Some data on sport fishing of halibut, however, are reported through ADFG Division of Subsistence, but only for those individuals who also hold Subsistence Halibut Registration Certificates (SHARCs). In other words, these data may not represent the entire sport harvest for a community, as they would not include individuals who may have sport fished but did not obtain SHARCs. In 2014, the most recent year for which data are available, an estimated nine King Cove SHARC holders sport fished for halibut, and sport harvested an estimated 34 halibut weighing a total of 551 pounds (Fall and Lemons 2016).

Chinook Salmon Charter and Non-Charter

No Chinook salmon sport harvest information specific to the community of King Cove is readily available. In statewide reporting, Chinook salmon sport fishing data for King Cove is lumped into the "Alaska Peninsula/Aleutian Islands" region, which had estimated an annual average halibut sport harvest of 2,773 fish during the period 2003-2014 (Table 43).

5.2.3.6 Subsistence Fishing Engagement

Overview

According to a survey conducted by ADFG in 1992 (Alaska Department of Fish and Game 2016a), which is the most recent, most comprehensive, and considered to be the most representative survey available, subsistence harvesting King Cove is an important aspect of the local economy and social life. The ADFG survey was able solicit responses from 47.5 percent of the households present in King Cove at the time, which was calculated as 266 total people out of an estimated total population of 560. The results showed that 100.0 percent of the households used wild subsistence resources in one form or another, and 96.0 percent of all households actively harvested subsistence resources. The average King Cove household harvested 908.2 pounds of useable weight of wild resources, 53.4 percent of which were salmon, 16.7 percent were fish other than salmon, 15.4 percent were land mammals, 7.7 percent were feral animals, and 6.8 percent were marine invertebrates. The breakdown in the use of non-salmon subsistence species in 1992, which is still considered to be the most representative year, show that 5.2 percent used halibut, while other used species included char (6.0 percent), Dolly Varden (5.2 percent), and cod (2.4 percent). Data on marine mammal subsistence harvesting from the 1993 report that an estimated 23 harbor seals were harvested for subsistence, and that 22.7 percent of all households used harbor seals for subsistence. More recent harvest figures suggest that harbor seal subsistence has declined, with an estimated 8 harbor harvested in 2008, the most recent year available.

Joint production opportunities, where commercial gear or fishing vessels are used for subsistence pursuits, were mentioned by community residents during previous study efforts as being important. For example, in interviews conducted for pre-crab rationalization community characterization in 2001, one vessel captain reported running to good hunting grounds following tendering activities in the Shumagin Islands, thereby saving fuel costs, while another example was given of fishermen bird hunting when out tending pots. Where stand-alone costs are unavoidable, some fishermen have reported that costs were made more manageable by having several families involved to spread out the out-of-pocket expenditures. At least some individuals who are out near productive hunting grounds during commercial fishing have also acted as designated hunters for others in the community to further reduce overall subsistence costs and increase productivity. During interviews in 2008, local hunters noted that caribou hunting in the area had been closed by the state due to herd population concerns, but that other hunting opportunities, such as moose that are typically found to the east around Pavlof Bay, and waterfowl, found throughout the area, remained robust, as well as subsistence fishing opportunities, a pattern confirmed during interviews in 2010. Local subsistence fishing, like local subsistence hunting, is reportedly sometimes pursued as a joint production activity in addition to being an important stand-alone activity in its own right, such as when a vessel or gear that is used for commercial fishing is also used for subsistence fishing at a separate time, or where fish are retained for subsistence/personal use

out of what is otherwise a commercial harvest (AECOM 2010). Related research has shown that opportunities for joint production may have declined due to changes in fishery management for at least some commercial fisheries in recent years. For example, subsistence-use access to king crab for residents of some smaller communities has become more complex and vulnerable under BSAI crab rationalization (Reedy and Maschner 2014), where having fewer crew members involved in the fishery has resulted in reduced access to "home-pack," which are boxes of crab brought home by crew members that would be commonly redistributed to relatives and/or otherwise used for socially important purposes.

Halibut Subsistence

The most recent halibut subsistence study conducted by ADFG estimated that a total of 293 halibut were harvested in 2014, representing an estimated 5,047 total pounds (Alaska Department of Fish and Game 2016e). Over the 11-year period 2003-2012 plus 2014 (no data are available for 2013), an estimated annual average of 35 King Cove subsistence fishermen caught roughly 360 halibut per year, or about 6,900 pounds of halibut per year. The estimated number of subsistence fishermen ranged between about 23 (2003) and 50 (2009) in any given year during this time. The estimated number of subsistence halibut caught ranged between about 270 fish (2012) and 510 fish (2010) in any given year, while the estimated weight of subsistence halibut caught ranged between about 4,000 pounds (2012) and 9,000 pounds (2004) in any given year over this same period (Table 33).

Chinook Salmon Subsistence

A recent subsistence study conducted by ADFG concerned with salmon use shows that King Cove residents harvested approximately 4,445 salmon in 2013 (Alaska Department of Fish and Game 2015). Fifty salmon permits were issued and 46 were returned. The clear majority of salmon caught for subsistence were sockeye (55.8 percent) and coho (34.2 percent). Complicating this measurement, however, is the vast number of people engaging in subsistence harvesting without a permit. Interviews conducted by ADFG in 1992 suggested that 31 percent of households harvested salmon without a permit. Other interviews suggested 51 percent of the salmon used for subsistence were removed from commercial harvests and that this trend was generally higher when salmon prices were depressed.

Over the period 2010-2013, the most recent years for which time series estimates are readily available, King Cove had an estimated annual average of about 46 returned households/permits in the subsistence and personal use salmon fishery, with an estimated annual average harvest of about 17 Chinook salmon, and an estimated annual average harvest of about 5,200 salmon (all species) overall. The estimated annual number of King Cove returned households/permits ranged between about 40 (2011) and 49 (2010) in any given year during this period. The estimated annual number of subsistence and personal use Chinook salmon harvested in King Cove ranged between no fish (2010) and 52 fish (2012) in any given year during this period (Table 43).

5.2.3.7 Support Services Sector

When viewed from one perspective, King Cove has little in the way of a fisheries support service sector, and in this manner, the community, though a major processing port, differs markedly from Kodiak. For example, in King Cove, the lone shoreplant has historically provided a variety of fleet support services (as noted in the shore-based processor discussion above) that the plants in Kodiak typically no longer provide with the development of comparatively large support sector. From another perspective, however, outside of public works, tribal, and school employment, there is arguably little in the way of local employment that is not directly linked back to supporting the fishing sector of the economy.

Direct fishery support services that do exist in King Cove include shipping, air transportation, marine transportation, and taxi services; marine and other fuel sales; gear hauling and storage (including crab pot hauling and crab pot storage) and vessel watch services; marine mechanical and specialty supply services; welding services; vessel supply services and local stores; diving and vessel charter services; bar and restaurant services; lodging services; and range of services provided by the King Cove Corporation (the local ANCSA village corporation). Additionally, two locally based tribal entities, the Agdaagux Tribe and the Belkofski Tribe, provide a range of services to the community, with the former being directly involved in a range of substantial infrastructure projects in recent years. There are also some other limited private sector business activities that are more indirectly related to fishing support in the community, and there are several public service sectors that derive a portion of their service population and demand from fisheries-related activities including recreation, clinic, and public safety services. This sector is described in detail in earlier NPFMC documents (especially AECOM 2010), including business attributes, seasonal fluctuations, and employment information for the individual enterprises in the various sectors. *<< As this type of detailed, sector-wide information is time-consuming and labor intensive to compile, not all of which is central to the current analytic tasks, pending direction coming out of the December 2016 Council meetings and the ultimate decision on fieldwork in the community, the discussion in this section will be expanded to focus on changes that have occurred since the earlier noted document was compiled for the businesses most directly associated with support of the GOA trawl fishery in particular, given the "local multiplier" effect of these businesses both in terms of local re-spending of fisheries dollars and the employment opportunities generated thereby. >>*

5.2.3.8 Public Revenues

Detailed information on local fish tax revenues related to GOA trawl caught-landings cannot be disclosed. At the time the detailed community profile was compiled for the BSAI crab rationalization 5-year program review (AECOM 2010), however, local tax revenues had increased annually since 2002, following a sharp decline between 2000 and 2002, such that by 2008, local leadership characterized the financial situation of the community as being as strong and as healthy as it has ever been, a clear reversal of what was experienced early in the decade (with total revenues over $3 million). While harbor-specific revenues were apparently adversely affected by decreases in activity associated with BSAI crab rationalization during the first year post-program implementation, and the annual revenue related to pot transfers remained lower than in the years immediately preceding crab rationalization, moorage revenues specifically and harbor revenues in general had returned to, if not exceeded, pre-BSAI crab rationalization levels by the time of the 5-year program review.

In more recent years, general fund revenues have generally stayed below the $3 million peak, dropping to $2.7 million in 2009 before increasing to $2.8 million in 2010, 2011, and 2012. In 2013, total revenues were over $2.9 million before a drop in 2014 to $2.6 million. The budgeted revenues in 2015 and 2016 were $2.7 million and $3.5 million, respectively, which, if actualized, would exceed the high mark of 2008. According to City staff, however, the continuing state budget crisis has led King Cove to be proactive in protecting local revenues by passing a measure that increased the local general sales tax from four percent to six percent, effective January 1, 2016, recognizing that the heart of city funding is driven by the now six percent local general sales and use tax and the local two percent raw fish tax, with the other largest component consisting of state fish taxes and revenue sharing. The city has seen cuts in state revenue sharing, which so far are being balanced by the increase in local taxes, and while the city is characterized as doing relatively well, especially compared to many rural Alaska communities, they are not in as strong of a position now (2016) as they were in 2010. State grants are now characterized as few and far between as well, with the city borrowing to complete the construction of a second hydroelectric plant on Waterfall Creek, a facility that is seen as needed for future energy cost savings but one for which the city would not have had to assume debt in the past (Northern Economics 2016).

Harbor revenues in recent years, which were above $400,000 for the first time in FY 2010, remained above $400,000 annually until dropping to approximately $345,000 in FY 2015. The latter figure is still well above annual totals in the years leading up to the implementation of the crab rationalization program in 2005 (all of which in the available data were below $300,000), but it does represent the lowest annual total harbor revenues seen since FY 2007. Additionally, while remaining relatively high, year-over-year harbor revenues have declined each year since FY 2012. Further, city staff reports that the harbor does continue to feel the loss of vessel activity that accompanied crab rationalization, with a part of the peak in harbor revenues seen around 2010 being attributable to a substantial (generally 35 percent) increase in the fee schedule rather than an increase in activity. This fee increase applied equally to local vessel owners as well as to vessels with ownership outside of the community, and it has been noted that there is the potential for another round of fee increases to be needed sooner rather than later, particularly due to concerns for the longer-term viability of ongoing local government subsidies provided to the harbor, given the challenges faced by the city's general fund due to ongoing state budget difficulties (Northern Economics 2016).

There are also several other public revenue sources in King Cove that are related specifically to taxes and fees directly associated with local fisheries operations. For example, while there are no local property taxes on seafood processing facilities, there is a local fisheries business impact tax applied to the local shore-based processor in the flat amount of $100,000 per year (paid in increments of $10,000 per month for the first 10 months of the year); another example is a city sewer services fee applied to the shore-based processor in the flat amount of $24,000 (paid in $2,000 monthly increments), with the flat amounts in both of these examples having remained constant for a number of years. Other examples where fees have changed relatively recently, or are more variable, include a water services fee that increased 33 percent in February 2015, with the shore-based processor now paying roughly $245,000 annually for about 200 million annual gallons, and landfill charges that are based on two cost elements (the number of weekly dumpsters via a combination of three- and six-cubic yard dumpsters and an honor system of reporting and paying flatbed truck loads on a per-trip basis) that, according to city staff, results in roughly $50,000 per year in revenue for the solid waste fund from the shore-based

processor. City staff has noted that infrastructure improvements are needed for sewer, water, and solid waste systems and that increases in fees for system users, including the local shore-based processor with its relatively high volume service demand, will be necessary to allow for the upgrades and to cover increased operating costs where relevant. At present (2016), the local shore-based processor produces all its own energy, although the possibility of the processor at some point integrating the purchase of surplus hydro power produced by the city into their housing and domestic facilities, if not into the processing plant itself, has been a topic of discussion for several years.

5.2.4 Anchorage, Petersburg, and Homer

5.2.4.1 Introduction

Anchorage, Petersburg, and Homer, though different in many ways, shared a common, limited form of participation in the GOA trawl fisheries over the period 2003-2014. Each of these communities was directly engaged in the fishery through resident ownership of GOA trawl catcher vessels; none of these communities was the location of shore-based processing of GOA trawl-caught groundfish. The order of magnitude of engagement in the GOA trawl fishery for each of these communities was small relative to the overall size of the community, the economy of the community in general, and the community's commercial fishing fleet in particular. Given the limited, single sector direct engagement of each of these three communities in the GOA trawl fishery, the profiles of these communities in this section are similarly limited to focusing on the community context of the specific nature of that engagement.

5.2.4.1 Anchorage

Location and History

Anchorage, considered the primary urban center of the state, is located along Turnagain and Knik Arms at the head of Cook Inlet. Anchorage is a Unified Home Rule Municipality and, among other areas, encompasses the unincorporated communities of Chugiak, Eagle River, and Girdwood, which sometimes appear listed as separate communities in a variety of fisheries data sources. Anchorage is connected to the Alaska state highway road system and is adjacent to Central GOA Regulatory Area, Kodiak District (630), and halibut regulatory area 3A.

Dena'ina Athabaskans inhabited the area at the time of European contact; the village of Eklutna, located near the northern end of the municipality is the last occupied Dena'ina village of several that were in what is now the Anchorage area (National Oceanic and Atmospheric Administration 2013). The discovery of gold in the 1880s and in Interior Alaska in 1922 precipitated permanent development in the area by non-Alaska Native peoples (National Oceanic and Atmospheric Administration 2013).

Community Demographics and Economy

With a population of 290,826 in 2010, Anchorage is the largest community in Alaska. Census figures from 2010 show that 66.0 percent of the residents of Anchorage identified themselves as White, 7.9 percent as American Indian or Alaska Native, 5.6 percent as Black/African American, 8.1 percent as Asian, 2.0 percent as Hawaiian Native and Other Pacific Islander, and 10.4 percent as "some other race" or "two or more races," while 7.6 percent of the residents of any race in Anchorage identified themselves as being of Hispanic or Latino origin. Based on race and ethnicity combined, 37.4 percent of Anchorage's total population was composed of minority residents (that is, all residents other than those identified as both White [race] and of non-Hispanic or Latino origin [ethnicity]) in 2010. Housing data from the U.S. Census indicate that 97.1 percent of all Anchorage residents lived in non-group quarters housing (AECOM 2013).

As discussed in National Oceanic and Atmospheric Administration 2013, Anchorage is the primary commercial center for the state. As such, oil and gas industries, finance and real estate, transportation, communications, and government agencies are headquartered in Anchorage. Tourism also plays an important role in the Anchorage economy. The latest employment estimate based on the 2010-2014 U.S. Census American Community Survey suggests that 151,197 were employed in the Anchorage municipality, with an unemployment rate of 6.9 percent. Per capita income for people in Anchorage was estimated at $36,508, median household income was $78,121, and median family income was $91,120. An estimated 8.3 percent of Anchorage's residents were considered low-income, defined as those individuals living below the poverty level threshold (Alaska Department of Labor and Workforce Development 2016).

Commercial Fisheries Engagement: Catcher Vessels

From 2003 through 2014, the annual number of Anchorage resident-owned commercial fishing vessels participating in all fisheries, using all gear types in all areas combined (i.e., the community commercial fishing fleet), varied from 22 (in 2005) to 33 (in 2011), with an annual average of 28.1 resident-owned commercial fishing vessels over this time span. The annual ex-vessel gross revenues for these vessels ranged from $6,874,965 (in 2006) to $18,434,502 (in 2011), with an annual average of $9,873,828 ex-vessel gross revenues over this period. In 2014, the most recent year for which data are available, Anchorage had 30 resident-owned vessels, with $9,827,075 in ex-vessel gross revenues.

A total of four unique Anchorage resident-owned GOA trawl catcher vessels participated in the fishery over the years 2003-2014, averaging 1.3 vessels participating per year, with two vessels participating in 2003, 2005, 2013, and 2014, and one vessel participating in the remaining eight years during this period. These vessels accrued a total of 16 vessel participation years over this 12-year span, with the participation of individual vessels ranging from one to 10 years:

- *Anchorage Vessel A*, 2003 (1 year)
- *Anchorage Vessel B*, 2003-2005 (3 years)
- *Anchorage Vessel C*, 2005-2014 (10 years)
- *Anchorage Vessel D*, 2013-2014 (2 years)

Over the years 2003-2014, the Anchorage resident-owned GOA trawl catcher vessel fleet consisted largely of vessels 60 feet or less LOA, with these vessels accounting for 13 of the 16 Anchorage resident-owned catcher vessel GOA trawl fishery participation years during this time. Of the four unique catcher vessels with Anchorage resident ownership that participated in the GOA trawl fishery during this period, none were in the less than 57 feet LOA category; three were in the 57-59 feet LOA category (all were 58 feet LOA); and one was in the 60-124 feet LOA category (with this vessel being 99 feet LOA). None were in the greater than or equal to 125 feet LOA category.

Given the small number of vessels participating in the fishery in any given year, ex-vessel gross revenues for Anchorage resident-owned GOA trawl catcher vessels cannot be disclosed for any year

2003-2014. While these revenues are assumed to be important on an individual vessel level, especially for the vessel that has participated in the fishery for the 10 most recent years for which data are available (*Anchorage Vessel C*), and may currently be so for the other vessel that has participated in the fishery in recent years (*Anchorage Vessel D*), it is assumed that these GOA trawl-specific ex-vessel gross revenues do not represent a substantial proportion of the community fleet ex-vessel gross revenues, given the size and diversity of the community fleet.

Table 59 provides information on the "delivery footprint" of the Anchorage resident-owned GOA trawl fleet. As shown, while there were deliveries made in one year each to Akutan, Sand Point, and Seattle (in all likelihood actually a floating processor operating in Alaska waters) and to Kodiak in the earliest three years covered by the dataset, the greatest continuity of deliveries, by far, by the Anchorage resident-owned fleet has been to King Cove, with deliveries occurring in all but one year covered by the data by three times the number of unique Anchorage resident-owned vessels than delivered to any other community during the 2003-2014 period. All but one Anchorage resident-owned vessel delivered to King Cove over this period; only one Anchorage resident-owned vessel delivered to any other community that did not deliver to King Cove as well. The centrality of King Cove as the focus of the Anchorage fleet is also shown the annual average number of Anchorage resident-owned GOA trawl catcher vessels delivering to King Cove was greater than 80 percent of the average annual number of Anchorage resident-owned GOA trawl catcher vessels delivering to all communities combined over the period 2003-2014.

Table 59. Community of GOA Trawl-Caught Deliveries by Catcher Vessels Owned by Anchorage Residents by Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Akutan	0	0	0	0	0	0	0	1	0	0	0	0	0.1	6.3%	1
King Cove	1	0	1	1	1	1	1	1	1	1	2	2	1.1	81.3%	3
Kodiak	1	1	1	0	0	0	0	0	0	0	0	0	0.3	18.8%	1
Sand Point	0	0	0	0	0	0	0	0	0	0	0	1	0.1	6.3%	1
All Other AK	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Seattle	0	0	0	0	0	0	0	0	0	1	0	0	0.1	6.3%	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Grand Total	2	1	2	1	1	1	1	1	1	1	2	2	1.3	100.0%	4

Source: AKFIN 2016b

GOA trawl catcher vessel crew data are available from one primary source: EDR data that were collected for 2015[55] and are summarized in this section.

GOA Trawl Crew Positions Held by Anchorage Residents on all GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, a total of 8 unique Anchorage residents held crew positions on GOA trawl catcher vessels, including 3 individuals who held CFEC gear operator permits and 5 individuals who held ADFG crew licenses.

- If crew positions are counted rather than unique individuals (as some individuals worked on more than one GOA trawl catcher vessel during the year), in 2015 a total of 8 crew positions were held by Anchorage residents, including 3 positions held by individuals with CFEC gear operator permits and 5 positions held by individuals with ADFG crew licenses. These included:

    - 3 on vessels owned by Kodiak residents (1 CFEC gear operator permit holder and 2 ADFG crew license holders).

    - 2 on vessels owned by Sand Point residents (1 CFEC gear operator permit holder and 1 ADFG crew license holder).

    - 1 on a vessel owned by a Seattle MSA resident (1 CFEC gear operator permit holder and 0 ADFG crew license holders).

    - 1 on a vessel owned by a Washington resident of a community (Bellingham) outside of the Seattle MSA (0 CFEC gear operator permit holders and 1 ADFG crew license holder).

    - 1 on a vessel owned by an Oregon resident from a community (Independence) other than Newport (0 CFEC gear operator permit holders and 1 ADFG crew license holder).

Crew Positions and Payments to Labor on Anchorage Resident-Owned GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, there were a total of 9 crew positions on Anchorage resident-owned GOA trawl catcher vessels, including 1 position whose occupant held a CFEC gear

[55] As noted elsewhere, multiple caveats apply to catcher vessel EDR data, including: 2015 was the first year EDR catcher vessel crew data were collected; only one year of data is available; the available data have not been verified and audited (as audits typically rely on multiple years of data to identify outliers); and data are missing (have not yet been submitted) for 10 GOA trawl catcher vessels, which includes four vessels that were apparently active in the fishery in 2015 and six that were not (n = 68 catcher vessels in the EDR data). Additionally, one vessel appears in the data twice, as it changed ownership during the year (i.e., there are 67 unique catcher vessels in the EDR data), and there are some minor inconsistencies in crew (n = 365 unique persons) and vessel counts specific to crew position and compensation data relative to other fields in the data (e.g., n = 387 crew positions for most variables, but 386 crew positions for compensation variables). Specific to community level analysis, residence community information is not available for 55 unique individual crew members (1 CFEC gear operator permit holder and 54 ADFG crew license holders) who held 56 crew positions (1 CFEC gear operator permit holder and 55 ADFG crew license holders). Nevertheless, these data are the best available and are presented here as an indication of relative if not exact crew employment and, to the extent possible within data confidentiality constraints, compensation patterns across communities.

operator permit and 8 positions whose occupant held an ADFG crew license. Of these positions:

- 1 was held by an Ohio resident (1 CFEC gear operator permit holder and 0 ADFG crew license holders).
- 8 were held by individuals whose residence location was unknown (0 CFEC gear operator permit holders and 8 ADFG crew license holders).

- EDR data indicate that in 2015, for the 2 GOA trawl catcher vessels identified as having Anchorage ownership, a total of 9 crew members on those vessels received labor payments from the GOA trawl fishery, but the value of those payments cannot be disclosed due to data confidentiality considerations.

For additional detail on EDR GOA trawl catcher vessel crew data, please see Table 103, Table 104, and Table 105 in Attachment 3.

5.2.4.2 Petersburg

Location and History

Petersburg is located on the northwest end of Mitkof Island at the confluence of the Wrangell Narrows and Frederick Sound in the southeastern portion of the state, approximately 115 miles southeast of Juneau, and 670 miles southeast of Anchorage. Formerly incorporated as a Home Rule City and not part of an organized borough, more recently (2013) Petersburg became a Non-Unified Home Rule Borough. The community is only accessible by air and sea, and is on the mainline of the Alaska state ferry. Petersburg is adjacent to the Eastern GOA Regulatory Area, Southeast Outside District (650), and halibut regulatory area 2C.

Traditionally, Tlingit Indians from Kake utilized the north end of Mitkof Island, including what is now Petersburg, as a summer fish camp site. Commercial fishing activity around the turn of the 20th century precipitated permanent development in the area by non-Alaska Native peoples (National Oceanic and Atmospheric Administration 2013).

Community Demographics and Economy

According to federal census data, Petersburg had a population of 2,948 in 2010. Census figures from that year show that 80.0 percent of the residents of Homer identified themselves as White, 7.0 percent as American Indian or Alaska Native, 0.4 percent as Black/African American, 3.2 percent as Asian, 0.2 percent as Hawaiian Native and Other Pacific Islander, and 9.1 percent as “some other race” or “two or more races,” while 3.7 percent of the residents of any race in Petersburg identified themselves as being of Hispanic or Latino origin. Based on race and ethnicity combined, 21.8 percent of Petersburg’s total population was composed of minority residents (that is, all residents other than those identified as both White [race] and of non-Hispanic or Latino origin [ethnicity]) in 2010. Housing data from the U.S.

Census indicate that 98.5 percent of all Homer residents lived in non-group quarters housing (AECOM 2013).

As discussed by National Oceanic and Atmospheric Administration 2005, Petersburg's economy remains tied closely to commercial fishing, with multiple processors operating cold storage facilities and custom packing services. Other primary employment sectors in the community include federal, state, and city government agencies and a range of support and retail businesses; the timber industry, previously important to the community, has virtually exited Petersburg in recent years. The community also experiences some tourism during the summer months as smaller cruise ships call on Petersburg. A number of bed and breakfasts, cabins, lodges, and hotels provide lodging for tourists, and guided fishing and hunting tours are available (Petersburg Chamber of Commerce 2011). The latest employment estimate based on the 2010-2014 U.S. Census American Community Survey suggests that 1,645 were employed in Petersburg, with an unemployment rate of 6.2 percent. Per capita income for people in Petersburg was estimated at $36,950, median household income was $60,774, and median family income was $86,250. An estimated 10.2 percent of Petersburg's residents were considered low-income, defined as those individuals living below the poverty level threshold (Alaska Department of Labor and Workforce Development 2016).

Commercial Fisheries Engagement: Catcher Vessels

From 2003 through 2014, the annual number of Petersburg resident-owned commercial fishing vessels participating in all fisheries, using all gear types in all areas combined (i.e., the community commercial fishing fleet), varied from 68 (in 2003) to 110 (in 2007), with an annual average of 97.3 resident-owned commercial fishing vessels over this time span. The annual ex-vessel gross revenues for these vessels ranged from $38,875,543 (in 2014) to $63,337,879 (in 2011), with an annual average of $51,944,695 ex-vessel gross revenues over this period. In 2014, the most recent year for which data are available, Petersburg had 101 resident-owned vessels, with $38,875,543 in ex-vessel gross revenues.

A total of three unique Petersburg resident-owned GOA trawl catcher vessels participated in the fishery over the years 2003-2014, averaging 1.1 vessels participating per year, with two vessels participating in 2014, and one vessel participating in the remaining 11 years during this period. These vessels accrued a total of 13 vessel participation years over this 12-year span, with the participation of individual vessels ranging from one to seven years:

- *Petersburg Vessel A*, 2003-2007 (5 years)
- *Petersburg Vessel B*, 2008-2014 (7 years)
- *Petersburg Vessel C*, 2014 (1 year)

Over the years 2003-2014, the Petersburg resident-owned GOA trawl catcher vessel fleet consisted exclusively of vessels 60 feet or less LOA. Of the three unique catcher vessels with Petersburg resident ownership that participated in the GOA trawl fishery during this period, none were in the less than 57 feet LOA category and all were in the 57-59 feet LOA category (one was 57 feet and two were 58 feet

LOA). None were in either the 60 feet to 124 feet LOA category or in the greater than or equal to 125 feet LOA category.

Given the small number of vessels participating in the fishery in any given year, ex-vessel gross revenues for Petersburg resident-owned GOA trawl catcher vessels cannot be disclosed for any year 2003-2014. While these revenues are assumed to be important on an individual vessel level, especially for the vessel that has participated in the fishery for the seven most recent years for which data are available (*Petersburg Vessel B*), and may currently be so for the other vessel that has participated in the fishery in recent years (*Petersburg Vessel C*), it is assumed that these GOA trawl-specific ex-vessel gross revenues do not represent a substantial proportion of the community fleet ex-vessel gross revenues, given the size and diversity of the community fleet.

Table 60 provides information on the "delivery footprint" of the Petersburg resident-owned GOA trawl fleet. As shown, while there were deliveries made in two or three years each to Akutan, Kodiak, and Seattle (in all likelihood actually a floating processor operating in Alaska waters) in the years covered by the dataset, the greatest continuity of deliveries, by far, by the Petersburg resident-owned fleet has been to King Cove, with deliveries occurring in all but three years covered by the dataset, and deliveries occurring by each of the unique Petersburg resident-owned vessels that were active in the fishery during the 2003-2014 period. Stated another way, no Petersburg resident-owned vessel delivered to any community other than King Cove that did not also deliver to King Cove at least some of the years 2003-2014 as well. Sand Point has also been the location of deliveries by Petersburg resident-owned vessels each of the five most recent years covered by the dataset. The centrality of King Cove as the focus of the Petersburg fleet is also shown the annual average number of Petersburg resident-owned GOA trawl catcher vessels delivering to King Cove was about 70 percent of the average annual number of Petersburg resident-owned GOA trawl catcher vessels delivering to all communities combined over the period 2003-2014.

Table 60. Community of GOA Trawl-Caught Deliveries by Catcher Vessels Owned by Petersburg Residents by Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Akutan	0	0	0	0	0	0	0	0	0	0	1	1	0.2	15.4%	1
King Cove	1	1	1	1	1	1	1	1	0	0	0	1	0.8	69.2%	3
Kodiak	1	1	0	0	0	0	0	1	0	0	0	0	0.3	23.1%	2
Sand Point	0	0	0	0	0	0	0	1	1	1	1	2	0.5	46.2%	2
All Other AK	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Seattle	0	0	0	0	0	0	0	1	0	0	1	1	0.3	23.1%	2
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Grand Total	1	1	1	1	1	1	1	1	1	1	1	2	1.1	100.0%	3

Source: AKFIN 2016b

GOA trawl catcher vessel crew data are available from one primary source: EDR data that were collected for 2015[56] and are summarized in this section.

GOA Trawl Crew Positions Held by Petersburg Residents on all GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, a total of 4 unique Petersburg residents held crew positions on GOA trawl catcher vessels, including 2 individuals who held CFEC gear operator permits and 2 individuals who held ADFG crew licenses.

- If crew positions are counted rather than unique individuals (as some individuals worked on more than one GOA trawl catcher vessel during the year), in 2015 a total of 4 crew positions were held by Petersburg residents, including 2 positions held by individuals with CFEC gear operator permits and 2 positions held by individuals with ADFG crew licenses. These included:

    - 3 on vessels owned by Petersburg residents (2 CFEC gear operator permit holders and 1 ADFG crew license holder).

    - 1 on a vessel owned by a Seattle MSA resident (0 CFEC gear operator permit holders and 1 ADFG crew license holder).

Crew Positions and Payments to Labor on Petersburg Resident-Owned GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, there were a total of 8 crew positions on Petersburg resident-owned GOA trawl catcher vessels, including 2 positions whose occupants held a CFEC gear operator permit and 6 positions whose occupants held an ADFG crew license. Of these positions:

    - 3 were held by Petersburg residents (2 CFEC gear operator permit holders and 1 ADFG crew license holder).

    - 3 were held by Washington residents who lived in communities (Castle Rock and Rosburg) outside of the Seattle MSA (0 CFEC gear operator permit holders and 3 ADFG crew license holders).

[56] As noted elsewhere, multiple caveats apply to catcher vessel EDR data, including: 2015 was the first year EDR catcher vessel crew data were collected; only one year of data is available; the available data have not been verified and audited (as audits typically rely on multiple years of data to identify outliers); and data are missing (have not yet been submitted) for 10 GOA trawl catcher vessels, which includes four vessels that were apparently active in the fishery in 2015 and six that were not (n = 68 catcher vessels in the EDR data). Additionally, one vessel appears in the data twice, as it changed ownership during the year (i.e., there are 67 unique catcher vessels in the EDR data), and there are some minor inconsistencies in crew (n = 365 unique persons) and vessel counts specific to crew position and compensation data relative to other fields in the data (e.g., n = 387 crew positions for most variables, but 386 crew positions for compensation variables). Specific to community level analysis, residence community information is not available for 55 unique individual crew members (1 CFEC gear operator permit holder and 54 ADFG crew license holders) who held 56 crew positions (1 CFEC gear operator permit holder and 55 ADFG crew license holders). Nevertheless, these data are the best available and are presented here as an indication of relative if not exact crew employment and, to the extent possible within data confidentiality constraints, compensation patterns across communities.

  - 2 were held by residents of Arizona and Ohio (0 CFEC gear operator permit holders and 2 ADFG crew license holders).

- EDR data indicate that in 2015, for the 2 GOA trawl catcher vessels identified as having Petersburg ownership, a total of 6 crew members on those vessels received labor payments from the GOA trawl fishery, but the value of those payments cannot be disclosed due to data confidentiality considerations.

For additional detail on EDR GOA trawl catcher vessel crew data, please see Table 103, Table 104, and Table 105 in Attachment 3.

5.2.4.1 Homer

Location and History

Homer is located on the western side of the Kenai Peninsula, along the entrance to Kachemak Bay off Cook Inlet, approximately 120 miles southwest of Anchorage. Homer is incorporated as a First Class City within the Kenai Peninsula Borough. Like Anchorage, Homer is connected to the Alaska state highway system and, also like Anchorage, is adjacent to Central GOA Regulatory Area, Kodiak District (630), and halibut regulatory area 3A.

The Homer area was traditionally home to the Pacific/Kachemak Eskimo peoples and Dena'ina Athabaskans, with increasing occupation of the Kenai Peninsula by the Dena'ina around 1000 A.D. Gold and coal mining in the mid- to late-1890s precipitated permanent development in the area by non-Alaska Native peoples (National Oceanic and Atmospheric Administration 2013).

Community Demographics and Economy

According to federal census data, Homer had a population of 5,003 in 2010. Census figures from that year show that 89.3 percent of the residents of Homer identified themselves as White, 4.1 percent as American Indian or Alaska Native, 0.4 percent as Black/African American, 1.0 percent as Asian, 0.1 percent as Hawaiian Native and Other Pacific Islander, and 5.1 percent as "some other race" or "two or more races," while 2.1 percent of the residents of any race in Homer identified themselves as being of Hispanic or Latino origin. Based on race and ethnicity combined, 11.7 percent of Homer's total population was composed of minority residents (that is, all residents other than those identified as both White [race] and of non-Hispanic or Latino origin [ethnicity]) in 2010. Housing data from the U.S. Census indicate that 98.6 percent of all Homer residents lived in non-group quarters housing (AECOM 2013).

As discussed in National Oceanic and Atmospheric Administration 2005, Homer's economy is dominated by commercial and sport fishing, as well as fish processing and marine-related support services, such as welding, electronics, and canvas work, with tourism having become more important to the local economy in the recent past. In a more recent (2011) survey, community leaders indicated that commercial fishing, ecotourism, and sport hunting and fishing are important economic drivers in Homer (National Oceanic and Atmospheric Administration 2013). The latest employment estimate

based on the 2010-2014 U.S. Census American Community Survey suggests that 2,462 were employed in Homer, with an unemployment rate of 7.1 percent. Per capita income for people in Homer was estimated at $31,237, median household income was $54,778, and median family income was $74,808. An estimated 12.1 percent of Homer's residents were considered low-income, defined as those individuals living below the poverty level threshold (Alaska Department of Labor and Workforce Development 2016).

Commercial Fisheries Engagement: Catcher Vessels

From 2003 through 2014, the annual number of Homer resident-owned commercial fishing vessels participating in all fisheries, using all gear types in all areas combined (i.e., the community commercial fishing fleet), varied from 69 (in 2003) to 110 (in 2012), with an annual average of 90.4 resident-owned commercial fishing vessels over this time span. The annual ex-vessel gross revenues for these vessels ranged from $29,574,967 (in 2005) to $59,996,715 (in 2011), with an annual average of $41,808,384 ex-vessel gross revenues over this period. In 2014, the most recent year for which data are available, Homer had 98 resident-owned vessels, with $32,775,482 in ex-vessel gross revenues.

A total of two unique Homer resident-owned GOA trawl catcher vessels participated in the fishery over the years 2003-2014, averaging 0.3 vessels participating per year, with two vessels participating in 2003, one vessel participating in the years 2004-2006, and no vessels participating in the remaining eight years during this period. These vessels accrued a total of five vessel participation years over this 12-year span, with the participation of individual vessels ranging from one to four years:

- *Homer Vessel A*, 2003 (1 year)
- *Homer Vessel B*, 2003, 2005, and 2006 (3 years)

Over the years 2003-2014, the Homer resident-owned GOA trawl catcher vessel fleet was anomalous among Alaska communities with respect to vessel length. Of the two unique catcher vessels with Homer resident ownership that participated in the GOA trawl fishery during this period, one was in the less than 57 feet LOA category (it was 41 feet LOA, making it the shortest vessel from any community that participated in the fishery during this period); none were in the 57-59 feet LOA category (a mainstay of participation for all other Alaska communities engaged in the fishery); and one was in the 60 feet to 124 feet LOA category (it was 73 feet LOA). None were in the greater than or equal to 125 feet LOA category.

Given the small number of vessels participating in the fishery in any given year, ex-vessel gross revenues for Homer resident-owned GOA trawl catcher vessels cannot be disclosed for any year 2003-2014. While these revenues are assumed to be important on an individual vessel level, no Homer resident-owned vessels participated in the fishery in the eight most recent years for which data are available, and it is assumed that these GOA trawl-specific ex-vessel gross revenues do not represent a substantial proportion of the community fleet ex-vessel gross revenues even in the years Homer vessels did participate, given the size and diversity of the community fleet.

Table 61 provides information on the "delivery footprint" of the Homer resident-owned GOA trawl fleet. As shown, all deliveries were made to either Kodiak (in the earliest year covered by the dataset) or Sand Point (in three of the four earliest years covered by the dataset). Both Homer resident-owned vessel delivered to Kodiak over this period; one of the two Homer resident-owned vessels delivered to Sand Point as well.

No EDR data on catcher vessel crew labor and/or payments to crew are available for Homer. No Homer residents holding either CFEC gear operator permits or ADFG crew licenses participated in the GOA trawl fishery as crew members in 2015 and no Homer resident-owned catcher vessels participated in the fishery in 2015.

Table 61. Community of GOA Trawl-Caught Deliveries by Catcher Vessels Owned by Homer Residents by Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Kodiak	2	0	0	0	0	0	0	0	0	0	0	0	0.2	50.0%	2
Sand Point	1	0	1	1	0	0	0	0	0	0	0	0	0.3	75.0%	1
All Other AK	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Seattle	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Grand Total	2	0	1	1	0	0	0	0	0	0	0	0	0.3	100.0%	2

Source: AKFIN 2016b

5.2.5 Seward, Akutan, and Unalaska/Dutch Harbor

5.2.5.1 Introduction

Seward, Akutan, and Unalaska/Dutch Harbor, though different in many ways, shared a common, limited form of participation in the GOA trawl fisheries over the period 2003-2014. Each of these communities was directly engaged in the fishery through the local operational of shore-based processors that accepted GOA trawl-caught deliveries; none of these communities was the location of resident ownership of GOA trawl catcher vessels. The order of magnitude of engagement in the GOA trawl fishery for each of these communities was small relative to the overall size of the community, the economy of the community in general, and/or the shore-based processing that occurs in the community in particular. Given the limited, single sector direct engagement of each of these three communities in the GOA trawl fishery, the profiles of these communities in this section are similarly limited to focusing on the community context of the specific nature of that engagement.

5.2.5.1 Seward

Location and History

Seward is located on Resurrection Bay on the eastern side of the Kenai Peninsula, approximately 80 miles south of Anchorage. Seward is incorporated as a Home Rule City within the Kenai Peninsula Borough. Like Anchorage and Homer, Seward is connected to the Alaska state highway system and, also like Anchorage and Homer, is adjacent to Central GOA Regulatory Area, Kodiak District (630), and halibut regulatory area 3A.

The earliest known inhabitants of the Resurrection Bay area were the Unegkurmiut, a subgroup of the Alutiiq Chugach; there is uncertainty as to whether these people were closely affiliated with the Koniag people of Kodiak Island, or had previously inhabited Cook Inlet and were pushed back into a smaller territory by the Koniag. Seward's selection as a railroad terminus, with its ice-free harbor, precipitated permanent development in the area in the first years of the 20th century by non-Alaska Native peoples (National Oceanic and Atmospheric Administration 2013).

Community Demographics and Economy

According to federal census data, Seward had a population of 2,693 in 2010. Census figures from that year show that 68.5 percent of the residents of Seward identified themselves as White, 16.7 percent as American Indian or Alaska Native, 3.1 percent as Black/African American, 2.4 percent as Asian, 0.6 percent as Hawaiian Native and Other Pacific Islander, and 8.7 percent as "some other race" or "two or more races," while 3.6 percent of the residents of any race in Seward identified themselves as being of Hispanic or Latino origin. Based on race and ethnicity combined, 33.1 percent of Seward's total population was composed of minority residents (that is, all residents other than those identified as both White [race] and of non-Hispanic or Latino origin [ethnicity]) in 2010. Housing data from the U.S. Census indicate that 73.7 percent of all Seward residents lived in non-group quarters housing.

As discussed in National Oceanic and Atmospheric Administration 2005, Seward's economy is based on commercial fishing, tourism, ship services and repair, and the fossil fuel industry as well as the transportation of goods; Seward is an important surface transportation hub as the terminus of the Alaska Railroad and its highway links to Anchorage and Alaska's Interior. In a more recent (2011) survey, community leaders indicated that Seward's economy also relies on mining, oil and gas exploration or drilling, and sport hunting and fishing (National Oceanic and Atmospheric Administration 2013). Seward is also known as the location of the Alaska Vocational Technical Center, the state's only coal export facility, a large state correctional facility, and multiple marine science research entities. The latest employment estimate based on the 2010-2014 U.S. Census American Community Survey suggests that 1,137 were employed in Seward, with an unemployment rate of 8.2 percent. Per capita income for people in Seward was estimated at $30,076, median household income was $49,432, and median family income was $69,158. An estimated 5.5 percent of Seward's residents were considered low-income, defined as those individuals living below the poverty level threshold (Alaska Department of Labor and Workforce Development 2016).

Commercial Fisheries Engagement: Shore-Based Processors

From 2003 through 2014, the annual number of active Seward shore-based processors varied from three (in 2003 and 2008) to five (in 2004, 2005, 2011, 2012, and 2014), with an annual average of 4.3 shore-based processors operating over this time span. Based on a count of intent to operate codes, a total of 10 unique shore-based processing entities operated in Seward during this period.[57]

During the period 2003-2014, first wholesale gross revenues for Seward shore-based processors are confidential for two years: 2003 and 2008. For the remaining (non-confidential) years during this period (2004-2007 and 2009-2014), the annual first wholesale gross revenues for these processors ranged from $51 million (in 2014) to $100 million (in 2011), with an annual average of $70 million first wholesale gross revenues for the non-confidential years during this period. In 2014, the most recent year for which data are available, Seward had five active shore-based processors, with $51 million in first wholesale gross revenues.

A total of three unique shore-based processors in Seward accepted GOA trawl-caught deliveries over the years 2003-2014, averaging 0.8 processors participating per year, with two processors participating in 2011 and 2012; one processor participating in the years 2004, 2005, 2010, 2013, and 2014; and no processors participating in the remaining five years during this period (2003 and 2006-2009). These processors accrued a total of nine shore-based processor participation years over this 12-year span, with the participation of individual processors ranging from two to four years:

[57] The number of intent to operate codes may or may not closely correspond with physical processing plants in any given community, for a number of reasons. For example, a processing entity may use the physical plant of another processing entity to have its product custom processed or, as another example, one processing entity may purchase another in whole or in part and continue to retain two distinct intent to operate codes based on the retention/creation of different units within the corporate organization of the successor entity. In other cases, it is not apparent why what looks to be the same entity would have more than one intent to operate code. In the case of Seward, it would appear that there is double counting of one entity during the period of 2003-2014, and there are a number of entities included in the community count that do not have physical plants in the community, but there are no such issues with the specific entities that accepted GOA trawl-caught deliveries during this period, each of which has a unique physical plant in the community.

- *Seward Processor A*, 2004-2005 (2 years)
- *Seward Processor B*, 2010-2012 (3 years)
- *Seward Processor C*, 2011-2014 (4 years)

Given the limited number of processors participating in the fishery, all first wholesale gross revenue information related to the processing of GOA trawl-caught deliveries to Seward is confidential. A general knowledge of the industry and previous community analyses would suggest, however, that during the 2003-2014, these revenues were likely a relatively minor component of overall processing first wholesale gross revenues for Seward shore-based processors as a group, although it is important to note that (1) these revenues may not have been insignificant to individual processors, as there is considerable variability between processors in both overall scale of operations and level of participation in the GOA trawl fishery and (2) as GOA-focused operations, Seward shore-based processors may be looking to continuing access, or potential future access, to GOA trawl-caught landings as important to maintaining a desired flexibility and diversity of operations. *<< this paragraph to be revisited/expanded following direction coming out of the December 2016 Council meetings and the ultimate decision on fieldwork and/or other follow-up in the community >>*

Table 62 provides information on the "community footprint" of the catcher vessels that made GOA trawl-caught deliveries to Seward shore-based processors 2003-2014, based on catcher vessel ownership address. As shown, while deliveries were accepted from Alaska, Oregon, and Washington vessels, the distribution of participation was not evenly spread across these geographies. Of the nine unique vessels that made GOA trawl-caught deliveries to Seward shore-based processors during this period, four were from Kodiak. No other community or group of communities accounted for more than two unique vessels making GOA trawl-caught deliveries to Seward shore-based processors. Further, the importance of the Kodiak catcher vessel connection may be seen in the fact that Kodiak resident-owned vessels made GOA trawl-caught deliveries to Seward shore-based processors in each of the five most recent years covered by the dataset (2010-2014); catcher vessels from no other community or group of communities made GOA trawl-caught deliveries to Seward shore-based processors for more than two consecutive years during the period 2003-2014.

No EDR data on catcher vessel crew labor and/or payments to crew are available for Seward. No Seward residents holding either CFEC gear operator permits or ADFG crew licenses participated in the GOA trawl fishery as crew members in 2015 and no Seward resident-owned catcher vessels participated in the fishery in 2015.

Table 62. Catcher Vessels Making GOA Trawl-Caught Deliveries to Seward Shore-Based Processors, by Community of Vessel Owner Residence and Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Kodiak	0	0	1	0	0	0	0	2	2	1	2	1	0.8	60.0%	4
All Other AK	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Alaska Total	0	0	1	0	0	0	0	2	2	1	2	1	0.8	60.0%	4
Newport	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
All Other OR	0	0	1	0	0	0	0	0	0	0	1	0	0.2	13.3%	2
Oregon Total	0	0	1	0	0	0	0	0	0	0	1	0	0.2	13.3%	2
Seattle MSA	0	0	0	0	0	0	0	0	1	2	0	0	0.3	20.0%	2
All Other WA	0	1	0	0	0	0	0	0	0	0	0	0	0.1	6.7%	1
Washington Total	0	1	0	0	0	0	0	0	1	2	0	0	0.3	26.7%	3
All Other States	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Grand Total	0	1	2	0	0	0	0	2	3	3	3	1	1.3	100.0%	9

Source: AKFIN 2016b

5.2.5.2 Akutan

Location and History

Akutan is located on Akutan Harbor on the eastern side of Akutan Island, one of the Fox Islands group of the eastern Aleutian Islands, approximately 760 miles southwest of Anchorage and approximately 35 miles northeast of Unalaska/Dutch Harbor. Akutan is incorporated as a Second Class City within the AEB. The community is only accessible by air and sea, and is served seasonally by ferry on the Aleutian Chain route of the Alaska Marine Highway system. Typically considered a Bering Sea community (e.g., it is a member community of the Bering Sea Community Development Quota [CDQ] program), Akutan is also adjacent to the Western GOA Regulatory Area (610), as well as halibut regulatory area 4A, which straddles the GOA and the Bering Sea sides of the eastern portion of the Aleutian Chain.

Occupation of the area dates back approximately 8,500 years to the early Anangula tradition; evidence of an early Aleutian tradition was found on Umnak Island dating back approximately 5,400 years (National Oceanic and Atmospheric Administration 2013). Following European contact, multiple Akutan Island villages were decimated by disease; in the mid-to late-1800s people returned to Akutan and in 1878 a sea otter trading post and a Russian Orthodox church and school were built at the present village site, followed by a whaling station across the bay (1912) and shore-based seafood processing closer to the village (1948) (National Oceanic and Atmospheric Administration 2013).

Community Demographics and Economy

According to federal census data, Akutan had a population of 1,027 in 2010. Census figures from that year show that 23.3 percent of the residents of Akutan identified themselves as White, 5.5 percent as American Indian or Alaska Native, 17.9 percent as Black/African American, 43.3 percent as Asian, 1.5 percent as Hawaiian Native and Other Pacific Islander, and 8.5 percent as “some other race” or “two or more races,” while 20.8 percent of the residents of any race in Akutan identified themselves as being of Hispanic or Latino origin. Based on race and ethnicity combined, 90.8 percent of Akutan’s total population was composed of minority residents (that is, all residents other than those identified as both White [race] and of non-Hispanic or Latino origin [ethnicity]) in 2010. Housing data from the U.S. Census indicate that 8.8 percent of all Akutan residents lived in non-group quarters housing.

As discussed in National Oceanic and Atmospheric Administration 2005, Akutan’s economy depends heavily on commercial fishing. In a more recent (2011) survey, community leaders estimated that there were 85 permanent and 900 seasonal residents living in the community in 2010 (National Oceanic and Atmospheric Administration 2013), with the former associated with the traditional village of Akutan and the latter associated with the shore-based processor operating in an industrial enclave-style development a very short distance from, but distinct from, the traditional village site (with the recognition of this separation being key to Akutan ultimately qualifying as a CDQ community). The latest employment estimate based on the 2010-2014 U.S. Census American Community Survey suggests that 849 were employed in Akutan, with an unemployment rate of 0.6 percent. Per capita income for people in Akutan was estimated at $26,513, median household income was $26,250, and median family income was $39,688. An estimated 14.6 percent of Akutan’s residents were considered

low-income, defined as those individuals living below the poverty level threshold (Alaska Department of Labor and Workforce Development 2016).

Commercial Fisheries Engagement: Shore-Based Processors

Based on a count of intent to operate codes, a single unique shore-based processing entity operated in Akutan 2003-2014. While specific volume and value information associated with the plant is confidential for all commercial fisheries, a general knowledge of the industry and previous community analyses would suggest that (1) the plant is heavily focused on BSAI rather than GOA fisheries and (2) it is among the largest BSAI multi-species plants in terms of both processing capacity and processing workforce employment.

Akutan's direct engagement in the GOA trawl fishery during 2003-2014 was limited to the single unique shore-based processor that operated in the community during that time. This processor accepted GOA trawl-caught deliveries each year 2003-2014 (i.e., the community averaged 1.0 processors participating in the fishery per year). This processor *(Akutan Processor A)* accrued a total of 12 shore-based processor participation years over this 12-year span.

Given that only a single shore-based processor participated in the fishery, all first wholesale gross revenue information related to the processing of GOA trawl-caught deliveries to Akutan is confidential. A general knowledge of the industry and previous community analyses would suggest, however, that during the 2003-2014, these revenues were likely a relatively minor component of overall processing first wholesale gross revenues for Akutan shore-based processing, although it is important to note that (1) these revenues likely varied considerably from year to year and well may have been substantial in absolute terms at least some years, (2) the timing of this processing may have been important to the operational flow of the plant and provided an important source of labor hours for processing staff, and (3) the processing of GOA trawl-caught deliveries in Akutan may have been important to the overall operations of the entity that owns the plant in Akutan beyond the operations of the Akutan plant itself.

Regarding the latter point, the company that owns *Akutan Processor A* also owns processing plants in Sand Point and Kodiak, both of which are closer to what are typically the most productive fishing grounds for the GOA trawl fishery. According to company management, the delivery of GOA trawl-caught fish to Akutan rather than to company-owned plants in Sand Point or Kodiak during the 2003-2014 period was a straightforward matter of processing capacity. For example, if the pollock quota was large in Area 610 (the Western GOA) in a given year, some of the harvest by vessels working for the company would be delivered to Akutan because of the limited processing capacity of firm's Sand Point shore-based processing plant relative to *Akutan Processor A*, with the benefits of that strategy reinforced by the race-for-fish conditions in that fishery.

Similarly, and also according to company management, as another example, in past years when capacity became limited at the firm's Kodiak shore-based processing facility, trawl-caught pollock from Area 620 (the Central GOA Chirikof District) was also been tendered to *Akutan Processor A* or, alternatively, landed in Kodiak and shipped to *Akutan Processor A* for processing (with the latter approach being responsive to City of Kodiak concerns regarding the potential loss of raw fish taxes if the pollock were tendered to another community rather than landed in Kodiak). More recently (2016), however, the

company has expanded the capacity of its Kodiak shore-based processing facility and, according to management, does not expect to tender or transport GOA trawl-caught pollock from Area 620 or Area 630 (the Central GOA Kodiak District) to Akutan given the increased capacity of the Kodiak plant.

From a borough-level perspective, both Sand Point and Akutan are in the AEB and therefore fish tax revenues benefit the borough equally even if there is a shift in landings between the two communities (although there is a difference on the individual community level based on local raw fish taxes and on the secondary economic and support service activities generated by having additional vessel calling on the community and having additional processing occur in the community). A shift between Kodiak and Akutan, on the other hand, represents a shift between two different boroughs (in addition to a shift between two individual communities), although the established practice of making landings in Kodiak before transporting the fish to Akutan for processing already represents an increase in benefits to the KIB (and the City of Kodiak) and a decrease in benefits to the AEB (and the City of Akutan) compared to the previous practice of tendering fish to Akutan.

Table 63 provides information on the "community footprint" of the catcher vessels that made GOA trawl-caught deliveries to the Akutan shore-based processor 2003-2014, based on catcher vessel ownership address. As shown, while deliveries were accepted from Alaska, Oregon, and Washington vessels, the distribution of participation was not evenly spread across these geographies. Of the 33 unique vessels that made GOA trawl-caught deliveries to the Akutan shore-based processor during this period, 22 were from Washington and 18 of those were from the Seattle MSA. At least one Seattle MSA resident-owned vessel made deliveries to the plant 11 out of the 12 years during the period 2003-2014, and multiple Seattle MSA resident-owned vessels did so in nine of those years. No other community or group of communities accounted for more than five unique vessels making GOA trawl-caught deliveries to the Akutan shore-based processor during the period 2003-2014, however, at least one Kodiak vessel made GOA trawl caught deliveries to the plant each of the five most recent years covered by the dataset (2010-2014) and at least one Sand Point vessel made deliveries to the plant four out of five most recent years covered by the dataset (2010 and 2012-2014), with multiple Sand Point vessels making deliveries to the plant in three of those years.

No EDR data on catcher vessel crew labor and/or payments to crew are available for Akutan. No Akutan residents holding either CFEC gear operator permits or ADFG crew licenses participated in the GOA trawl fishery as crew members in 2015 and no Akutan resident-owned catcher vessels participated in the fishery in 2015.

Table 63. Catcher Vessels Making GOA Trawl-Caught Deliveries to Akutan Shore-Based Processors, by Community of Vessel Owner Residence and Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Anchorage	0	0	0	0	0	0	0	1	0	0	0	0	0.1	1.3%	1
Kodiak	0	0	0	0	0	0	0	1	1	1	1	1	0.4	6.3%	2
Petersburg	0	0	0	0	0	0	0	0	0	0	1	1	0.2	2.5%	1
Sand Point	0	0	0	1	0	0	0	3	0	1	2	3	0.8	12.5%	5
All Other AK	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Alaska Total	0	0	0	1	0	0	0	5	1	2	4	5	1.5	22.5%	9
Newport	1	0	0	0	0	0	0	0	0	0	2	0	0.3	3.8%	3
All Other OR	0	0	0	0	0	0	0	0	0	0	1	0	0.1	1.3%	1
Oregon Total	1	0	0	0	0	0	0	0	0	0	3	0	0.3	5.0%	4
Seattle MSA	3	1	2	4	2	2	1	5	0	3	8	8	3.3	48.8%	18
All Other WA	1	2	1	2	2	0	0	1	0	3	2	2	1.3	20.0%	4
Washington Total	4	3	3	6	4	2	1	6	0	6	10	10	4.6	68.8%	22
All Other States	0	0	1	1	1	0	0	0	0	0	0	0	0.3	3.8%	1
Grand Total	5	3	4	8	5	2	1	11	1	8	17	15	6.7	100.0%	33

Source: AKFIN 2016b

5.2.5.3 Unalaska/Dutch Harbor

Location and History

Unalaska is located on Unalaska Bay on the northern side of Unalaska Island, one of the Fox Islands group of the eastern Aleutian Islands, approximately 800 miles southwest of Anchorage. A portion of the community is located on Unalaska Island itself, while another portion, connected to Unalaska Island by bridge, is located on Amaknak Island, including the port of Dutch Harbor. Unalaska is incorporated as a First Class City, is not a part of an organized borough, and is within the Aleutians West Census Area. The community is only accessible by air and sea, and is served seasonally by ferry on the Aleutian Chain route of the Alaska Marine Highway system. Like Akutan, Unalaska/Dutch Harbor is typically considered a Bering Sea community (e.g., it is an ex-officio member of the Aleutian Pribilof Island Development Association CDQ group), but (again like Akutan) it is also adjacent to the Western GOA Regulatory Area (610), as well as halibut regulatory area 4A, which straddles the GOA and the Bering Sea sides of the eastern portion of the Aleutian Chain.

Archaeological sites on Anangula Island have been used to estimate the earliest occupation of the area as occurring approximately 8,000 years ago (National Oceanic and Atmospheric Administration 2013). Following European contact, multiple Unalaska and Amaknak Island villages were decimated by multiple factors including disease. Following an initial period of Russian occupation during which Unalaska became fur-trading port, in 1825 a forerunner of the contemporary Russian Orthodox Church of the Holy Ascension was built at the present village site; following the abandonment of local commercial operations by the Russians in 1850, development related to the community becoming a coaling station and commercial trade center occurred in the 1880s. By the turn of the 20th century several seafood processors may have been operating locally and, following substantial military development and use of the community immediately before, during, and after World War II, interest in local commercial fishing operations was revived in the 1950s (National Oceanic and Atmospheric Administration 2013).

Community Demographics and Economy

According to federal census data, Unalaska had a population of 4,376 in 2010. Census figures from that year show that 39.2 percent of the residents of Unalaska identified themselves as White, 6.1 percent as American Indian or Alaska Native, 6.9 percent as Black/African American, 32.6 percent as Asian, 2.2 percent as Hawaiian Native and Other Pacific Islander, and 13.0 percent as “some other race” or “two or more races,” while 15.2 percent of the residents of any race in Unalaska identified themselves as being of Hispanic or Latino origin. Based on race and ethnicity combined, 66.3 percent of Unalaska’s total population was composed of minority residents (that is, all residents other than those identified as both White [race] and of non-Hispanic or Latino origin [ethnicity]) in 2010. Housing data from the U.S. Census indicate that 52.0 percent of all Unalaska residents lived in non-group quarters housing.

As discussed in National Oceanic and Atmospheric Administration 2005, the economy of Unalaska/Dutch Harbor is based almost entirely on commercial fishing, with employment occurring in the harvest and processing sectors, and in fishing-related services such as fuel, vessel maintenance, trade, and transportation. As noted in a more recent profile, the community enjoys a strategic position

as the center of a rich fishing area and is used for transferring cargo between Pacific Rim trading partners (National Oceanic and Atmospheric Administration 2013). The latest employment estimate based on the 2010-2014 U.S. Census American Community Survey suggests that 3,353 were employed in Unalaska, with an unemployment rate of 2.2 percent. Per capita income for people in Unalaska was estimated at $32,705, median household income was $90,216, and median family income was $99,141. An estimated 7.6 percent of Unalaska's residents were considered low-income, defined as those individuals living below the poverty level threshold (Alaska Department of Labor and Workforce Development 2016).

Commercial Fisheries Engagement: Shore-Based Processors

From 2003 through 2014, the annual number of active Unalaska/Dutch Harbor shore-based processors varied from five (each year 2010-2013) to 10 (in 2003), with an annual average of 6.2 shore-based processors operating over this time span. Based on a count of intent to operate codes, a total of 12 unique shore-based processing entities operated in Unalaska/Dutch Harbor during this period.[58]

The annual first wholesale gross revenues for these processors ranged from $196 million (in 2010) to $306 million (in 2008), with an annual average of $249 million first wholesale gross revenues over this period. In 2014, the most recent year for which data are available, Unalaska/Dutch Harbor had six active shore-based processors, with $215 million in first wholesale gross revenues.

A total of three unique shore-based processors in Unalaska/Dutch Harbor accepted GOA trawl-caught deliveries over the years 2003-2014, averaging 1.0 processors participating per year, with two processors participating in 2004 and 2011; one processor participating in the years 2003, 2005-2010, and 2012; and no processors participating in the remaining two years during this period (2013-2014). These processors accrued a total of 12 shore-based processor participation years over this 12-year span, with the participation of individual processors ranging from one to nine years:

- *Unalaska Processor A*, 2003-2011 (9 years)
- *Unalaska Processor B*, 2004 and 2012 (2 years)[59]

[58] The number of intent to operate codes may or may not closely correspond with physical processing plants in any given community, for a number of reasons. For example, a processing entity may use the physical plant of another processing entity to have its product custom processed or, as another example, one processing entity may purchase another in whole or in part and continue to retain two distinct intent to operate codes based on the retention/creation of different units within the corporate organization of the successor entity. In other cases, it is not apparent why what looks to be the same entity would have more than one intent to operate code. In the case of Unalaska/Dutch Harbor, it would appear that there is double counting of one entity that had a physical plant in the community during the period of 2003-2014, and there are a number of entities included in the community count that do not have physical plants in the community, but there are no such issues with the specific entities that accepted GOA trawl-caught deliveries during this period, each of which has a unique physical plant in the community.

[59] This processor is not shown in the primary dataset as having accepted GOA trawl-caught deliveries in 2003, but is shown in the separate processor diversity dataset as having done so. This discrepancy is likely the result of the relevant landings in 2003 having resulted from incidental catch in other fisheries, thus the processor years figure given in the preceding paragraph does not include 2003 for this processor; in any event, the discrepancy is small enough that it does not change overall patterns of participation or analytic findings.

- *Unalaska Processor C*, 2011 (1 year)

GOA trawl-caught deliveries during the period 2003-2014 to Unalaska/Dutch Harbor processors were limited to pollock and Pacific cod. *Unalaska Processor A* accepted deliveries of GOA trawl-caught pollock each year 2003-2011 and deliveries of GOA trawl-caught Pacific cod in 2010. All GOA trawl-caught deliveries to *Unalaska Processor B* and *Unalaska Processor C* in the three out of the 12 years during this period that either was engaged in the fishery were deliveries of Pacific cod only.

Given the limited number of processors participating in the fishery, all first wholesale gross revenue information related to the processing of GOA trawl-caught deliveries to Unalaska/Dutch Harbor is confidential. A general knowledge of the industry and previous community analyses would suggest, however, that during the 2003-2014, these revenues were likely a relatively minor component of overall processing first wholesale gross revenues for Unalaska/Dutch Harbor shore-based processors as a group, although it is important to note that (1) these revenues likely varied considerably from year to year and may have been substantial in absolute terms at least some years, (2) the timing of this processing may have been important to the operational flow of the plant and provided an important source of labor hours for processing staff, and (3) the processing of GOA trawl-caught deliveries in Unalaska/Dutch Harbor may have been strategically important to the overall operations of at least one processor looking to continuing access, or potential future access, to GOA trawl-caught landings as important to maintaining a desired flexibility and diversity of operations and to maintaining mutually beneficial relationships with some of its delivery fleet that participated in other fisheries with the plant.

According to *Unalaska Processor A* management, although at least infrequent deliveries were taken from other vessels, the relatively steady deliveries of GOA trawl-caught pollock to the plant was largely the result of ongoing relationships with two catcher vessels engaged in the GOA trawl fishery. One of the vessels (*UPA Delivering CV #1*) was acquired by an entity affiliated with *Unalaska Processor A* as part of a transaction involving the purchase of two vessels from an entity affiliated with a different processor; following acquisition, the relevant fishing permits/history of the two vessels were combined onto *UPA Delivering CV #1,* which continued to pursue a range of fisheries in the Bering Sea and the GOA (in addition to participating in the west coast hake fishery), with Bering Sea trawl-caught Pacific cod and GOA trawl-caught pollock delivered on a continuing basis to *Unalaska Processor A*. Subsequently acquired by CDQ entities, this vessel continued to fish for *Unalaska Processor A* until it reportedly became inactive for a variety of reasons; it is shown in the 2003-2014 dataset as making GOA trawl-caught deliveries to *Unalaska Processor A* every year 2003-2010 (and to two other processors in 2013).

Another vessel (*UPA Delivering CV #2*), owned by entity not affiliated with *Unalaska Processor A*, also delivered Bering Sea trawl-caught Pacific cod and GOA trawl-caught pollock on a continuing, if less steady basis, to *Unalaska Processor A* (while also participating seasonally in the west coast hake fishery). *UPA Delivering CV #2* is shown in the 2003-2014 dataset as making GOA trawl-caught deliveries to *Unalaska Processor A* in 2003, 2005, 2006, 2009, and 2010.

According to *Unalaska Processor A* management, in optimum years both *UPA Delivering CV #1* and *UPA Delivering CV #2* fished GOA pollock in the Davidson Bank area of the Western GOA. Located south of Unimak Island, roughly 100 miles east of Unalaska/Dutch Harbor, Davidson Bank was close

enough to only require a few hours for a fishing vessel to run between the fishing grounds and the processor. For several the more recent years covered by the dataset, however, the pollock were not found in abundance around Davidson Bank, but rather closer to Sand Point, which required a 24-hour run from the fishing grounds to *Unalaska Processor A*. While no GOA trawl-caught pollock deliveries were made to *Unalaska Processor A* in the three most recent years covered by the data (2012-2014), according to *Unalaska Processor A* management there is continuing interest on both the part of the plant and *UPA Delivering CV #2* in remaining engaged in the GOA trawl fishery, with multiple deliveries of GOA trawl-caught pollock having been made by *UPA Delivering CV #2* to *Unalaska Processor A* in the 2016 A and B seasons.

Table 64 provides information on the "community footprint" of the catcher vessels that made GOA trawl-caught deliveries to Unalaska/Dutch Harbor shore-based processors 2003-2014, based on catcher vessel ownership address. As shown, of the eight unique vessels that made GOA trawl-caught deliveries to Unalaska/Dutch Harbor shore-based processors during this period, seven were from the Seattle MSA. Further, the importance of the Seattle MSA catcher vessel connection may be seen in the fact that Seattle MSA resident-owned vessels made GOA trawl-caught deliveries to Unalaska/Dutch Harbor shore-based processors in 10 out of the 12 years covered by the dataset (2003-2012) and in eight of these 10 years more than one vessel did so. The other catcher vessel that participated in making GOA trawl-caught deliveries to Unalaska/Dutch Harbor shore-based processors during the period 2003-2014 was a catcher vessel with ownership attributed to a state other than Alaska, Oregon, or Washington that made at least one delivery to an Unalaska/Dutch Harbor shore-based processor in 2006.

No EDR data on catcher vessel crew labor and/or payments to crew are available for Unalaska/Dutch Harbor. No Unalaska/Dutch Harbor residents holding either CFEC gear operator permits or ADFG crew licenses participated in the GOA trawl fishery as crew members in 2015 and no Unalaska/Dutch Harbor resident-owned catcher vessels participated in the fishery in 2015.

Table 64. Catcher Vessels Making GOA Trawl-Caught Deliveries to Unalaska/Dutch Harbor Shore-Based Processors, by Community of Vessel Owner Residence and Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Alaska Total	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Oregon Total	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Seattle MSA	2	2	2	2	1	2	3	3	2	1	0	0	1.7	95.2%	7
All Other WA	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Washington Total	2	2	2	2	1	2	3	3	2	1	0	0	1.7	95.2%	7
All Other States	0	0	0	1	0	0	0	0	0	0	0	0	0.1	4.8%	1
Total	2	2	2	3	1	2	3	3	2	1	0	0	1.8	100.0%	8

Source: AKFIN 2016b

5.3 Pacific Northwest Communities

5.3.1 Seattle MSA and Other Washington Communities

The Seattle MSA was chosen as a unit of analysis for the purposes of this social impact assessment rather than the City of Seattle itself, consistent with the approach used in other recent NPFMC analyses (e.g., the GOA Halibut PSC analysis [AECOM 2013]). This is due in part to the integration of fisheries related activities into that larger metropolitan area and in part to a desire to avoid understating the importance of that larger community to the fishery, although it is recognized that there are areas of the Seattle MSA, such as Ballard, that more traditionally associated with commercial fishing in general and a history of participating in Alaska fisheries than others.

Additionally, although multiple other Washington communities were engaged in the GOA trawl fishery in the years covered by the baseline data (2003-2014) and continue to be so at present (2016), the focus of this section is largely on the Seattle MSA itself, as the direct engagement of Washington communities outside of the Seattle MSA in the GOA trawl fishery is typically limited to catcher vessel ownership and to a relatively few vessels in any one community. Specifically, as noted below, among the multiple communities with GOA trawl catcher vessel resident-ownership outside of the Seattle MSA 2003-2014, only two communities had an annual average of more than one resident-owned vessel participating in the fishery over this period (one of which had an annual average of less than 1.5 catcher vessels participating and the other had an annual average of less than 2.5 catcher vessels participating). On the other hand, also as noted below, the Seattle MSA was substantially engaged in virtually all sectors of the fishery in all the years covered by the data.

5.3.1.1 Location and History

The Seattle MSA is located along the eastern edge of Puget Sound, an inlet of the Pacific Ocean and part of the Salish Sea, in northwest Washington. It includes King, Pierce, and Snohomish counties, the three most populous counties within the Puget Sound region, and is typically used to characterize the greater Seattle metropolitan area.[60] Major cities within the Seattle MSA include Seattle, Tacoma, Bellevue, and Everett, with the city of Seattle itself located in King County between Elliot Bay and Lake Washington.

Traditionally, the Puget Sound area was the home of the Duwamish and Suquamish Native American groups. The Hudson's Bay Company established a post in the area in 1833, with development occurring on what is now the site of Seattle in the early 1850s. In the late 1800s, Seattle became a jumping off point those travelling north to participate in gold rushes in Canada and Alaska; in that same era fishermen and fishing companies from the west coast began participating in the Pacific cod fisheries of the Bering Sea and Gulf of Alaska, along with the salmon fisheries in Bristol Bay. Early on, Seattle played a pivotal role in this process, establishing a pattern of substantial engagement of the community

[60] Based on commuting patterns, adjacent areas of Olympia, Bremerton, and Mount Vernon, along with a few smaller satellite urban areas, are often grouped into the larger Seattle-Tacoma-Olympia Combined Statistical Area, commonly referred to as the Puget Sound Region, for the purposes of labor market and other economic analyses.

across a range of North Pacific fisheries, a pattern that has continued to the present (National Oceanic and Atmospheric Administration 2007).

5.3.1.2 Community Demographics and Economy

According to federal census data, the Seattle MSA had a population of 3,439,809 in 2010. Census figures from that year show that 71.9 percent of the residents of the Seattle MSA identified themselves as White, 1.1 percent as American Indian or Alaska Native, 5.6 percent as Black/African American, 11.4 percent as Asian, 0.8 percent as Hawaiian Native and Other Pacific Islander, and 9.2 percent as "some other race" or "two or more races," while 9.0 percent of the residents of any race in the Seattle MSA identified themselves as being of Hispanic or Latino origin. Based on race and ethnicity combined, 32.0 percent of the Seattle MSA's total population was composed of minority residents (that is, all residents other than those identified as both White [race] and of non-Hispanic or Latino origin [ethnicity]) in 2010. Housing data from the U.S. Census indicate that 98.1 percent of all Seattle MSA residents lived in non-group quarters housing.

According to the most recent U.S. Census American Community Survey (2010-2014), approximately 67.6 percent of the population 16 years and over in the Seattle MSA was employed and 5.5 percent of the civilian labor force over the age of 16 was unemployed (U.S. Census Bureau 2016). More recent statistics from August 2016 for King County, Washington, where Seattle proper is located, suggested that the unemployment rate had declined to 3.9 percent, which was lower than the Washington statewide rate at the time (5.7 percent) (U.S. Bureau of Labor Statistics 2016b; U.S. Bureau of Labor Statistics 2016a). Per capita income for the Seattle MSA was estimated at $39,251, median household income ranged from $59,711 in Pierce County to $73,035 in King County, while median family income ranged from $70,892 in Pierce County to $94,597 in King County. An estimated 10.2 percent of residents were considered low-income, defined as those individuals living below the poverty level threshold (U.S. Census Bureau 2016).

As of 2016, major industries in the Seattle MSA included educational services, health care, and social assistance (20.6 percent); professional, scientific, management, and administrative services (15.1 percent); retail trade (12.0 percent); and manufacturing (11.0 percent). Natural resource jobs including agriculture, forestry, fishing, hunting, and mining represented 0.6 percent of local employment (U.S. Census Bureau 2016). Major employers in King County included the Boeing Company, Microsoft, University of Washington, Amazon.com, county government, Starbucks, Swedish Health Services, city government, Costco, Nordstrom, and Group Health Cooperative (Economic Development Council 2016).

5.3.1.3 Commercial Fisheries Engagement

Overview

The Seattle MSA, by many measures, is the community most heavily engaged in, if not dependent on, multiple federal fisheries off Alaska managed by the North Pacific Fishery Management Council. It is also a community heavily engaged in federally fisheries off the West Coast managed by the Pacific Fishery Management Council. Among the eight Washington communities outside of the Seattle MSA

that were also engaged in the GOA trawl fishery 2003-2014, half of those communities (Aberdeen, Anacortes, Bellingham, and South Bend) are described in an earlier NOAA document (National Oceanic and Atmospheric Administration 2007) as fishing communities engaged in both the West Coast and North Pacific fisheries, while the others (Camas, East Wanatchee, Lynden, and Suquamish) are not.

Catcher Vessel Sector

General

From 2003 through 2014, the annual number of Seattle MSA resident-owned commercial fishing vessels participating in all fisheries, using all gear types in all areas combined (i.e., the community commercial fishing fleet), varied from 506 (in 2013) to 620 (in 2003), with an annual average of 538.3 resident-owned commercial fishing vessels over this time span. The annual ex-vessel gross revenues for these vessels ranged from $404,550,660 (in 2014) to $586,028,383 (in 2008), with an annual average of $504,201,590 ex-vessel gross revenues over this period. In 2014, the most recent year for which data are available, Seattle MSA had 512 resident-owned vessels.

GOA Trawl Catcher Vessels

Table 65 shows information on Washington community participation in the GOA trawl fishery, as indicated by the number of resident-owned catcher vessels engaged in the fishery by year, 2003-2014. Readily apparent is the concentration of GOA trawl catcher vessel ownership in the Seattle MSA, with about three times as many vessels participating in the fishery on an annual average basis compared to all other communities in the state combined; similarly, the Seattle MSA had about three times as many unique vessels participating in the fishery over this period compared to all other communities in the state combined.

- Within the Seattle MSA, a total of nine individual communities were the location of resident ownership of GOA trawl catcher vessels in at least one year during the period 2003-2014. None of these communities had an annual average number of participating catcher vessels greater than one, except for the city of Seattle, which averaged 14.3 vessels per year. A total of 34 unique city of Seattle resident-owned catcher vessels participated in the GOA trawl fishery during the 2003-2014 period; the only other community within the Seattle MSA with more than one unique catcher vessel doing so was Edmonds, which had two unique resident-owned vessels participate in the fishery over this time span.

- Outside of the Seattle MSA, a total of eight Washington communities were engaged in the GOA trawl fishery during the period 2003-2014 through resident ownership of GOA trawl catcher vessels. Of these communities, only two had an annual average number of participating vessels greater than one: South Bend (1.4 vessels) and Bellingham (2.3 vessels). These same two communities were two of the four Washington communities outside of the Seattle MSA that had more than one unique GOA trawl catcher vessel participate over the period 2003-2014: South Bend had two unique vessels do so, while Bellingham had five unique vessels do so; the

other two communities were Aberdeen and Lynden, each with two unique resident-owned catcher vessels participating in the GOA trawl fishery over this period.

In percentage terms, Washington resident-owned GOA trawl catcher vessels accounted for about 35 percent of all catcher vessels in the fishery on an annual average basis over the period 2003-2014, with Seattle MSA resident ownership accounting for about 26 percent of the fishery total and other Washington resident ownership accounting for about nine percent of the fishery total.

Over this same period, Seattle MSA resident-owned GOA trawl catcher vessels accounted for an annual average of approximately 16 percent of average annual catcher vessel ex-vessel gross revenues in the fishery. The ex-vessel gross revenues for vessels owned by residents of other Washington communities cannot be presented due to confidentiality restrictions.[61]

[61] In earlier tables, the ex-vessel gross revenue data for GOA trawl catcher vessels owned by residents of Washington communities other than those in the Seattle MSA were combined with ex-vessel gross revenue data for catcher vessels owned by residents of "All Other States" (i.e., states other than Alaska, Washington, Oregon) to permit the reporting of both the Seattle MSA data and a grand total for the fishery, given that the data for "All Other States" alone are confidential. This could have been done with data from Oregon communities other than Newport instead of data from Washington communities other than the Seattle MSA; the decision to go with the latter rather than the former was driven by the higher GOA trawl catcher vessel annual average participation count in the former, which, in turn means that an Oregon state total can be disclosed, but not a Washington state total cannot.

Table 65. Individual GOA Trawl Catcher Vessels by Community of Vessel Owner: Seattle MSA and Other Washington Communities, 2003-2014.

Community	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Annual Average 2003-2014	Total Unique CVs
Seattle MSA Communities														
Edmonds	1	0	0	0	1	1	1	1	1	0	0	0	0.5	2
Fox Island	1	0	0	0	0	0	0	0	0	0	0	0	0.1	1
Gig Harbor	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1
Lakewood	0	0	0	0	0	0	0	0	0	1	0	0	0.1	1
Lynnwood	0	0	0	0	0	0	0	1	1	1	0	0	0.3	1
Mercer Island	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1
Renton	0	1	1	1	1	1	1	0	1	0	1	1	0.8	1
Seattle	13	10	13	14	16	17	13	12	12	17	19	16	14.3	34
Vashon	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1
Seattle MSA Total	18	14	17	18	21	22	18	17	18	22	23	20	19.0	42
Other Washington Communities														
Aberdeen	2	2	0	0	0	0	0	0	0	0	0	0	0.3	2
Anacortes	1	1	1	1	1	1	0	0	0	0	0	0	0.5	1
Bellingham	3	2	1	1	2	2	2	3	4	3	2	2	2.3	5
Camas	1	1	0	0	0	0	1	1	1	1	1	1	0.7	1
East Wenatchee	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1
Lynden	1	1	2	1	0	0	0	0	0	0	0	0	0.4	2
South Bend	1	2	2	1	1	1	1	1	1	2	2	2	1.4	2
Suquamish	1	0	0	0	0	0	0	0	0	0	0	0	0.1	1
Other WA Total	11	10	7	5	5	5	5	6	7	7	6	6	6.7	15
Grand Total (all WA)	29	24	24	23	26	27	23	23	25	29	29	26	25.7	54

Note: Due to vessel movement between communities over the years shown, total unique CVs per community may not sum to community group or state totals.
Source: AKFIN 2016a

A total of 42 unique Seattle MSA resident-owned GOA trawl catcher vessels participated in the fishery over the years 2003-2014, averaging approximately 19 vessels participating per year, ranging between 14 vessels (2004) and 23 vessels (2013) participating in the fishery under Seattle MSA resident ownership in any given year. These vessels accrued a total of 226 vessel participation years over this 12-year span, with the participation of individual vessels under Seattle MSA resident ownership ranging from one to 12 years:

- Twelve vessels participated one year
- Three vessels participated two years
- Five vessels participated three years
- Two vessels participated four years
- One vessel participated five years
- One vessel participated six years
- Three vessels participated seven years
- Two vessels participated eight years
- Five vessels participated nine years
- One vessel participated 10 years
- Two vessels participated 11 years
- Five vessels participated all 12 years

Twelve of the 42 unique vessels with Seattle MSA resident ownership that participated in the GOA trawl fishery in any year 2003-2014 also fished under ownership attributed to a different community at least one other year during this period.

- Five of these vessels are shown in the database has having ownership attributed to Alaska communities during at least one year they actively participated in the fishery: two vessels are shown has having Sand Point resident ownership 2003-2006 and 2009, but Seattle MSA resident ownership 2007-2008 and 2011-2014; one is shown as having Sand Point ownership 2003-2007 and 2009-2010, Washington ownership outside of the Seattle MSA in 2011, Seattle MSA ownership 2012-2013, and Kodiak ownership 2014; one is shown as having Kodiak ownership 2003-2010, both Kodiak and Seattle MSA ownership in 2011, and Seattle MSA ownership 2012-2014; and one is shown as having Anchorage ownership 2003-2005 and Seattle MSA resident ownership 2006-2014.

- Two of these vessels are shown in the database has having ownership attributed to Washington communities outside of the Seattle MSA during at least one year they actively participated in the fishery: one vessel is shown as having "all other Washington" resident ownership 2003-2004 and Seattle MSA resident ownership 2005-2007; and one vessel is shown as having "all other Washington" resident ownership in 2003 and Seattle MSA resident ownership 2004-2009 and 2011-2014.

- Five of these vessels are shown in the database has having ownership attributed to Oregon communities during at least one year they actively participated in the fishery: one vessel is shown has having Newport resident ownership 2003-2011, but Seattle MSA resident ownership 2012-2014; one is shown as having Newport ownership 2003-2004, "all other Oregon" ownership in 2006, and Seattle MSA ownership in 2008; one is shown as having "all other Oregon" ownership 2003-2011, both "all other Oregon" and Seattle MSA ownership in 2012, and Seattle MSA ownership 2013-2014; one is shown as having "all other Oregon" ownership 2003-2006 and Seattle MSA resident ownership 2007-2014; and one is shown as having "all other Oregon" ownership 2003-2012 and Seattle MSA resident ownership 2013-2014.

Over the years 2003-2014, the Seattle MSA resident-owned GOA trawl catcher vessel fleet was more diversified in terms of vessel LOA categories than the resident-owned GOA trawl catcher vessel fleet of any other community, with a substantial number of vessels being longer than those of any other participating community. Of the 29 unique catcher vessels with Seattle MSA resident ownership that participated in the GOA trawl fishery during this period, 11 were in the under 60 feet LOA category (all were 58 feet LOA); 29 were in the 60-124 feet LOA category; and two were in the greater than or equal to 125 feet LOA category. No other participating community had a resident-owned catcher vessel engaged in the GOA trawl fishery that was greater than 100 feet LOA with two exceptions: Newport and Kodiak had one such vessel each and in both cases the vessel in question was listed also has having Seattle MSA resident ownership for part of the period 2003-2014 (and both were also within the 100-109 feet LOA subcategory). Within the 60-124 feet LOA category, no Seattle resident-owned GOA trawl catcher vessels were in the 60-69 feet LOA subcategory, two were in the 70-79 feet LOA subcategory, four were in the 80-89 feet LOA subcategory, seven were in the 90-99 feet LOA subcategory, four was in the 100-109 feet LOA subcategory, and 12 were in the 110-124 feet LOA subcategory. Despite the Seattle MSA resident ownership dominating the larger categories of GOA trawl catcher vessels, for consistency of participation, the smallest of the Seattle MSA resident-owned vessels were predominant. Of the five Seattle MSA resident-owned GOA trawl catcher vessels that participated in the fishery all 12 years 2003-2014, four were in the less than 60 feet LOA category (each was 58 feet LOA) and one was at the top end of the 60-124 feet LOA category (at 123 feet LOA).

Ex-vessel gross revenues for Seattle MSA resident-owned GOA trawl catcher vessels averaged approximately $8.5 million annually over the period 2003-2014, ranging from approximately $4 million (2003 and 2004) to approximately $14 million (2012) in any given year.

In terms of reliance or dependency, for Seattle MSA resident-owned GOA trawl catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 23 percent of all ex-vessel gross revenues generated by those

vessels for the period with year-to-year variation ranging from about 12 percent (2003) to about 39 percent (2014). For the Seattle MSA resident-owned community fleet (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately two percent of all ex-vessel gross revenues generated by those vessels for the period with year-to-year variation ranging from about 1 percent (2003 and 2004) to about 3 percent (2014).

Table 66 provides information on the "delivery footprint" of the Seattle MSA resident-owned GOA trawl fleet. As shown, Seattle MSA resident-owned vessels made GOA trawl-caught deliveries every year 2003-2014 to Akutan, King Cove, Kodiak, and Sand Point, as well as to Unalaska/Dutch Harbor and Seattle in 10 of the 12 years covered by the data (with Seattle deliveries likely actually being to floating processors operating in Alaska waters). There is also a clear focus of deliveries in Sand Point and Kodiak, with over 50 percent and 40 percent, respectively, of all active Seattle MSA resident-owned GOA trawl catcher vessels making deliveries in those communities on an annual average basis over this period. Over 20 unique Seattle MSA resident-owned GOA trawl catcher vessels made deliveries to these communities 2003-2014; over 10 unique Seattle MSA resident-owned GOA trawl catcher vessels make deliveries to Akutan and King Cove over this same period as well, while seven did so to Unalaska/Dutch Harbor. overall, the Seattle MSA GOA trawl catcher vessel fleet delivery footprint is more widely and evenly distributed than that of any other community profiled.

Table 66. Community of GOA Trawl-Caught Deliveries by Catcher Vessels Owned by Seattle MSA Residents by Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Akutan	3	1	2	4	2	2	1	5	0	3	8	8	3.3	17.1%	18
King Cove	3	4	4	4	3	3	2	4	4	2	3	2	3.2	16.7%	12
Kodiak	6	5	6	7	7	8	5	6	6	12	14	14	8.0	42.1%	22
Ninilchik	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Sand Point	8	10	10	10	11	11	8	9	9	11	14	11	10.2	53.5%	27
Seward	0	0	0	0	0	0	0	0	1	2	0	0	0.3	1.3%	2
Unalaska/Dutch Harbor	2	2	2	2	1	2	3	3	2	1	0	0	1.7	8.8%	7
All Other AK	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Seattle	1	0	1	0	1	2	1	2	3	2	3	2	1.5	7.9%	8
Unknown	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.4%	1
Grand Total	18	14	17	18	21	22	18	17	18	22	23	20	19.0	100.0%	42

Source: AKFIN 2016b

GOA Trawl Catcher Vessel Crew

GOA trawl catcher vessel crew data are available from one primary source: EDR data that were collected for 2015[62] and are summarized in this section.

GOA Trawl Crew Positions Held by Seattle MSA Residents on all GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, a total of 19 unique Seattle MSA residents held crew positions on GOA trawl catcher vessels, including 6 individuals who held CFEC gear operator permits and 13 individuals who held ADFG crew licenses.

- If crew positions are counted rather than unique individuals (as some individuals worked on more than one GOA trawl catcher vessel during the year), in 2015 a total of 22 crew positions were held by Seattle MSA residents, including 8 positions held by individuals with CFEC gear operator permits and 14 positions held by individuals with ADFG crew licenses. These included:

    - 1 on a vessel owned by a Kodiak resident (0 CFEC gear operator permit holders and 1 ADFG crew license holder).

    - 20 on vessels owned by Seattle MSA residents (8 CFEC gear operator permit holders and 12 ADFG crew license holders).

    - 1 on a vessel owned by a resident of a Washington community (Bellingham) outside of the Seattle MSA (0 CFEC gear operator permit holders and 1 ADFG crew license holder).

- EDR data indicate that in 2015, a total of 23 unique Washington residents from communities other than those in the Seattle MSA held crew positions on GOA trawl catcher vessels, including 5 individuals who held CFEC gear operator permits and 18 individuals who held ADFG crew licenses.

- If crew positions are counted rather than unique individuals (as some individuals worked on more than one GOA trawl catcher vessel during the year), in 2015 a total of 38 crew positions

[62] As noted elsewhere, multiple caveats apply to catcher vessel EDR data, including: 2015 was the first year EDR catcher vessel crew data were collected; only one year of data is available; the available data have not been verified and audited (as audits typically rely on multiple years of data to identify outliers); and data are missing (have not yet been submitted) for 10 GOA trawl catcher vessels, which includes four vessels that were apparently active in the fishery in 2015 and six that were not (n = 68 catcher vessels in the EDR data). Additionally, one vessel appears in the data twice, as it changed ownership during the year (i.e., there are 67 unique catcher vessels in the EDR data), and there are some minor inconsistencies in crew (n = 365 unique persons) and vessel counts specific to crew position and compensation data relative to other fields in the data (e.g., n = 387 crew positions for most variables, but 386 crew positions for compensation variables). Specific to community level analysis, residence community information is not available for 55 unique individual crew members (1 CFEC gear operator permit holder and 54 ADFG crew license holders) who held 56 crew positions (1 CFEC gear operator permit holder and 55 ADFG crew license holders). Nevertheless, these data are the best available and are presented here as an indication of relative if not exact crew employment and, to the extent possible within data confidentiality constraints, compensation patterns across communities.

were held by Washington residents from communities other than those in the Seattle MSA, including 7 positions held by individuals with CFEC gear operator permits and 31 positions held by individuals with ADFG crew licenses.

Crew Positions and Payments to Labor on Seattle MSA Resident-Owned GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, there were a total of 120 crew positions on Seattle MSA resident-owned GOA trawl catcher vessels, including 29 positions whose occupant held a CFEC gear operator permit and 91 positions whose occupant held an ADFG crew license. Of these positions:
    - 13 were held by residents of Kodiak (5 CFEC gear operator permit holders and 8 ADFG crew license holders).
    - 8 were held by residents of Sand Point (2 CFEC gear operator permit holders and 8 ADFG crew license holders).
    - 1 was held by a resident of Anchorage (1 CFEC gear operator permit holder and 0 ADFG crew license holders).
    - 7 were held by residents of other communities in Alaska, 1 each in Cantwell, Palmer, Petersburg, Salcha, Soldotna, Unalakleet, and Wasilla (0 CFEC gear operator permit holders and 6 ADFG crew license holders).
    - 20 were held by residents of the Seattle MSA (8 CFEC gear operator permit holders and 12 ADFG crew license holders).
    - 18 were held by residents of Washington outside of the Seattle MSA, including Adna, Anacortes, Belfair, Bellingham, Chehalis, Chelan, Kennewick, Long Beach, Mount Vernon, Oak Harbor, Olympia, Oroville, Sedro Woolley, Wenatchee, and Westport (3 CFEC gear operator permit holders and 15 ADFG crew license holders).
    - 4 were held by residents of Newport (2 CFEC gear operator permit holders and 2 ADFG crew license holders).
    - 24 were held by residents of Oregon outside of Newport, including Bend, Grants Pass, North Bend, Oregon City, Portland, Redmond, Salem, Siletz, Toledo, Warrenton, and West Linn (6 CFEC gear operator permit holders and 18 ADFG crew license holders).
    - 13 were held by residents of states other than Alaska, Washington, and Oregon, including California, Florida, Montana, Nevada, Utah, and Wisconsin (1 CFEC gear operator permit holder and 12 ADFG crew license holders).
    - 12 were held by individuals whose residence location was unknown (1 CFEC gear operator permit holders and 11 ADFG crew license holders).

- EDR data indicate that in 2015, for the 23 GOA trawl catcher vessels identified as having Seattle MSA ownership, a total of 118 crew members on those vessels received $5,649,536 in total labor payments from the GOA trawl fishery, including $2,155,512 to captains and $3,494,024 to other crew members.

- EDR data indicate that in 2015, there were a total of 34 crew positions on GOA trawl catcher vessels owned by residents of Washington communities other than those in the Seattle MSA, including 7 positions whose occupant held a CFEC gear operator permit and 27 positions whose occupant held an ADFG crew license.

- EDR data indicate that in 2015, for the 7 GOA trawl catcher vessels identified as having ownership by residents of Washington communities other than those in the Seattle MSA, plus those owned by residents of states other than Alaska, Washington, and Oregon[63], a total of 47 crew members on those vessels received $2,700,017 in total labor payments from the GOA trawl fishery, including $1,016,096 to captains and $1,683,921 to other crew members.

For additional detail on EDR GOA trawl catcher vessel crew data, please see Table 103, Table 104, and Table 105 in Attachment 3.

GOA Halibut and GOA Chinook Salmon

Table 67 provides summary information on the level of participation of Seattle MSA and other Washington resident-owned catcher vessels in the commercial GOA halibut and Chinook salmon fisheries. As shown, the pattern of concentration of vessels in these two fisheries, with respect to number of vessels participating between the Seattle MSA and other Washington communities, is the reverse of what is seen in the GOA trawl fishery, although the pattern of the distribution of revenues differs between the GOA halibut and Chinook salmon fisheries.

Table 67. Summary of Seattle MSA and Other Washington Resident-Owned Catcher Vessel Average Annual Participation in the GOA Halibut and Chinook Salmon Fisheries, 2003-2014

	GOA Halibut				GOA Chinook Salmon			
	Catcher Vessels		Ex-Vessel Gross Revenue		Catcher Vessels		Ex-Vessel Gross Revenue	
Community	Annual Average 2003-2014 (number of vessels)	Annual Average 2003-2014 (percent of fishery total)	Annual Average 2003-2014 ($ millions)	Annual Average 2003-2014 (percent of fishery total)	Annual Average 2003-2014 (number of vessels)	Annual Average 2003-2014 (percent of fishery total)	Annual Average 2003-2014 ($ millions)	Annual Average 2003-2014 (percent of fishery total)
Seattle MSA	47.7	6.1%	25.41	15.3%	85.8	4.6%	421	3.2%
All Other WA	48.3	6.2%	14.24	8.5%	165.3	8.9%	1,327	10.0%
Washington Total	96.0	12.4%	39.65	23.8%	251.2	13.5%	1,748	13.2%

Source: AKFIN 2016a

[63] GOA trawl catcher vessels owned by residents of states other than Alaska, Washington, or Oregon have been added to this total to permit disclosure of a grand total for crew employment and compensation. Only one GOA trawl catcher vessel was reported to be owned by a resident of a state other than Alaska, Washington, or Oregon. Ownership of that vessel is attributed to Kailua Kona, Hawaii, and reported a total of 3 compensated crew members.

Catcher Processor Sector

In the years covered by the 2003-2014 dataset, ownership of GOA trawl catcher processors has been highly concentrated in the state of Washington in general and in the Seattle MSA specifically. Over these years, on an annual average basis, about 84 percent of the participating catcher processors had ownership addresses in the Seattle MSA, with Washington as a whole averaging about 93 percent of the participating catcher processors on an annual average basis over this same period as measured by ownership location information. Alaska and Oregon ownership of participating GOA trawl catcher processors over this period was limited to two catcher processors with Kodiak ownership addresses in 2003 and 2004. Ownership of participating catcher processors in all other states was limited to one or two participating vessels in seven of the years 2003-2014, and no vessels in the remaining five years during that period.

Due to the low number of participating vessels outside of the Seattle MSA in any given year, a breakdown of first wholesale gross revenues cannot be given for any geographic subset of catcher processor ownership. It is assumed, however, that the large majority of the $14 million average annual GOA trawl catcher processor first wholesale gross revenues accrue to the Seattle MSA-owned portion of the fleet, based on vessel count distribution. As there is an extensive analysis of the catcher processor sector in the Regulatory Impact Review to which this social impact assessment is appended, and that sector is nearly exclusively associated with the Seattle MSA, that baseline characterization is not recapitulated here.

GOA Trawl Catcher Processor Crew

GOA trawl catcher processor crew data are available from one primary source: EDR data that were collected for 2015[64] and are summarized in this section. There are too few catcher processors with ownership addresses outside of the Seattle MSA to disaggregate volume and value data (or other confidential business data) to the community level. As the large majority of GOA trawl catcher processors have ownership addresses in the Seattle MSA, crew data for the entire sector are described in this section.

[64] As noted elsewhere, multiple caveats apply to catcher processor EDR data, including: 2015 was the first year EDR catcher processor crew data were collected; only one year of data is available; the available data have not been verified and audited (as audits typically rely on multiple years of data to identify outliers); and the scope of the information reported varied by firm. For example, of the 10 CPs that were active in the GOA during 2015, two vessels reported either one or two crew licenses, four vessels reported 20 to 35 crew licenses, and four reported 60 or more licenses. From this information and the crew counts not associated with individual crew license numbers reported in the EDR, it indicates that some vessels only reported the skipper's CFEC Gear Operator's permit number and some vessels reported all the persons that held a CFEC or ADFG crew license, regardless of whether they operated as harvesting crew or processing crew. As a result, it is not possible to provide counts of catcher processor fishing crew (deck crew) by community of employee residence. Nevertheless, the summary data presented here are the best available and are presented here as an indication of relative if not exact crew employment.

Crew Positions on all GOA Trawl Catcher Processors

- As noted, it is not possible to provide counts of catcher processor crew by community of employee residence, for fishing (deck crew), processing, or other onboard employees using EDR data.

- By matching CFEC gear operator permit and ADFG crew license data with the EDR data, however, it is possible to generate an inventory of communities of residence for the EDR data provided to allow description of the geographic distribution of the residence information in the data.

    - A total of 22 states and 1 U.S. territory are represented in the data, along with 159 unique communities. The five states with the most unique communities in the data and the number of those communities by state are:

        - Washington – 62 communities
        - California – 23 communities
        - Oregon – 15 communities
        - Maine – 12 communities
        - Alaska – 8 communities

    - Other states in the data include:

        - 5 community state: North Carolina
        - 4 community states: Arizona, Idaho, and Illinois
        - 3 community states: Hawaii and Nevada
        - 2 community states or territories: American Samoa, Massachusetts, Missouri, and Montana.
        - 1 community states: Alabama, Florida, Iowa, Michigan, Mississippi, Nebraska, New York, and Ohio.

Crew Positions and Payments to Labor onboard GOA Trawl Catcher Processors

- EDR data indicate that in 2015, there were a total of 689 employees onboard eight trawl catcher processors reporting greater than zero days fishing in the GOA, including 122 fishing (deck crew) employees, 441 processing employees, and 126 other employees (such as officers, galley staff, etc.).

    - The total number of crew positions onboard these eight GOA trawl catcher processors was 260, including 43 fishing (deck crew) positions, 167 processing positions, and 50 other employee positions.

  - The total number of fishing days reported by these eight participating GOA trawl catcher processors as 1,830, including 568 days in the GOA and 1,262 days in the Amendment 80 (BSAI) fisheries.

- EDR data indicate that in 2015, for the eight GOA trawl catcher processors identified as having greater than zero days fishing in the GOA, a total of 689 persons onboard those vessels received $41,756,989 in total labor payments from the BSAI and GOA trawl fisheries combined, including $5,337,441 to fishing (deck crew) employees, $14,920,233 to processing employees, and $21,499,315 to other employees onboard.

For additional detail on EDR GOA trawl catcher processor crew data, please see Table 106**,** Table 107, and Table 108 in Attachment 3.

Processing Sector

The Seattle MSA is the location of the corporate offices, or domestic the corporate offices, for at least eight of the 11 shore-based processors operating in Alaska that accepted GOA trawl-caught deliveries over the period 2003-2014. Home of the closest U.S. port complex to both Alaska and Asia, the Seattle MSA often serves as the logistical support base for shore-based processors operating in Alaska as well.

Seattle is also shown in the 2003-2014 dataset at the physical location of shore-based processing of GOA trawl-caught deliveries. Specifically, a total of three unique shore-based processors with Seattle listed as their intent to operate location accepted GOA trawl-caught deliveries over the years 2003-2014, averaging 1.5 processors participating per year, with two processors participating each year 2003-2005 and 2011-2014; one processor participating in the years 2007-2010; and no processors participating in the remaining year during this period (2006). These processors accrued a total of 18 shore-based processor participation years over this 12-year span, with the participation of individual processors ranging from one to nine years:

- *Seattle Processor A*, 2003-2005, 2008-2009, and 2011-2013 (9 years)

- *Seattle Processor B*, 2003 (1 year)

- *Seattle Processor C,* 2004-2005, 2007, and 2010-2014 (8 years)

The data suggest, however, that these shoreside processors are not on-shore operations; rather, they are stationary floating processors owned by firms with Seattle offices that operate in Alaska. Some stationary floating processors tie up and operate within Alaska municipal boundaries and thereby show up in the data as shore-based processors operating in those communities; in other cases, floating processors will moor and operate for varying periods of time along the Alaska coast outside of municipal boundaries and thereby sometimes not show up in the data with reliable/consistent processing location information and/or accept deliveries while in other locales more temporarily. While specific quantitative information on the volume and value of production for stationary floating processors attributed in the data as shoreside processing in Seattle are confidential, these operations

focused almost exclusively on pollock or Pacific cod, with participation and first wholesale gross revenues attributable to GOA trawl-caught deliveries varying substantially from year-to-year.

Support Services Sector

Seattle has a large fisheries support service sector that includes harbors, nautical supply facilities, ship yards, boat building and repair companies, cold storage plants, and shipping companies familiar with doing work in rural Alaskan communities as well as serving international customers, with the Port of Seattle being the 4th largest container facility in the United States. The port facility is separated into a north (Seattle) and south (Tacoma) harbor. Across the facilities, the port spans 1,754 acres, includes 10 container terminals, 23 deep-water berths, and has 47 container cranes (Northwest Seaport Alliance 2016).

The Port of Seattle, in addition to being a large container port, offers commercial moorage at multiple locations, including Piers 90 and 91, frequently home to factory trawlers that work the North Pacific, as well as the Bell Street Pier, Maritime Industrial Center, Terminal 30, and Fishermen's Terminal. The Port of Tacoma, which handles more than 70 percent of the marine cargo moving between Alaska and the contiguous 48 states, is also home to a substantial number of commercial fishing vessels, both catcher vessels and catcher processors, that regularly participate in the North Pacific (National Oceanic and Atmospheric Administration 2007).

Fisherman's Terminal is located in along the Lake Washington Ship Canal and has been the center of commercial fishing support service in Seattle since 1914. The facility has moorage for 700 vessels, lineal moorage of 2,800 feet, 371 stalls, three cranes, an electric hoist, and forklifts for rental (National Oceanic and Atmospheric Administration 2007; Port of Seattle 2016). Another benefit of Fisherman's Terminal is that it is on the Lake Washington side of the Chittenden Locks, which means that moorage and repair work can occur out of more corrosive saltwater.

Finally, Seattle is also home to multiple fishing industry organizations engaged in Alaska fisheries. These include the Alaska Seafood Cooperative, the At-Sea Processor's Association, the Deep Sea Fishermen's Union of the Pacific, the Pacific Seafood Processors Association, and United Catcher Boats, among others.

5.3.2 Newport and Other Coastal Oregon Communities

Similar to the structure of the Seattle MSA profile above, although multiple other Oregon communities were engaged in the GOA trawl fishery in the years covered by the baseline data (2003-2014) and continue to be so at present (2016), the focus of this section is largely on Newport, as the direct engagement of Oregon communities outside of Newport in the GOA trawl fishery is typically limited to catcher vessel ownership and to a relatively few vessels in any one community. Specifically, as noted below, among the multiple Oregon communities with GOA trawl catcher vessel resident-ownership outside of Newport 2003-2014, only two communities had an annual average of more than one resident-owned vessel participating in the fishery over this period (neither of which average more than 2.0 vessels per year). On the other hand, also as noted below, the Newport was substantially engaged in the fishery through the participation of its resident-owned catcher vessels in all the years covered by the

data. In contrast to the Seattle MSA, however, and like the other Oregon communities, direct sector participation in the GOA trawl fishery in Newport was essentially limited to the catcher vessel sector.

5.3.2.1 Location and History

Newport is located along a north-central portion of Oregon's Pacific coast and Yaquina Bay, a coastal estuary at the at the mouth of the Yaquina River. The seat of Lincoln County, there are two distinct areas of the community, the Bayfront, which continues to feature a working waterfront, and Nye Beach, which has attracted seasonal visitors to the area since the 1800s, along the oceanfront.

Traditionally, ancestors of the Siletz people inhabited the coastal areas that include Tillamook, Lincoln, and Lane counties. European miners arrived in the area in the 1850s, and soon thereafter local Native American groups were forced onto reservations. The area opened to settlement by non-Native Americans in the mid-1860s, around the time an oyster industry developed on Yaquina Bay. From that time through the present, tourism, fishing, and logging have defined Newport (National Oceanic and Atmospheric Administration 2007).

5.3.2.2 Community Demographics and Economy

According to federal census data, Newport had a population of 9,989 in 2010. Census figures from that year show that 84.1 percent of the residents of Newport identified themselves as White, 2.1 percent as American Indian or Alaska Native, 0.6 percent as Black/African American, 1.6 percent as Asian, 0.2 percent as Hawaiian Native and Other Pacific Islander, and 11.5 percent as "some other race" or "two or more races," while 15.3 percent of the residents of any race in Newport identified themselves as being of Hispanic or Latino origin. Based on race and ethnicity combined, 22.0 percent of Newport's total population was composed of minority residents (that is, all residents other than those identified as both White [race] and of non-Hispanic or Latino origin [ethnicity]) in 2010. Housing data from the U.S. Census indicate that 96.8 percent of all Newport residents lived in non-group quarters housing.

According to the most recent U.S. Census American Community Survey (2010-2014), approximately 55.0 percent of the population 16 years and over in the City of Newport was employed and 7.1 percent was unemployed (U.S. Census Bureau 2016). More recent statistics from August 2016 for Lincoln County, where Newport is located, suggested that the unemployment rate had decreased to 5.9 percent, which was still somewhat higher than the Oregon statewide rate at the time (5.4 percent) (U.S. Bureau of Labor Statistics 2016b; U.S. Bureau of Labor Statistics 2016a). Per capita income was estimated at $26,407, median household income was $40,448 and median family income was $53,036. An estimated 18.5 percent of residents were considered low-income, defined as those individuals living below the poverty level threshold (U.S. Census Bureau 2016).

As of 2016, major industries in Newport included arts, entertainment, recreation, accommodation, and food services (19.1 percent); educational services, health care, and social assistance (18.3 percent); and retail trade (13.0 percent). Natural resource jobs including agriculture, forestry, fishing, hunting, and mining represented 4.6 percent of local employment (U.S. Census Bureau 2016). Major employers in Lincoln County included the Confederated Tribes of Siletz Indians, Samaritan Health Services, Lincoln County School District, county government, Georgia Pacific Toledo, Oregon State University Hatfield

Marine Science Center, Pacific Seafood, the National Oceanic and Atmospheric Administration, Walmart, and Oregon Coast Brewing (Economic Development Alliance 2016).

5.3.2.3 Commercial Fisheries Engagement

Overview

Newport, like the Seattle MSA, is substantially engaged in multiple federal fisheries off Alaska managed by the North Pacific Fishery Management Council. It is also a community heavily engaged in federally fisheries off of the West Coast managed by the Pacific Fishery Management Council. Among the 12 Oregon communities other than Newport that are directly engaged in the GOA trawl fishery, 10 the communities (Brookings, Charleston, Cloverdale, Depoe Bay, Florence, Port Orford, Siletz, South Beach, Toledo, and Warrenton) are described in an earlier NOAA document (National Oceanic and Atmospheric Administration 2007) as fishing communities engaged in both the West Coast and North Pacific fisheries, while the other two (Dallas and Independence) are not.

Harvest Sector

General

From 2003 through 2014, the annual number of Newport resident-owned commercial fishing vessels participating in all fisheries, using all gear types in all areas combined (i.e., the community commercial fishing fleet), varied from 13 (in 2014) to 30 (in 2003), with an annual average of 20.4 resident-owned commercial fishing vessels over this time span. The annual ex-vessel gross revenues for these vessels ranged from $25,585,310 (in 2014) to $61,106,191 (in 2003), with an annual average of $44,702,917 ex-vessel gross revenues over this period.

GOA Trawl Catcher Vessels

Table 68 shows information on Oregon community participation in the GOA trawl fishery, as indicated by the number of resident-owned catcher vessels engaged in the fishery by year, 2003-2014. Readily apparent is the concentration of GOA trawl catcher vessel ownership in Newport, with nearly as many vessels participating in the fishery on an annual average basis as all other communities in the state combined; in a similar vein, Newport residents owned approximately the same number of unique vessels participating in the fishery over this period as were owned by residents of all other Oregon communities combined.

Outside of Newport, a total of 12 Oregon communities were engaged in the GOA trawl fishery during the period 2003-2014 through resident ownership of GOA trawl catcher vessels. Of these communities, only two had an annual average number of participating vessels greater than one: Florence (1.9 vessels) and Siletz (2.0 vessels). These same two communities were the only Oregon communities that had more than one unique GOA trawl catcher vessel participate over the period 2003-2014: Florence had two unique vessels do so, while Siletz had four unique vessels do so.

In percentage terms, Oregon resident-owned GOA trawl catcher vessels accounted for about 21 percent of all catcher vessels in the fishery on an annual average basis over the period 2003-2014, with Newport

resident ownership accounting for about nine percent of the fishery total and other Oregon resident ownership accounting for about 12 percent of the fishery total.

Over this same period, Oregon resident-owned GOA trawl catcher vessels accounted for an annual average of about $16.3 million in ex-vessel gross revenues, or approximately 31 percent of average annual catcher vessel ex-vessel gross revenues in the fishery. Newport resident-owned vessels accounted for approximately 13 percent of average annual catcher vessel ex-vessel gross revenues in the fishery, while other Oregon resident-owned vessels accounted for approximately 18 percent of the total during the 2003-2014 period.

Table 68. Individual GOA Trawl Catcher Vessels by Community of Vessel Owner: Newport and Other Oregon Communities, 2003-2014

Community	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Annual Average 2003-2014	Total Unique CVs
Newport														
Newport	10	10	9	7	7	7	6	6	8	5	4	4	6.9	13
Newport Total	10	10	9	7	7	7	6	6	8	5	4	4	6.9	13
Other Oregon Communities														
Brookings	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1
Charleston	0	0	0	0	0	0	0	0	1	1	0	0	0.2	1
Cloverdale	1	1	0	0	0	0	0	0	0	0	0	0	0.2	1
Dallas	0	1	1	1	1	1	0	0	0	0	0	0	0.4	1
Depoe Bay	1	1	1	1	1	1	1	1	1	1	0	0	0.8	1
Florence	2	2	2	2	2	2	2	2	2	2	2	1	1.9	2
Independence	0	0	0	0	0	0	0	0	0	0	0	1	0.1	1
Port Orford	1	1	1	1	1	1	1	1	1	1	0	0	0.8	1
Siletz	2	2	2	2	1	1	2	2	2	2	3	3	2.0	4
South Beach	1	1	1	1	1	1	1	1	1	1	1	0	0.9	1
Toledo	0	0	0	1	0	0	0	0	0	0	0	0	0.1	1
Warrenton	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1
Other OR Total	10	11	10	11	9	8	8	8	9	9	7	6	8.8	14
Grand Total (all OR)	20	21	19	18	16	15	14	14	17	14	11	10	15.75	24

Note: Due to vessel movement between communities over the years shown, total unique CVs per community may not sum to community group or state totals.
Source: AKFIN 2016a

A total of 13 unique Newport resident-owned GOA trawl catcher vessels participated in the fishery over the years 2003-2014, averaging approximately seven vessels participating per year, ranging between four vessels (2013 and 2014) and 10 vessels (2003 and 2004) participating in the fishery under Newport resident ownership in any given year. These vessels accrued a total of 83 vessel participation years over this 12-year span, with the participation of individual vessels under Newport resident ownership ranging from one to 12 years:

- Two vessels participated one year (one in 2003 and one in 2005)[65]
- Two vessels participated two years (one in 2003 and 2004; the other in 2004 and 2005)
- One vessel participated three years (2003, 2004, and 2011)
- One vessel participated four years (2011-2014)
- One vessel participated six years (both 2003-2008)[66]
- Two vessels participated nine years (both 2003-2011)[67]
- One vessel participated 10 years (2003-2012)[68]
- Three vessels participated all 12 years (2003-2014)

Over the years 2003-2014, the Newport resident-owned GOA trawl catcher vessel fleet consisted exclusively of vessels 60 feet to 124 feet LOA category. Of the 13 unique catcher vessels with Newport resident ownership that participated in the GOA trawl fishery during this period, none were in the less than 60 feet LOA range and none were in the greater than or equal to 125 feet LOA category. Within the 60 feet to 124 feet LOA category, Newport resident-owned GOA trawl catcher vessels were tightly clustered in the 80-89 feet and 90-99 feet LOA subcategories (four and seven vessels, respectively), with the two subcategories together accounting for 75 of the 83 Newport resident-owned vessel GOA trawl fishery participation years during this time. Of the remaining two unique vessels, one was 79 feet LOA and the other was 109 feet LOA, participating in the GOA trawl fishery in six and two of the total of 12 years in the period, respectively.

[65] One of these vessels participated in the GOA trawl fishery for one year (2006) under the ownership based in another Oregon community and one year (2008) under Seattle MSA resident ownership after participating in the fishery as a Newport resident-owned vessel.

[66] This vessel is shown in the dataset as participating in the GOA trawl fishery in each year 2003-2014, but as participating under Oregon resident ownership outside of Newport 2009-2014.

[67] Both of these vessels are shown in the dataset as participating in the GOA trawl fishery in each year 2003-2014, but one is shown as having Kodiak resident ownership 2012-2014 and the other is shown as having Seattle MSA resident ownership 2012-2014.

[68] This vessel is shown in the dataset as participating in the GOA trawl fishery in each year 2003-2014, but as participating under Oregon resident ownership outside of Newport 2013-2014.

Ex-vessel gross revenues for Newport resident-owned GOA trawl catcher vessels averaged approximately $7 million annually over the period 2003-2014, ranging from approximately $4 million (2009) to approximately $10 million (2008) in any given year.

Eight out of the 13 Newport resident-owned GOA trawl catcher vessels that participated in the fishery in any of the years 2003-2014 did not participate in the fishery in the three most recent years covered by the dataset (2012-2014). Why Newport vessel owners chose to participate in the GOA trawl fishery some years and not others remains an open question. As noted above, of the eight vessels that participated in the GOA trawl fishery under Newport resident ownership at least some years 2003-2014 but not the most recent three years covered by the data, three of those vessels did participate in the fishery under ownership attributed to residents of other communities in Oregon, Washington, or Alaska following their participation in the fishery as Newport resident-owned vessels. The reason for the apparent shift of GOA trawl catcher vessel ownership away from Newport in the most recent years covered by the dataset remains an open question. *<< this paragraph to be revisited/expanded following direction coming out of the December 2016 Council meetings and the ultimate decision on fieldwork and/or other follow-up in the community >>*

In terms of reliance or dependency, for Newport resident-owned GOA trawl catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 49 percent of all ex-vessel gross revenues generated by those vessels for the period as a whole, with year-to-year variation ranging from about 29 percent (2004) to about 64 percent (2010). For the Newport resident-owned community fleet as a whole (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 16 percent of all ex-vessel gross revenues generated by those vessels for the period as a whole, with year-to-year variation ranging from about 11 percent (2003) to about 21 percent (2014).

Table 69 provides information on the "delivery footprint" of the Newport resident-owned GOA trawl fleet. As shown, while there were GOA trawl-caught deliveries made by Newport resident-owned catcher vessels in one or two years each to Akutan, King Cove, and Sand Point, and in four years to Seattle (in all likelihood actually a floating processor operating in Alaska waters), the greatest frequency and continuity of deliveries, by far, by the Newport resident-owned fleet has been to Kodiak, with deliveries occurring in all years covered by the data; further, these deliveries were made by 10 of the 13 unique Newport resident-owned vessels that delivered to any community during the 2003-2014 period. The centrality of Kodiak as the focus of the Newport fleet is also shown the annual average number of Newport resident-owned GOA trawl catcher vessels delivering to Kodiak was greater than 95 percent of the average annual number of Newport resident-owned GOA trawl catcher vessels delivering to all communities combined over the period 2003-2014.

Table 69. Community of GOA Trawl-Caught Deliveries by Catcher Vessels Owned by Newport Residents by Year, 2003-2014

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Total Unique CVs 2003-2014
Akutan	1	0	0	0	0	0	0	0	0	0	2	0	0.3	3.6%	3
King Cove	1	0	0	0	0	0	0	0	0	0	0	0	0.1	1.2%	1
Kodiak	9	9	7	7	7	7	6	6	8	5	4	4	6.6	95.2%	10
Sand Point	1	0	0	0	0	0	0	0	1	0	0	0	0.2	2.4%	2
All Other AK	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Seattle	0	2	2	0	0	0	0	4	3	0	0	0	0.9	13.3%	8
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0%	0
Grand Total	10	10	9	7	7	7	6	6	8	5	4	4	6.9	100.0%	13

Source: AKFIN 2016b

GOA Trawl Catcher Vessel Crew

GOA trawl catcher vessel crew data are available from one primary source: EDR data that were collected for 2015[69] and are summarized in this section.

GOA Trawl Crew Positions Held by Newport Residents on all GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, a total of 22 unique Newport residents held crew positions on GOA trawl catcher vessels, including 7 individuals who held CFEC gear operator permits and 15 individuals who held ADFG crew licenses.

- If crew positions are counted rather than unique individuals (as some individuals worked on more than one GOA trawl catcher vessel during the year), in 2015 a total of 23 crew positions were held by Newport residents, including 7 positions held by individuals with CFEC gear operator permits and 16 positions held by individuals with ADFG crew licenses. These included:

    - 1 on a vessel owned by a Kodiak resident (1 CFEC gear operator permit holder and 0 ADFG crew license holders).

    - 4 on vessels owned by Seattle MSA residents (2 CFEC gear operator permit holders and 2 ADFG crew license holders).

    - 5 on vessels owned by Newport residents (1 CFEC gear operator permit holder and 4 ADFG crew license holders).

    - 13 on vessels owned by Oregon residents from outside of Newport, including Independence and Siletz (3 CFEC gear operator permit holders and 10 ADFG crew license holders).

- EDR data indicate that in 2015, a total of 54 unique Oregon residents from communities other than Newport held crew positions on GOA trawl catcher vessels, including 15 individuals who held CFEC gear operator permits and 39 individuals who held ADFG crew licenses.

[69] As noted elsewhere, multiple caveats apply to catcher vessel EDR data, including: 2015 was the first year EDR catcher vessel crew data were collected; only one year of data is available; the available data have not been verified and audited (as audits typically rely on multiple years of data to identify outliers); and data are missing (have not yet been submitted) for 10 GOA trawl catcher vessels, which includes four vessels that were apparently active in the fishery in 2015 and six that were not (n = 68 catcher vessels in the EDR data). Additionally, one vessel appears in the data twice, as it changed ownership during the year (i.e., there are 67 unique catcher vessels in the EDR data), and there are some minor inconsistencies in crew (n = 365 unique persons) and vessel counts specific to crew position and compensation data relative to other fields in the data (e.g., n = 387 crew positions for most variables, but 386 crew positions for compensation variables). Specific to community level analysis, residence community information is not available for 55 unique individual crew members (1 CFEC gear operator permit holder and 54 ADFG crew license holders) who held 56 crew positions (1 CFEC gear operator permit holder and 55 ADFG crew license holders). Nevertheless, these data are the best available and are presented here as an indication of relative if not exact crew employment and, to the extent possible within data confidentiality constraints, compensation patterns across communities.

- If crew positions are counted rather than unique individuals (as some individuals worked on more than one GOA trawl catcher vessel during the year), in 2015 a total of 60 crew positions were held by Oregon residents from communities other than Newport, including 17 positions held by individuals with CFEC gear operator permits and 43 positions held by individuals with ADFG crew licenses.

Crew Positions and Payments to Labor on Newport Resident-Owned GOA Trawl Catcher Vessels

- EDR data indicate that in 2015, there were a total of 29 crew positions on Newport resident-owned GOA trawl catcher vessels, including 7 positions whose occupant held a CFEC gear operator permit and 22 positions whose occupant held an ADFG crew license. Of these positions:
    - 11 were held by residents of Kodiak (4 CFEC gear operator permit holders and 7 ADFG crew license holders).
    - 1 was held by a resident of Palmer, Alaska (0 CFEC gear operator permit holders and 1 ADFG crew license holder).
    - 5 were held by residents of Newport (1 CFEC gear operator permit holder and 4 ADFG crew license holders).
    - 7 were held by residents of Oregon outside of Newport, including Dallas, Eugene, Siletz, South Beach, and Toledo (2 CFEC gear operator permit holders and 5 ADFG crew license holders).
    - 5 were held by individuals whose residence location was unknown (0 CFEC gear operator permit holders and 5 ADFG crew license holders).
- EDR data indicate that in 2015, for the 4 GOA trawl catcher vessels identified as having Newport ownership, a total of 31 crew members on those vessels received $2,361,787 in total labor payments from the GOA trawl fishery, including $929,965 to captains and $1,431,822 to other crew members.
- EDR data indicate that in 2015, there were a total of 39 crew positions on GOA trawl catcher vessels owned by residents of Oregon communities other than Newport, including 12 positions whose occupant held a CFEC gear operator permit and 27 positions whose occupant held an ADFG crew license.
- EDR data indicate that in 2015, for the 5 GOA trawl catcher vessels identified as having Oregon ownership by residents of communities other than Newport, a total of 33 crew members on those vessels received $2,765,809 in total labor payments from the GOA trawl fishery, including $1,123,595 to captains and $1,642,214 to other crew members.

For additional detail on EDR GOA trawl catcher vessel crew data, please see Table 103, Table 104, and Table 105 in Attachment 3.

GOA Halibut and GOA Chinook Salmon

As shown in Table 70, few Newport vessels are engaged in either the GOA halibut or GOA Chinook salmon fisheries. As shown, the pattern of concentration of vessels in these two fisheries, with respect to number of vessels participating between Newport and other Oregon communities, is very different from what is seen in the GOA trawl fishery.

Table 70. Summary of Newport and Other Oregon Resident-Owned Catcher Vessel Average Annual Participation in the GOA Halibut and Chinook Salmon Fisheries, 2003-2014

Community	GOA Halibut				GOA Chinook Salmon			
	Catcher Vessels		Ex-Vessel Gross Revenue		Catcher Vessels		Ex-Vessel Gross Revenue	
	Annual Average 2003-2014 (number of vessels)	Annual Average 2003-2014 (percent of fishery total)	Annual Average 2003-2014 ($ millions)	Annual Average 2003-2014 (percent of fishery total)	Annual Average 2003-2014 (number of vessels)	Annual Average 2003-2014 (percent of fishery total)	Annual Average 2003-2014 ($ millions)	Annual Average 2003-2014 (percent of fishery total)
Newport	2.3	0.3%	--	--	0.2	0.0%	--	--
All Other OR	23.4	3.0%	--	--	51.5	2.8%	--	--
Oregon Total	25.8	3.3%	10.16	6.1%	51.7	2.8%	212	1.6%

Source: AKFIN 2016a

Support Services Sector

The Port of Newport includes 1,400 feet for waterfront property and includes the port's administration building and the commercial marina. The commercial marina includes moorage for approximately 200 commercial fishing vessels, a 300-foot fixed service dock with four hoists, 200 feet of floating dock for dockside vessel repair, and two acres of crab gear storage. Also, a shipwright is located within the marina and between 50 to 60 fishery support service businesses are located along the waterway (Port of Newport 2016; Dillman 2013).

The Newport area is also tied closely to other communities in the region, including Depoe Bay and Toledo. The Port of Toledo, located up the Yaquina River from Newport, is the only inland Oregon coastal community with a deep-water channel and is home to a major boatyard in Sturgeon Bend that includes a 300-ton dry dock capable of handling vessels up to 100 feet long and 46 feet wide. A group of approved independent contractors are available for various commercial vessel services through the public boatyard (Dillman 2013). In addition to providing services to the locally based fleet, support facilities in the area are used to service vessels from elsewhere on the West Coast engaged in a wide range of Alaska fisheries as well as a number of vessels based in Alaska itself.

5.4 Cross-Cutting Community Engagement Ties

Communities, of course, are not engaged in the GOA trawl fishery in isolation, with multiple interconnections or cross-cutting ties. In this section, five types of data are presented to illustrate some of those ties: the correspondence between community engagement in the GOA trawl, GOA halibut, and GOA Chinook salmon fisheries; the correspondence between delivery patterns by locally owned GOA trawl catcher vessels and the community of ownership of GOA trawl catcher vessels that deliver to local shore-based processors; the correspondence between ownership and homeport communities for GOA trawl catcher vessels; the correspondence between community of ownership of GOA trawl catcher vessels and the communities where those vessels obtain goods and services; and the correspondence between community GOA federal regulatory area and district location, International Pacific Halibut Commission (IPHC) regulatory area location, CQE status, GOA trawl fishery engagement, and Community Fishing Association (CFA) eligibility status under Alternative 4.

- Figure 12 provides a graphic representation of GOA trawl fisheries engagement, GOA halibut fisheries engagement, and GOA Chinook salmon fisheries engagement for the Alaska communities profiled. Also shown is this table is relative community size, which, in these cases, corresponds to relative diversity of the local economy. Communities shown in this table are limited to those Alaska communities that had at least some multi-year GOA trawl catcher vessel activity and/or continuing shore-based processing activity in the years covered by the primary dataset used for analysis (2003-2014). Specifically, they were those communities that had at least one resident-owned trawl catcher vessel that made at least one GOA trawl delivery in more than one year[70] over the period 2003-2014[71] and/or had an average of 0.5 or more shore-based processors operating in the community annually over the period 2003-2014 (i.e., the community had, on average, shore-based processing in at least half of the years during the period[72]).

- Table 71 provides information on the relationship between the community of ownership of GOA trawl catcher vessels and the location of GOA shore-based processors accepting those GOA trawl-caught deliveries. The columns in this table show the geographic range of locally owned GOA trawl catcher vessels, in terms of where they made at least one GOA-trawl caught delivery, on an annual average number of vessels basis as well as on a total number of unique

[70] Three other Alaska communities appear in the data as having one resident-owned vessel operate in the trawl fishery for a single year during the period 2003-2014. These are Anchor Point, Juneau, and Nikolaevsk each of which had one resident-owned GOA trawl catcher vessel shown as active in the data in 2003, but not in 2004-2014.

[71] As a simplifying assumption, trawl catcher vessels that engaged in pelagic trawl and non-pelagic trawl in both shallow-water and deep-water complexes were combined due to the limited number of vessels in any complex, pelagic or non-pelagic, in any community, for any year, in order to present more complete data than would otherwise be possible due to confidentiality restrictions.

[72] Four other Alaska communities appear in the data as having shore-based processing of trawl-caught deliveries in 2003-2014. These include three communities that took one or more deliveries in a single year during the period 2003-2014 (Homer and Kenai, 2003, and Sitka, 2012) and one community that took one or more deliveries in two years during the period 2003-2014 (Ninilchik, 2003 and 2006).

vessels basis (all years combined) over the period 2003-2014. The rows in this table show the geographic catchment area of locally operating shore-based processors, in terms of community of ownership of catcher vessels that make at least one GOA trawl-caught delivery to at least one locally operating shore-based plant. Differences in fleet range and processor catchment areas are readily apparent between communities. For example, the Kodiak resident-owned GOA trawl catcher vessel fleet without exception delivered locally to Kodiak shore-based processors and at least some Kodiak vessels also delivered across a wide geography; Kodiak shoreplants accepted GOA trawl-caught deliveries from catcher vessels from every geography shown except King Cove, with heavy weighting toward vessels owned in the Pacific Northwest. In contrast, King Cove resident-owned GOA trawl catcher vessels delivered virtually exclusively to King Cove; the King Cove shore-based processor accepted deliveries from vessels owned across a wide geography, but with a heavier weighting toward catcher vessels owned in Alaska.

- Table 72 provides information on the relationship of GOA trawl catcher vessel community of resident ownership and homeport community.[73] In those instances where community of ownership varies from community of homeport, that may be indicative of a pattern of differential distribution of vessel port activities, but previous NPFMC social impact analyses (e.g., AECOM 2010) would suggest that homeport designations are, in general, inconsistently predictive of the location of vessel activity in any given fishery. Nevertheless, the table shows marked variation in patterns of correspondence of community of ownership and homeport for GOA trawl catcher vessels.

    - For example, among the Alaska communities with (1) multiple year resident-owned catcher vessel engagement in the GOA trawl fishery 2003-2014 and (2) any such engagement in 2014, Sand Point and Petersburg have a 100 percent correspondence and Kodiak has an 89 percent correspondence between ownership and homeport community in 2014 (with Sand Point and Kodiak having relatively large engagement in absolute terms [18 and seven vessels, respectively] when compared to Petersburg [two vessels] and the other Alaska communities engaged through catcher vessel participation in 2014). On the other hand, for King Cove and Anchorage (both of which are similar to Petersburg in having relatively few vessels engaged in the fishery in 2014 [having three and two vessels engaged, respectively]), the correspondence was 33 percent and 0 percent, respectively. In all cases but one, where an Alaska resident-owned vessel had a homeport that differed from the community of ownership, that homeport was also in Alaska (with the exception being a King Cove resident-owned vessel was shown in the data with a Seattle MSA community as its homeport).

[73] This table was produced from a different dataset than the one used for most of the tables in the rest of this document, which introduced a minor inconsistency between this table and individual community tables displaying similar information. In this case, Kasilof is noted as the community of residence of ownership of one GOA trawl catcher vessel in 2014, which does not appear in the primary dataset. This inconsistency is not great enough to make a substantial difference in data interpretation. The dataset used to generate this table is the same dataset that was used to generate tables of overall community fleet statistics and vessel diversity information; the primary dataset focuses on GOA trawl specific vessels and processors and is considered more accurate for those purposes.

- Two communities in Alaska that did not have multi-year engagement of any resident-owned catcher vessels in GOA trawl fishery 2003-2014 show up in the 2014 data as being the homeport of GOA trawl catcher vessels: Juneau (with four homeported vessels, shown variously as Kodiak, Anchorage, Seattle MSA, and "Other WA" resident-owned in the data) and Metlakatla (with one homeported vessel, shown as King Cove resident-owned in the data). In the 2003-2014 data, Juneau shows up as having one resident-owned catcher vessel participating in the GOA trawl fishery in 2003 (but none in 2004-2014), while Metlakatla does not appear in the 2003-2014 GOA trawl catcher vessel ownership data at all. In other words, using 2014 homeport data, another Alaska community (Metlakatla) is added to the list of communities engaged in the fishery through direct links to GOA trawl catcher vessel participation if homeport designation is taken as indicative of fishery specific vessel-related activity and, similarly, the engagement of Juneau is expanded beyond the single (and not recent) year of catcher vessel ownership.

- For Seattle MSA resident-owned GOA trawl catcher vessels and "Other WA" resident-owned GOA trawl catcher vessels the correspondence is 35 and 33 percent, respectively. In all but two cases (in which two Seattle MSA resident-owned vessels are shown as having Newport, Oregon as their homeport), Washington resident-owned catcher vessels are shown as having Alaska homeports when there is a difference between ownership and homeport communities. In most of these instances (nine cases) Kodiak is the shown as the homeport for these vessels, with Sand Point, Anchorage, and Juneau also appearing in the data (two vessels each).

- For Newport, Oregon resident-owned GOA trawl catcher vessels, the correspondence was 75 percent for the small sample (four vessels), with one vessel showing Newport ownership but Kodiak as a homeport; for Oregon resident-owned GOA trawl catcher vessels outside of Newport there was a 50 percent correspondence, but in all cases the homeports of those vessels were listed as Newport.

- Table 73 provides information on the correspondence of number of catcher vessels participating in the GOA trawl fishery, on an annual average basis and a total number of unique vessels, and the number of active and inactive GOA trawl endorsed groundfish license limitation program (LLP) licenses, by community for three different periods: 2003-2012, 2007-2012, and 2008-2012. As shown, as the periods get both shorter and more recent, vessel numbers decline as do the number of active LLP licenses while, conversely, the number of inactive LLP licenses ("latent licenses") increase as the periods get both shorter and more recent (with the total number of LLP licenses [active plus inactive LLP licenses] remaining constant at 152 across all periods shown).

    - Three communities in Alaska that did not have multi-year engagement of any resident-owned catcher vessels and/or locally operating shore-based processors in GOA trawl fishery 2003-2014 show up in the 2003-2012 data as having GOA trawl endorsed

groundfish LLP licenses: Juneau (with one active LLP 2003-2012 and one inactive LLP in 2007-2012 and 2008-2012), plus Kenai and Cordova (with the latter two having one inactive LLP each in all three periods).

- In the 2003-2014 data, Juneau shows up as having one resident-owned catcher vessel participating in the GOA trawl fishery in 2003 (but none in 2004-2014), Kenai shows up as having one shore-based processor accepting GOA trawl-caught deliveries in 2003 (but none in 2004-2014), and Cordova does not appear in the 2003-2014 GOA trawl catcher vessel ownership or GOA shore-based processor data at all. In other words, using LLP data, another Alaska community (Cordova) would be added to the list of communities with a direct link to the GOA trawl fishery if the holding of an inactive LLP alone is taken as indicative of fishery specific ties, and the engagement of Kenai in the fishery would be expanded beyond the single (and not recent) year of shore-based processor activity that occurred in that community. In the case of Juneau, with its one active LLP in the earliest period, engagement in the GOA trawl fishery would be expanded beyond the single (and not recent) year of catcher vessel ownership (and the additional potential homeporting vessel-related activity noted immediately above).

- Table 74 shows the relationship of the community of GOA trawl catcher vessel ownership and the communities crew members on those vessels reside, utilizing data from the Annual Trawl Catcher Vessel Economic Data Report for Calendar Year 2015. As noted earlier, there are known limitations to these data, primarily resulting from this being the first year of their collection, there being only one year of data available, and a higher than desirable number of missing/unknown data, but the data are the best available and useful within those known limitations. As shown:
  - Among Alaska communities, for Sand Point, King Cove, and Petersburg resident-owned vessels, there is a very close correspondence between community of crew residence and the vessels they work on (but there is more variability in the correspondence community of vessel ownership and community of all crew members on those vessels); for Kodiak and Anchorage there are distinctly different patterns:
    - 79.1 percent of crew members from Sand Point work on Sand Point-owned vessels (and 70.8 percent of the crew positions on Sand Point-owned vessels are filled by Sand Point residents); 88.9 percent of crew members from King Cove work on King Cove-owned vessels (and 61.5 percent of the crew positions on King Cove-owned vessels are filled by King Cove residents); and 75.0 percent of crew members from Petersburg work on Petersburg-owned vessels (and 37.5 percent of the crew positions on Petersburg-owned vessels are filled by Petersburg residents).
    - 56.0 percent of crew members from Kodiak work on Kodiak-owned vessels (and 54.7 percent of the crew positions on Kodiak-owned vessels are filled by Kodiak residents); none of the crew members from Anchorage work on

Anchorage-owned vessels (and, of course, none of the crew positions on Anchorage-owned vessels are filled by Anchorage residents).

- Among Washington and Oregon communities (or groups of communities), patterns vary considerably.
    - 90.9 percent of crew members from the Seattle MSA work on Seattle MSA-owned vessels (and 17.2 percent of the crew positions on Seattle MSA-owned vessels are filled by Seattle MSA residents); 34.1 percent of crew members from other Washington communities work on vessels owned by residents of Washington communities other than the Seattle MSA (and 36.8 percent of the crew positions on vessels owned by residents of Washington communities other than the Seattle MSA are filled by residents of Washington communities other than the Seattle MSA).
    - 21.7 percent of crew members from Newport work on Newport-owned vessels (and 17.2 percent of the crew positions on Newport-owned vessels are filled by Newport residents); 31.7 percent of crew members from other Oregon communities work on vessels owned by residents of Oregon communities other than Newport (and 48.7 percent of the crew positions on vessels owned by residents of Oregon communities other than Newport are filled by residents of Oregon communities other than Newport).

- Figure 13 graphically illustrates the relationship of the community of GOA trawl catcher vessel ownership and the communities where those vessels obtain support services, utilizing data from the 2014 AFSC GOA Trawl Social Survey. Vessels and their community of ownership are shown as clustered dots within the circle, and support service businesses are shown, arranged by community where goods and services were obtained, as dots forming the circle itself. Thicker connecting lines represent multiple mentions for single businesses, while the thin lines in the background show the pervasive interconnections that result from unique mentions on the survey.

- Table 75 provides information on the boundaries of the federal waters regulatory areas and districts for the GOA. Table 76 provides a cross-reference for GOA community CQE eligibility status, federal regulatory area and district location, IPHC area location, and 2003-2014 GOA trawl fishery engagement (as measured by having had a resident-owned catcher vessel or a locally operating shore-based processor participate in the fishery two or more years during this period) with CFA eligibility under Alternative 4. As shown:
    - A total of 27 communities would be eligible for CFA participation, five of which were engaged in the GOA trawl fishery 2003-2014. Of these five communities that would be eligible for CFA status and directly participated in the GOA trawl fishery 2003-

2014, two are CQE eligible (King Cove and Sand Point) and three are not (Homer, Kodiak, and Seward[74]).

- An additional five Alaska communities that directly participated in the GOA trawl fishery during the period 2003-2014 are not CQE eligible and would not be eligible for CFA status (Akutan, Anchorage, Ninilchik, Petersburg, and Unalaska/Dutch Harbor[75]).

- An additional three communities that are not CQE eligible and did not participate in the GOA trawl fishery 2003-2014 would qualify for CFA status (Cordova, Whittier, and Valdez[76]).

[74] These communities were affirmatively included in the Alternative 4 description.

[75] Akutan and Unalaska/Dutch Harbor are typically considered Bering Sea communities, as they are located on the Bering Sea side of Akutan and Unalaska Islands, respectively. Both islands, however, straddle the Bering Sea and Western Gulf of Alaska boundary and Western GOA Area waters are easily accessible from both communities. Petersburg, in the Southeast Alaska Outside District, is well removed from the West Yakutat District, Central GOA Area and Western GOA Area, whereas Anchorage and Ninilchik are within the Kodiak District of the Central GOA.

[76] These communities were affirmatively included in the Alternative 4 description.

Figure 12. Graphic Representation of Annual Average Engagement in Potentially Affected GOA Trawl, Halibut, and Chinook Salmon Fisheries for Profiled Alaska Communities, 2013-2014

Community		GOA Trawl Engagement		GOA Halibut Engagement			GOA Chinook Salmon Engagement	
Name	Size	Resident-Owned CVs	Shore-Based Processing	Resident-Owned CVs	Shore-Based Processing	Local Sport Charter Permit Holders	Resident-Owned CVs	Shore-Based Processing
Kodiak								
Sand Point						none*		
King Cove						none*		
Anchorage			none					none
Petersburg			none					
Homer								
Seward		none						
Akutan		none				none*	none	
Unalaska/ Dutch Harbor		none				none*		

Figure Key

Type/Level of Engagement			
Community Size	2010 population = less than 1,000	2010 population = 1,000 – 10,000	2010 population = greater than 10,000
Trawl Catcher Vessel (CV) Participation	2003-2014 annual avg. = 0.1 – 0.9 vessels	2003-2014 annual avg. = 1.0 – 4.9 vessels	2003-2014 annual avg. = 5.0 or more vessels
Halibut/Chinook Salmon CV Participation	2003-2014 annual avg. = 0.1 – 9.9 vessels	2003-2014 annual avg. = 10.0 – 19.9 vessels	2003-2014 annual avg. = 20.0 or more vessels
Shore-Based Processing Participation	2003-2014 annual avg. = 0.1 – 0.9 plants	2003-2014 annual avg. = 1.0 – 1.9 plants	2003-2014 annual avg. = 2.0 or more plants
GOA Halibut Sport Charter Participation	2016 (only) = 1 – 19 permit holders	2016 (only) = 20 – 39 permit holders	2016 (only) = 40 or more permit holders

* Note: King Cove and Sand Point are located in area 3B, and Akutan and Unalaska/Dutch Harbor in in area 4A, neither of which are managed under sport charter regulations.

Table 71. Community of Ownership of Catcher Vessels Making GOA Trawl-Caught Deliveries to Shore-Based Processors, by Community of Shore-Based Processor Operation, 2003-2014

Shore-Based Processing Location		Measure of GOA Trawl Catcher Vessel Fleet Participation 2003-2014	Catcher Vessels by Location of Ownership												TOTAL
			Kodiak	Sand Point	King Cove	Anchorage	Petersburg	Homer	Other AK*	Seattle MSA	Other WA	Newport	Other OR	Other States	
Shore-Based Processors by Location of Operation	Kodiak	Annual Avg CVs	14.8	0.2	--	0.3	0.3	0.2	0.2	8.0	6.0	6.6	8.8	0.9	45.9
		Unique CVs	29	1	--	1	2	2	2	22	14	10	14	3	79
	Sand Point	Annual Avg CVs	1.3	7.5	--	0.1	0.5	0.3	0.1	10.2	1.7	0.2	--	0.2	21.9
		Unique CVs	9	13	--	1	2	1	1	27	5	2	--	1	55
	King Cove	Annual Avg CVs	0.2	3.9	3.3	1.1	0.8	--	--	3.2	0.2	0.1	--	1.0	13.7
		Unique CVs	2	8	6	3	1	--	--	12	2	1	--	1	35
	Seward	Annual Avg CVs	0.8	--	--	--	--	--	--	0.3	0.1	--	0.2	--	1.3
		Unique CVs	4	--	--	--	--	--	--	2	1	--	2	--	9
	Akutan	Annual Avg CVs	0.4	0.8	--	0.1	0.2	--	--	3.3	1.3	0.3	0.1	0.3	6.7
		Unique CVs	2	5	--	1	1	--	--	18	4	3	1	1	33
	Unalaska	Annual Avg CVs	--	--	--	--	--	--	--	1.7	--	--	--	0.1	1.8
		Unique CVs	--	--	--	--	--	--	--	7	--	--	--	1	8
	Ninilchik	Annual Avg CVs	--	--	--	--	--	--	--	--	0.2	--	--	--	0.2
		Unique CVs	--	--	--	--	--	--	--	--	1	--	--	--	1
	Other AK**	Annual Avg CVs	0.1	--	--	--	--	--	--	--	--	--	--	0.2	0.2
		Unique CVs	1	--	--	--	--	--	--	--	--	--	--	1	2
	Seattle***	Annual Avg CVs	0.3	0.3	0.1	0.1	0.3	--	--	1.5	0.7	0.9	0.4	0.1	4.5
		Unique CVs	3	2	1	1	2	--	--	8	5	8	4	1	35
	Unknown	Annual Avg CVs	0.3	--	--	--	--	--	--	0.1	0.2	--	--	--	0.6
		Unique CVs	2	--	--	--	--	--	--	1	2	--	--	--	5
TOTAL		Annual Avg CVs	14.8	9.4	3.3	1.3	1.1	0.3	0.3	19	6.7	6.9	8.8	1.8	73.5
		Unique CVs	29	14	6	4	3	2	3	42	15	13	14	4	124

* Anchor Point, Juneau, and Nikolaevsk each had one resident-owned GOA trawl catcher vessel in 2003 (but none in 2004-2014). The Anchor Point and Nikolaevsk resident-owned catcher vessels made at least one GOA trawl-caught delivery to Kodiak shore-based processors in 2003, while the Juneau resident-owned catcher vessel made at least one GOA trawl-caught delivery to a Sand Point shore-based processor in 2003.

** Other Alaska communities having shore-based processing of trawl-caught deliveries in 2003-2014 were Homer (2003), Kenai (2003), and Sitka (2012). A shore-based processor in Sitka accepted as least one GOA trawl-caught delivery from a Kodiak resident-owned catcher vessel in 2012. The available data has a blank field for community of ownership of the catcher vessel(s) that made at least one GOA trawl-caught delivery to the one shore-based processor each in Homer and Kenai that accepted at least one GOA trawl-caught delivery in 2003.

*** The shore-based processing activity attributed to Seattle in table is in all likelihood actually activity associated with Seattle-owned floating processors operating in Alaska waters (but for which good operation location data are not available).

Source: AKFIN 2016b

Table 72. Correspondence of Community of Ownership and Community of Homeport of Catcher Vessels Making GOA Trawl-Caught Deliveries, 2014

Community		GOA Trawl Catcher Vessels by Location of Homeport												TOTAL
		Kodiak	Sand Point	King Cove	Anchorage	Petersburg	Homer	Other AK**	Seattle MSA	Other WA	Newport OR	Other OR	Other States	
GOA Trawl Catcher Vessels by Location of Ownership	Kodiak	16	1	0	0	0	0	1	0	0	0	0	0	18
	Sand Point	0	7	0	0	0	0	0	0	0	0	0	0	7
	King Cove	0	0	1	0	0	0	1	1	0	0	0	0	3
	Anchorage	0	0	1	0	0	0	1	0	0	0	0	0	2
	Petersburg	0	0	0	0	2	0	0	0	0	0	0	0	2
	Homer	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other AK*	0	0	0	0	0	1	0	0	0	0	0	0	1
	Seattle MSA	6	2	0	2	0	0	1	7	0	2	0	0	20
	Other WA	3	0	0	0	0	0	1	0	2	0	0	0	6
	Newport OR	1	0	0	0	0	0	0	0	0	3	0	0	4
	Other OR	0	0	0	0	0	0	0	0	0	3	3	0	6
	Other States	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL		26	10	2	2	3	1	5	8	2	8	3	0	70

* Kasilof had one resident-owned GOA trawl catcher vessel in 2014.
**Of the five GOA trawl catcher vessels with "Other AK" homeports, four (owned one each in Kodiak, Anchorage, Seattle MSA, and "Other WA") were homeported in Juneau; the fifth (owned in King Cove) was homeported in Metlakatla.
Source: AKFIN 2016b

Table 73. Correspondence of Catcher Vessel Ownership Community with GOA Trawl Endorsed Groundfish LLP License Ownership Community, Selected Time Intervals, 2003-2012

	2003-2012				2007-2012				2008-2012			
	Catcher Vessels		GOA Trawl Endorsed Licenses		Catcher Vessels		GOA Trawl Endorsed Licenses		Catcher Vessels		GOA Trawl Endorsed Licenses	
Community	Annual Average Number of Active Vessels	Number of Unique Active Vessels	Number of Unique Active LLPs	Number of Unique Inactive LLPs	Annual Average Number of Active Vessels	Number of Unique Active Vessels	Number of Unique Active LLPs	Number of Unique Inactive LLPs	Annual Average Number of Active Vessels	Number of Unique Active Vessels	Number of Unique Active LLPs	Number of Unique Inactive LLPs
Kodiak	14.5	27	21	1	14.2	20	19	3	14.6	19	19	3
Sand Point	9.9	14	7	5	8.8	12	6	6	8.6	12	6	6
King Cove	3.4	6	5	1	3.7	6	5	1	3.6	6	5	1
Anchorage	1.2	3	2	0	1.0	1	2	0	1.0	1	2	0
Petersburg	1.0	2	2	0	1.0	2	1	1	1.0	1	1	1
Homer	0.4	2	3	0	0	0	3	0	0	0	2	1
Other AK*	0.3	3	1	2	0	0	0	3	0	0	0	3
Seattle MSA	18.5	41	62	8	19.7	35	51	19	19.4	32	49	21
Other WA	6.8	15	8	2	5.8	9	8	2	6.0	9	8	2
Newport OR	7.5	13	6	0	6.5	9	5	1	6.4	9	5	1
Other OR	9.3	13	11	0	8.5	10	9	2	8.4	9	9	2
Other States	1.9	4	4	1	1.5	2	2	3	1.4	2	2	3
Total	74.4	122	132	20	70.2	94	111	41	69.8	89	108	44

* Other Alaska communities represented in the LLP data include Cordova and Kenai, with one GOA trawl endorsed groundfish LLP license each, both of which were inactive in all three periods; and Juneau, with one GOA trawl endorsed groundfish LLP license that was active in the first period (2003-2012), but not in the other two periods. Other Alaska communities represented in the CV ownership data include Anchor Point, Juneau, and Nikolaevsk each of which had one resident-owned GOA trawl catcher vessel active for one year (2003) during the first period (2003-2012), but not in the other two periods.

Source: AKFIN 2016a; National Marine Fisheries Service 2016

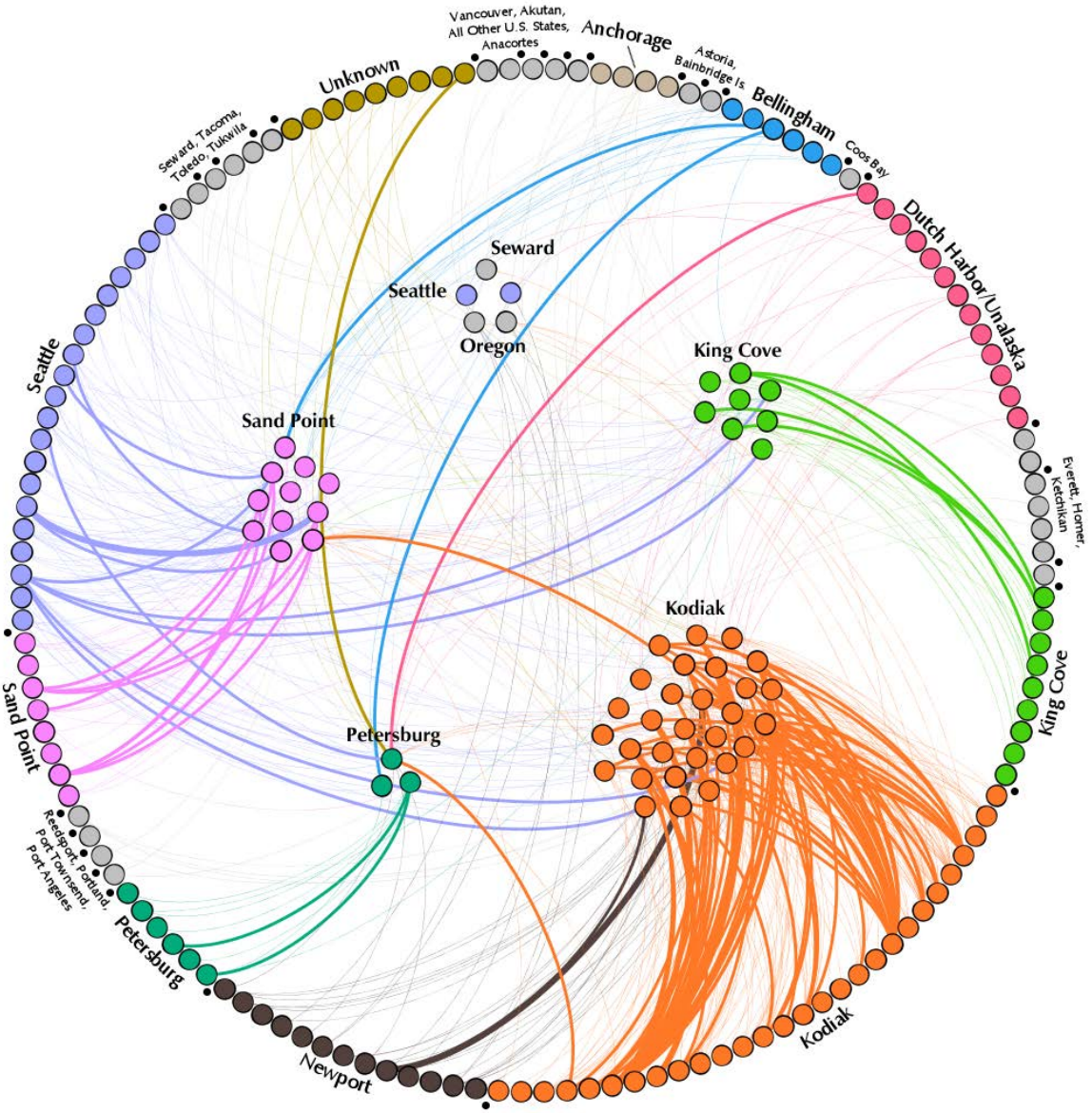
Table 74. Correspondence of Catcher Vessel Ownership Community and Crew Residence Community, GOA Trawl Fishery, 2015

Community of Catcher Vessel Crew Residence	Number of Crew Positions (CFEC Gear Operator Permit and ADFG Crew License Holders Combined)												
	Catcher Vessel Owner Community												TOTAL
	Kodiak	Sand Point	King Cove	Anchorage	Petersburg	Homer	Other AK	Seattle MSA	Other WA	Newport OR	Other OR	Other States	
Kodiak	47	--	--	--	--	--	--	13	10	11	3	--	84
Sand Point	--	34	1	--	--	--	--	7	1	--	--	--	43
King Cove	--	1	8	--	--	--	--	--	--	--	--	--	9
Anchorage	3	2	--	--	--	--	--	1	1	--	1	--	8
Petersburg	--	--	--	--	3	--	--	1	--	--	--	--	4
Homer	--	--	--	--	--	--	--	--	--	--	--	--	0
Anchor Point	2	--	--	--	--	--	--	--	--	--	--	--	2
Cantwell	--	--	--	--	--	--	--	1	--	--	--	--	1
Chiniak	2	--	--	--	--	--	--	--	--	--	--	--	2
Gustavus	1	--	--	--	--	--	--	--	--	--	--	--	1
Juneau	1	--	--	--	--	--	--	--	--	--	--	--	1
Old Harbor	1	--	--	--	--	--	--	--	--	--	--	--	1
Palmer	1	--	--	--	--	--	--	1	--	1	1	--	4
Salcha	--	--	--	--	--	--	--	1	--	--	--	--	1
Soldotna	--	--	--	--	--	--	--	1	--	--	--	--	1
Unalakleet	--	--	--	--	--	--	--	1	--	--	--	--	1
Wasilla	--	--	--	--	--	--	--	--	1	--	--	--	1
Other AK	--	--	--	--	--	--	--	--	--	--	--	--	0

Community of Catcher Vessel Crew Residence	Number of Crew Positions (CFEC Gear Operator Permit and ADFG Crew License Holders Combined)												
	Catcher Vessel Owner Community												TOTAL
	Kodiak	Sand Point	King Cove	Anchorage	Petersburg	Homer	Other AK	Seattle MSA	Other WA	Newport OR	Other OR	Other States	
Seattle MSA	1	--	--	--	--	--	--	20	1	--	--	--	22
Other WA	5	--	1	--	3	--	--	18	14	--	--	--	41
Newport OR	1	--	--	--	--	--	--	4	--	5	13	--	23
Other OR	8	--	--	--	--	--	--	24	2	7	19	--	60
Other States	4	--	--	1	2	--	--	12	1	--	1	--	21
Unknown	9	11	3	8	--	--	--	11	7	5	1	1	56
TOTAL	86	48	13	9	8	0	0	116	38	29	39	1	387

Source: National Marine Fisheries Service 2016b

Figure 13. Community of GOA Trawl Catcher Vessel Ownership and Community of Vessel Support Service Businesses Utilized by those Vessels, 2014



Source: National Oceanic and Atmospheric Administration 2015

Table 75. GOA Federal Waters Regulatory Area and District Boundaries

Federal Waters Regulatory Area	GOA Regulatory District		Boundaries	
	Name	Number	Western	Eastern
Western GOA	Shumagin	610	170° W long	159° W long
Central GOA	Chirikof	620	159° W long	154° W long
	Kodiak	630	154° W long	147° W long
Eastern GOA	W Yakutat	640	147° W long	140° W long
	SE Outside	650	140° W long	US-CDN EEZ

Source: National Oceanic and Atmospheric Administration 2016b

Table 76. CFA Eligible Communities by CQE Status, Regulatory Area, GOA Regulatory District, and GOA Trawl Fishery Engagement Status, 2003-2014

Community	CFA Eligible (Alt 4)	CQE Eligible	Regulatory Area	GOA Regulatory District*		IPHC Area	2003-2014 GOA Trawl Fishery Engagement		Geographic Coordinates of Community		Regulatory Boundary (deg. W long.)
				Name	Number		CV**	SBPR***	Latitude	Longitude	
Adak	No	Yes	Aleutian Is.	--	--	4B	No	No	51°53'0"N	176°38'42"W	West of 170
Cold Bay	Yes	Yes	WGOA	Shumagin	610	3B	No	No	55°12'33"N	162°42'51"W	159-170
Ivanof Bay	Yes	Yes	WGOA	Shumagin	610	3B	No	No	55°54'40"N	159°29'21"W	
King Cove	Yes	Yes	WGOA	Shumagin	610	3B	Yes	Yes	55°04'20"N	162°19'05"W	
Perryville	Yes	Yes	WGOA	Shumagin	610	3B	No	No	55°54'49"N	159°09'04"W	
Sand Point	Yes	Yes	WGOA	Shumagin	610	3B	Yes	Yes	55°20'12"N	160°29'36"W	
Akhiok	Yes	Yes	CGOA	Chirikof	620	3A	No	No	56°56'40"N	154°10'13"W	154-159
Chignik	Yes	Yes	CGOA	Chirikof	620	3B	No	No	56°17'54"N	158°24'16"W	
Chignik Lagoon	Yes	Yes	CGOA	Chirikof	620	3B	No	No	56°18'27"N	158°32'6"W	
Chignik Lake	Yes	Yes	CGOA	Chirikof	620	3B	No	No	56°16'10"N	158°46'54"W	
Karluk	Yes	Yes	CGOA	Chirikof	620	3A	No	No	57°34'41"N	154°21'45"W	
Chenega Bay	Yes	Yes	CGOA	Kodiak	630	3A	No	No	60°03'59"N	148°00'40"W	147-154
Halibut Cove	Yes	Yes	CGOA	Kodiak	630	3A	No	No	59°35'51"N	151°14'05"W	
Homer	Yes	No	CGOA	Kodiak	630	3A	Yes	No	59°38'35"N	151°31'33"W	
Kodiak	Yes	No	CGOA	Kodiak	630	3A	Yes	Yes	57°47'35"N	152°23'39"W	
Larsen Bay	Yes	Yes	CGOA	Kodiak	630	3A	No	No	57°32'12"N	153°59'29"W	
Nanwalek	Yes	Yes	CGOA	Kodiak	630	3A	No	No	59°21'13"N	151°54'45"W	
Old Harbor	Yes	Yes	CGOA	Kodiak	630	3A	No	No	57°11'50"N	153°18'28"W	
Ouzinkie	Yes	Yes	CGOA	Kodiak	630	3A	No	No	57°55'24"N	152°30'07"W	
Port Graham	Yes	Yes	CGOA	Kodiak	630	3A	No	No	59°20'52"N	151°50'0"W	
Port Lions	Yes	Yes	CGOA	Kodiak	630	3A	No	No	57°52'05"N	152°52'48"W	
Seldovia	Yes	Yes	CGOA	Kodiak	630	3A	No	No	59°26'20"N	151°42'45"W	
Seward	Yes	No	CGOA	Kodiak	630	3A	No	Yes	60°07'28"N	149°26'00"W	
Tyonek	Yes	Yes	CGOA	Kodiak	630	3A	No	No	61°04'05"N	151°08'28"W	
Whittier	Yes	No	CGOA	Kodiak	630	3A	No	No	60°46'27"N	148°40'40"W	
Cordova	Yes	No	EGOA	W Yakutat	640	3A	No	No	60°32'37"N	145°45'07"W	140-147
Tatitlek	Yes	Yes	EGOA	W Yakutat	640	3A	No	No	60°52'01"N	146°40'38"W	
Valdez	Yes	No	EGOA	W Yakutat	640	3A	No	No	61°07'51"N	146°20'54"W	
Angoon	No	Yes	EGOA	SE Outside	650	2C	No	No	57°29'49"N	134°34'25"W	East of 140
Coffman Cove	No	Yes	EGOA	SE Outside	650	2C	No	No	56°00'44"N	132°49'44"W	
Craig	No	Yes	EGOA	SE Outside	650	2C	No	No	55°28'35"N	133°08'54"W	
Edna Bay	No	Yes	EGOA	SE Outside	650	2C	No	No	55°58'43"N	133°40'35"W	
Elfin Cove	No	Yes	EGOA	SE Outside	650	2C	No	No	58°11'56"N	136°21'19"W	
Game Creek	No	Yes	EGOA	SE Outside	650	2C	No	No	58°03'31"N	135°30'47"W	

Community	CFA Eligible (Alt 4)	CQE Eligible	Regulatory Area	GOA Regulatory District*		IPHC Area	2003-2014 GOA Trawl Fishery Engagement		Geographic Coordinates of Community		Regulatory Boundary (deg. W long.)
				Name	Number		CV**	SBPR***	Latitude	Longitude	
Gustavus	No	Yes	EGOA	SE Outside	650	2C	No	No	58°24'59"N	135°44'44"W	
Hollis	No	Yes	EGOA	SE Outside	650	2C	No	No	55°29'04"N	132°42'57"W	
Hoonah	No	Yes	EGOA	SE Outside	650	2C	No	No	58°06'34"N	135°26'11"W	
Hydaburg	No	Yes	EGOA	SE Outside	650	2C	No	No	55°12'17"N	132°49'15"W	
Kake	No	Yes	EGOA	SE Outside	650	2C	No	No	56°58'15"N	133°56'02"W	
Kasaan	No	Yes	EGOA	SE Outside	650	2C	No	No	55°32'30"N	132°24'07"W	
Klawock	No	Yes	EGOA	SE Outside	650	2C	No	No	55°33'18"N	133°05'07"W	
Metlakatla	No	Yes	EGOA	SE Outside	650	2C	No	No	55°07'37"N	131°34'35"W	
Meyers Chuck	No	Yes	EGOA	SE Outside	650	2C	No	No	55°44'31"N	132°15'48"W	
Naukati Bay	No	Yes	EGOA	SE Outside	650	2C	No	No	55°52'25"N	133°11'05"W	
Pelican	No	Yes	EGOA	SE Outside	650	2C	No	No	57°57'30"N	136°13'27"W	
Point Baker	No	Yes	EGOA	SE Outside	650	2C	No	No	56°21'09"N	133°37'43"W	
Port Alexander	No	Yes	EGOA	SE Outside	650	2C	No	No	56°14'24"N	134°39'26"W	
Port Protection	No	Yes	EGOA	SE Outside	650	2C	No	No	56°19'19"N	133°36'24"W	
Tenakee Springs	No	Yes	EGOA	SE Outside	650	2C	No	No	57°46'41"N	135°13'11"W	
Thorne Bay	No	Yes	EGOA	SE Outside	650	2C	No	No	55°40'38"N	132°33'22"W	
Whale Pass	No	Yes	EGOA	SE Outside	650	2C	No	No	56°06'45"N	133°08'31"W	
Yakutat	No	Yes	EGOA	SE Outside	650	3A	No	No	59°32'49"N	139°43'38"W	
Akutan	No	No	Bering Sea	--	--	4A	No	Yes	54°07'57"N	165°46'30"W	159-170 *(but N of GOA)*
Unalaska/Dutch Hbr.	No	No	Bering Sea	--	--	4A	No	Yes	53°53'20"N	166°31'38"W	
Anchorage	No	No	CGOA	Kodiak	630	3A	Yes	No	61°13'05"N	149°54'01"W	147-154
Ninilchik	No	No	CGOA	Kodiak	630	3A	No	Yes	60°02'47"N	151°40'02"W	
Petersburg	No	No	EGOA	SE Outside	650	2C	Yes	No	56°48'16"N	132°56'31"W	East of 140

* Communities in Prince William Sound (District 649) and Southeast Inside (District 659) assigned to federal waters regulatory district based on longitude for the purposes of this analysis.

** Catcher vessel engagement defined as those Alaska communities having resident-owned catcher vessels making GOA trawl-caught landings (in any location) in more than one year 2003-2014. Communities with a single year of participation (and therefore not shown on table) were Anchor Point, Juneau, and Nikolaevsk (2003 for each).

*** Shore-based processor engagement of Alaska communities determined by location of any processor or processors accepting GOA groundfish trawl-caught deliveries in more than one year 2003-2014. Communities with a single year of participation (and therefore not shown on table) were Homer (2003), Kenai (2003), and Sitka (2012).

Source: National Oceanic and Atmospheric Administration 2016c; National Oceanic and Atmospheric Administration 2016b

6 Community-Level Social Impacts by Alternative

As noted in Section 2.0, the community-level impacts analysis of the proposed action is guided largely by the NEPA; EO 12898, Federal Action to Address Environmental Justice in Minority Population and Low-Income Populations; and Magnuson-Stevens Act National Standard 8 – Communities. This section of the community analysis describes the engagement and dependency of fishing communities on the fisheries most likely to be affected by the proposed action alternatives and analyzes the risks to the sustained participation of those fishing communities.

6.1 Potential Distribution of Community-Level Impacts to GOA Trawl Fishery Dependent Communities

6.1.1 Community Engagement, Dependence, Vulnerability, and Risks to Fishing Community Sustained Participation in the GOA Trawl Fisheries

Community engagement (participation) in the GOA groundfish trawl fisheries was detailed in terms of the distribution of sectors across communities in Section 4.0 and by sectors within the context of individual communities in Section 5.0.

- Vulnerability of communities to adverse community-level impacts from the proposed GOA trawl bycatch management revisions is in part a function of dependence of the community on the potentially affected GOA trawl fisheries and the economic resiliency and diversity of the community.

- Dependency is influenced by the relative importance of GOA trawl fisheries to vessels participating directly in those fisheries in comparison to all area, species, and gear fisheries in which those same vessels participate (community GOA trawl sector vessel diversity); the relative importance of the GOA trawl fisheries to all community resident-owned commercial fishing vessels participating in all area, species, and gear fisheries combined (community fleet diversity); the relative importance of GOA trawl-caught deliveries to shore-based processors participating directly in the GOA trawl fisheries in comparison to all area, species, and gear fisheries in which those same processors participate (community GOA trawl sector shore-based processor diversity); the relative importance of GOA trawl-caught deliveries to all shore-based processors operating in the community participating in all area, species, and gear fisheries combined (community shore-based processor diversity); and the relative importance of the overall community fishery sector(s) within the larger community economic base both in terms of private sector business activity and public revenues (community economic diversity).

- Also important to adverse community-level impact outcomes is the specific nature of local engagement in the potentially affected GOA trawl fisheries, related support sectors, and alternative employment, income, business, and public revenue opportunities available within the community as a result of the location, scale, and relative economic diversity of the

community. At their most extreme, potential adverse impacts associated with a proposed action could present a risk to fishing community sustained participation in the GOA trawl fisheries, with sustained participation defined, per National Standard 8, as continued access to the fishery within the constraints of the condition of the resource.

6.1.2 GOA Trawl Fishery Dependency and Vulnerability to Adverse Community-Level Impacts of the Proposed Action Alternatives Among Communities in Alaska

6.1.2.1 Overview

Among the specific GOA trawl communities profiled and assessed as part of this document, the level and nature of engagement in the GOA trawl fishery varies widely. Three communities were directly and substantially engaged in the fishery through both local GOA trawl catcher vessel ownership and local shore-based processing of GOA trawl-caught deliveries (Kodiak, Sand Point, and King Cove); three communities were directly engaged in the fishery exclusively, or almost exclusively, through local GOA trawl catcher vessel ownership (Anchorage, Homer, and Petersburg); and three communities were directly engaged in the fishery exclusively through local shore-based processing of GOA trawl-caught deliveries (Seward, Akutan, and Unalaska/Dutch Harbor).

The relative importance of the GOA trawl fisheries likely to be affected by the proposed GOA trawl bycatch management revisions within the larger local fisheries sector and within the larger local economic base varies widely among the engaged Alaska communities. Similarly, the socioeconomic structure of the engaged communities varies widely along with the relative diversity of their respective local economies.

In general, the types and magnitude of potential social impacts that may occur as a result of the proposed action vary widely by community under the different alternatives. Under Alternative 1, the no action alternative, the GOA trawl fishery would continue to change/evolve as it would be influenced by existing trends, changes in future conditions, and whatever mechanism other than the proposed alternatives, if any, is ultimately chosen to address identified GOA trawl bycatch management issues. As noted elsewhere, the GOA trawl fishery was not static under 2003-2014 existing conditions, as changes in regulations influenced the fishery and participant's behavior was influenced by the knowledge that the implementation of a history-based bycatch management program was a distinct possibility, among other factors. Among other trends, consolidation in some community GOA trawl catcher fleets and shore-based processing occurred over the 2003-2014 period, as noted in the individual community discussions below.

Experience with other history-based catch share-type of management programs that have been previously implemented other in North Pacific fisheries suggest a range of types of social impacts that may be anticipated under Alternative 2. These impacts have been often traced to several types of changes that have occurred in the individual fisheries following program implementation. While recognizing that each fishery and each management program is different, it is possible to list a set of common changes that include, but are not limited to:

- Consolidation of catcher vessels
    - Among many factors influencing the decisions that result in consolidation are:
        - Common ownership of multiple vessels.
        - An initial allocation of quota below "critical mass" that makes either fishing initial allocation quota alone or leasing or buying quota to supplement the initially allocated quota unattractive.
        - Vessel characteristics and how GOA trawl fits into the annual round/fishing portfolio of the vessel.
        - Overall economic viability of the operation.
        - Co-op specific considerations.
        - Vessel owner retirement/exit strategy.
    - The degree of consolidation that would occur ultimately depends on the sum of individual business decisions that cannot be predicted with certainty, but the maximum amount of consolidation that could occur would be determined by ownership and/or vessel use caps.
    - For some other fisheries managed under programs similar in structure to Alternative 2, such as the BSAI pollock and crab fisheries, those fisheries are often the central fishery for the catcher vessels involved; while that is also true for some of the GOA trawl catcher vessel fleet, for a substantial number of the vessels engaged in the GOA trawl fishery the vessels are less specialized and the GOA trawl fishery is one of several important components in a yearly round.
- Redistribution of vessel and quota ownership between communities
    - Movement of vessel ownership and quota ownership toward fewer and larger communities over time has been seen in other programs.
    - Amount of movement depends on the sum of individual business decisions, overall consolidation factors noted above, and efficacy of community protection measures designed to retain quota in specific regions or communities.
    - LLP ownership is less likely to change than quota ownership, as LLPs are necessary to access other fisheries.
- Redistribution of vessel activities
    - Changes in location of vessel activities under some other programs has been influenced by where catcher vessels ended up in co-ops.
    - Changes in patterns of landings have also been influenced/minimized by community protection measures.
    - In general, patterns of GOA trawl-caught landings by community (and processor) are less fluid than in some other fisheries managed under other North Pacific catch share type programs, such as the halibut fishery, where processors can relatively easily accept sporadic deliveries of varying scale; the ability to accept GOA trawl-caught landings is less fluid due to volume and value considerations, along with line start-up, shut-down, and labor logistics and cost considerations.
    - In the GOA trawl fishery, biological factors influencing peak aggregation and peak roe value in turn influence timing of fishing effort in both the Western and Central Gulf, although there have been some differences in timing between the two regions brought about by adjusting cod and pollock trawl effort around other fisheries.

- Changes in vessel/participation costs
    - Changes in costs have been seen in other programs with increases in observer coverage and program management costs.
    - Additional costs have also been incurred in other programs through quota leasing and/or bycatch leasing.
    - Additional costs to operate vessels/participate in the fishery, in turn, impact compensation to skippers and crew.
- Changes in harvester and processor relationships
    - Changes have been seen in these relationships under other programs, but those changes have varied widely by program, based on attributes of the program and the nature of the specific fishery (e.g., the halibut IFQ fishery, where the program is built around harvesters, and the BSAI crab fishery, where processor quota shares and an arbitration system is a part of the program).
    - Changes under other programs, or that occurred in anticipation of other programs, have also included changes in patterns of patterns of vertical integration of harvesting and processing capacity.
- Changes in crew employment
    - Reduction of crew positions have mirrored the overall consolidation of vessels in other programs.
    - Changes in crew working conditions under other programs have included changes in seasonality/days at sea and compensation, including the impact of quota leasing.
    - Within the GOA trawl fishery, it is elsewhere assumed that under Alternatives 1 and 3 there would be more crew positions but less overall revenue for those positions than under Alternative 2, but an unknown under Alternative 2 is how increased observer, co-op, and leasing costs would be calculated in/deducted before calculating crew shares; there is variability in methods of calculating crew shares in the existing fleet.
    - Post-consolidation activities of those vessels that exit the GOA trawl fishery cannot be predicted with certainty, but will strongly influence net program impacts to communities in general and to crew specifically.
- Changes economics of fishery entry
    - The expense of obtaining quota has been seen as an additional financial barrier to entry to the fishery in other programs.
    - This has, in turn, been viewed as making the career transition from deck to wheelhouse more challenging, as well as the career transition from successful ownership of smaller vessels and permits in other fisheries that is used to capitalize ownership of a vessel and permits in the already capital-intensive fishery that is the subject of the new management program. Like the BSAI crab fishery, the GOA trawl fishery is seen as a relatively capital intensive fishery that is frequently not considered an entry-level ownership fishery, but one that is typically aspired to over the course of a career that includes ownership of vessels in other fisheries.
- Consolidation of shore-based processing
    - Among many factors influencing the decision to consolidate several are similar to the factors that influence vessel consolidation:

        - Common ownership of multiple shore-based or shoreside processing facilities; in the BSAI crab fishery, for example, where there was common ownership of shore-based processing facilities and stationary floating processors at the time of program implementation, the use of stationary floating processors has been reduced over time.
        - Facility characteristics and how GOA trawl landings fit into the processing portfolio of the facility.
        - Number and characteristics of shore-based processors in a given community; where a single, high-volume, multi-species processor accepting a relatively high volume of GOA trawl-caught groundfish is present in a community, consolidation of processing away from that community is assumed to be less likely than processing consolidation within a community with multiple shore-based processors.
        - The long-term strategy of individual processing firms.
    - The degree of consolidation that would occur ultimately depends on the sum of individual business decisions that cannot be predicted with certainty, but the maximum amount of consolidation that could occur would be determined by ownership and/or facility use caps.
- <u>Changes in demand for support services</u>
    - The demand for local support services would be driven by many of the factors listed above that would result in:
        - Changes in local GOA trawl catcher vessel ownership that could lessen service demand.
        - Changes in the number of catcher vessels making local landings.
        - Changes in catcher vessel demand for shipwright, welding, electrical, mechanical, hydraulic, and electronics services; vessel provisioning and resupply services; fuel services; gear storage; vessel watch services; and public harbor/infrastructure related services such as moorage, among others.

Under Alternative 3, given that allocations of bycatch would not be linked to fishing history but, rather, equal allocations would be given to any applicant who intends to fish in a future season, it is assumed, consistent with analysis presented in the Regulatory Impact Review (RIR)[77] to which this SIA document is appended, that there would be more applicants than there are existing fishery participants. It is further assumed that the equal allocations and in combination with the assumed increase in the number of applicants would result in at least some current fishery participants being able to continue to fish at their historic levels of participation. Specifically, the greatest impacts would accrue to those vessels most heavily reliant on flatfish in the Central GOA, as the vessels targeting those species have the greatest need for access to bycatch. In general, as stated in the RIR, because vessels would likely continue to race to harvest pollock and Pacific cod TACs, it is expected that about the same number of catcher vessels would fish in the GOA trawl fisheries under Alternative 3 as under Alternative 1.

[77] The *GOA Trawl Bycatch Management – Preliminary Analysis* document includes RIR components; references to the RIR at this stage are synonymous with references to the *GOA Trawl Bycatch Management – Preliminary Analysis* document.

Under Alternative 4, to the extent that the CFA program would succeed in anchoring quota in the 27 CFA qualified communities, the large majority of which (22 of 27 communities or 81 percent) did not directly participate in the GOA trawl fishery during 2003-2014, Alternative 4 would, all things being equal, tend to move quota away from of those communities that did participate in the GOA trawl fishery but would not qualify for CFA status or, potentially, some communities that did participate in the fishery and did qualify for CFA status, and toward communities that have not previously participated in the fishery in order to facilitate new entrants in those communities. The amount of quota that would move and the length of time over which it would move, however, are unknown. Further, the CFA program potentially would reduce quota available for current fishery participants and/or increase costs of accessing that quota, with communities that have historically participated in the fishery but that did not qualify for CFA status being disadvantaged.

The following sections present brief summaries of existing engagement and a qualitative assessment of potential social impacts by community by alternative for each of the earlier profiled communities. Specifically mentioned are circumstances unique to each community that may serve to differentiate impacts between the communities.

6.1.2.2 Kodiak

General

Kodiak was substantially engaged in the GOA trawl fishery in several ways over the period 2003-2014.

- Overall Level of Catcher Vessel Engagement. Kodiak had an annual average of 14.8 and a total of 29 unique resident-owned catcher vessels participating in the fishery over this period.
- Recent Catcher Vessel Engagement. Nine unique Kodiak resident-owned catcher vessels participated in the GOA trawl fishery in all years covered by the data (2003-2014) and a total of 20 unique resident-owned catcher vessels participated in one or more of the most recent 5 years covered by the data (2009-2014).
- Continuity of Recent Catcher Vessel Engagement. Nine Kodiak resident-owned vessels participated in all 12 years covered by the data, while the other 11 catcher vessels that participated in any of the most recent 5 years covered by the data (2009-2014) participated in the fishery between 1 and 11 years total during 2003-2014.
- Ex-Vessel Gross Revenue Data. For Kodiak, 2003-2014 average annual GOA trawl ex-vessel gross revenues for resident-owned GOA trawl catcher vessels were approximately $15.5 million, or about 60 percent of all ex-vessel gross revenues from all fisheries for these catcher vessels.
- Catcher Vessel Crew Engagement. EDR data indicate that Kodiak crew employment aboard GOA trawl catcher vessels in 2015 included 76 unique Kodiak residents holding 31 CFEC gear operator permits and 45 ADFG crew licenses filled 43 positions on GOA trawl catcher vessels owned by residents of Kodiak, the Seattle MSA, other Washington communities, Newport, and other Oregon communities (47, 13, 10, 11, and 3 positions, respectively).

- Catcher Vessel Crew Compensation Data. For the 14 GOA trawl catcher vessels identified as having Kodiak resident ownership in 2015, a total of 85 crew members on those vessels received $6,097,021 in total labor payments from the GOA trawl fishery, including $2,442,728 to captains and $3,654,293 to other crew members. Crew members on these vessels included residents of: Kodiak (47); seven other Alaska communities (Anchor Point, Anchorage, Chiniak, Gustavus, Juneau, Old Harbor, and Palmer) (11); Newport (1); seven other Oregon communities (Beaverton, Lebanon, Port Orford, Redmond, Siletz, Sweet Home, and Waldport) (8); the Seattle MSA; four other Washington communities (Chehalis, Ferndale, Sedro Woolley, and Sequim) (5); four states other than Alaska, Washington and Oregon (California, Illinois, Massachusetts, and Texas); and unknown locations (9).
- Overall Level of Shore-Based Processor Engagement. Merging counts of intent to operate numbers and name variations, a total of 10 unique Kodiak shore-based processing entities accepted GOA trawl-caught deliveries over the years 2003-2014.
- Recent Shore-Based Processor Engagement. Six unique Kodiak shore-based processors accepted GOA trawl-caught deliveries in every year covered by the data, including the most recent years. Of the other 4 shore-based processors, 2 accepted GOA trawl-caught deliveries in the most recent year covered by the data and the other 2 did so within the 4 most recent years covered by the data.
- Continuity of Shore-Based Processor Engagement. Six unique Kodiak shore-based processors accepted GOA trawl-caught deliveries for the 12 consecutive years covered by the data (2003-2014), while the other 4 processors ranged in their overall engagement in the fishery from 3 to 10 of the years in the 2003-2014 period.
- First Wholesale Gross Revenue Data. First wholesale gross revenues from GOA trawl-caught deliveries for Kodiak shore-based processors averaged approximately $41.7 million annually over the period 2003-2014, ranging from approximately $29.5 million (2009) to approximately $52.6 million (2014) in any given year.
- Support Services Engagement. Kodiak is the main regional supplier of support services in the central GOA, including supplying services to the catcher vessels that participate in the GOA trawl fishery.

The scale of Kodiak resident-owned catcher vessel engagement in the GOA trawl fishery during 2003-2014 was substantial relative to resident-owned catcher vessel engagement in other fisheries, particularly in terms of ex-vessel gross revenues (and employment as noted above).

- The Kodiak total resident-owned commercial catcher vessel fleet (all fisheries, all gear types, in all areas) annually averaged 265 vessels over the period 2003-2014.
- Total Kodiak resident-owned commercial catcher vessel ex-vessel gross revenues (all fisheries, all gear types, in all areas) over this same period averaged $138 million, with GOA trawl ex-vessel gross revenues accounting for approximately 11 percent of this total.

The scale of Kodiak shore-based processing engagement in the GOA trawl fishery during 2003-2014 was substantial relative to shore-based processing engagement in other fisheries, particularly in terms of first wholesale gross revenues (and employment as noted elsewhere). For Kodiak shore-based processors, on an annual average basis for the years 2003-2014, ex-vessel gross revenues associated

with GOA trawl-caught deliveries accounted for approximately 28 percent of all ex-vessel gross revenues generated by landings at those processors from all deliveries from all fisheries in all areas caught by all gear types for the period.

For Kodiak, the relatively substantial level of engagement in the GOA trawl fishery in both the catcher vessel and shore-based processing sectors (and through crew employment) makes adverse community-level impacts possible from at least some of the proposed GOA trawl bycatch management alternatives and/or alternative options.

As the center of the Central GOA trawl fishery, Kodiak resident-owned GOA trawl catcher vessels and shore-based processors would benefit from the stability offered by Alternative 2; however, if substantial catcher vessel consolidation were to take place, Kodiak would undoubtedly lose the most crew positions of any Alaska community, both on locally owned vessels and on vessels owned by residents of the Seattle MSA, other Washington communities, Newport, and other Oregon communities. In 2015, more Kodiak residents held crew positions on vessels owned by persons not from their home community than did all Alaska residents from all other communities combined. They also held more crew positions on vessels owned by residents of their own community than did Alaska residents from all other communities combined. As the primary provider of fleet support services in the Central GOA, Kodiak would be particularly sensitive to the effects of vessel consolidation on that sector.

In terms of processor consolidation, Kodiak has already experienced processor consolidation, with two local shore-based processors being purchased by a third within the last few years. At the time of preliminary fieldwork (June 2016), however, the community was expecting a new entrant in the shore-based processor sector, but the operational plans of that processor were unknown.

Depending on the qualifying years interval chosen, the level of engagement of Kodiak in the GOA trawl fishery show some variability whether measured in resident-owned catcher vessel participation or in resident owned GOA trawl endorsed active and inactive groundfish LLP licenses. Kodiak had an annual average of 14.5 and a total of 27 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2003-2012 period, an annual average of 14.2 and a total of 20 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2007-2012 period, and an annual average of 14.6 and 19 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2008-2012 period. Kodiak residents held 21 active and 1 inactive LLPs during the 2003-2012 period, and 19 active and 3 inactive LLPs during the both the 2007-2012 and 2008-2012 periods.

The GOA trawl-caught delivery patterns of Kodiak resident-owned catcher vessels also vary somewhat by the different qualifying year intervals.

- Between 12 and 18 Kodiak resident-owned catcher vessels made GOA trawl-caught deliveries to Kodiak shore-based processors every year during the 2003-2012, 2007-2012, and 2008-2012 periods and, during each of those years, no Kodiak resident-owned vessels made deliveries to any other community without also making deliveries to Kodiak.
- Kodiak resident-owned catcher vessels made GOA trawl-caught deliveries to Sand Point shore-based processors in the three-most recent years included in 6 of the 10 years 2003-2012, 5 of the 6 years 2007-2012, and 4 of the 5 years 2008-2012 periods, including the 3 most recent years in each period. Kodiak resident-owned catcher vessels also made deliveries in the most recent three years in each of periods to Akutan and Seward, with Seward also receiving at least

one GOA trawl-caught delivery from one Kodiak resident-owned catcher vessel in one year (2005) included in the 2003-2012 period only.

- King Cove and Sitka received GOA trawl-caught deliveries from Kodiak resident-owned catcher vessels in one year that was included in all three periods (2011 and 2014, respectively). Finally, Kodiak resident-owned vessels made GOA trawl-caught deliveries to Seattle (likely a floating processor operating off of Alaska) in 3 years 2003-2012 and 2 years in the other two periods.

Using 2014 homeport data as a proxy for other potential GOA trawl catcher vessel activity in communities that may or may not correspond to the community of catcher vessel ownership, 16 of 18 Kodiak resident-owned GOA trawl catcher vessel were also homeported in Kodiak (with the other two homeported in Sand Point and Juneau).

Depending on the qualifying years interval chosen, the level of engagement of Kodiak in the GOA trawl fishery shows little variability as measured in the number of shore-based processors accepting GOA trawl-caught deliveries, with 10 unique shore-based processors accepting GOA trawl-caught deliveries in each of the three periods 2003-2012, 2007-2012, and 2008-2012. Six Kodiak shore-based processors accepted GOA trawl-caught deliveries each year in every period, 2 missed 2 years (2003 and 2005 in one case and 2005 and 2012 in the other), 1 participated in 5 of the most recent 6 years in each period (all but 2012), and 1 participated in the most recent 3 years in each period.

The pattern of community of resident ownership of catcher vessels making GOA trawl-caught deliveries to shore-based processors in Kodiak also varied somewhat between different qualifying year intervals.

- Multiple catcher vessels owned by residents of Kodiak, Newport, other communities in Oregon, the Seattle MSA, and other Washington communities made GOA trawl-caught deliveries to Kodiak shore-based processors every year 2003-2012, 2007-2012, and 2008-2012.
- Kodiak shore-based processors accepted GOA trawl-caught deliveries from catcher vessels owned by residents of Anchor Point, Anchorage, Homer, Nikolaevsk, and Sand Point in the 2003-2012 period, but vessels owned by residents of these communities made no GOA trawl-caught deliveries to Kodiak in either 2007-2012 or 2008-2012.
- Catcher vessels owned by residents of Petersburg make GOA trawl-caught deliveries to Kodiak shore-based processors in 3 years in the 2003-2012 period, but only 1 year in both other periods.
- Kodiak shore-based processors accepted GOA trawl-caught deliveries from at least one catcher vessel owned by residents of states other than Alaska, Washington, and Oregon in all but two years (2010 and 2011) included in each of the three periods.

Under Alternative 3, Kodiak is uniquely vulnerable among Alaska communities to adverse impacts as the greatest impacts under this alternative would accrue to those vessels most heavily reliant on flatfish in the Central GOA, given that those are the vessels targeting those species have the greatest need for access to bycatch. This includes both Kodiak resident-owned vessels and other vessels delivering to Kodiak shore-based processors.

Kodiak is not a CQE eligible communities and but would qualify for inclusion in a CFA under Alternative 4. If Alternative 4 were to be selected, to the extent that the CFA program would succeed

in anchoring quota in CFA qualified communities, the large majority of which did not directly participate in the GOA trawl fishery during 2003-2014, Alternative 4 could, all things being equal, tend to move quota out of those communities that did participate in the GOA trawl fishery, potentially including CFA-qualified communities such as Kodiak. The amount of quota that would move and the length of time over which it would move, however, are unknown.

Environmental Justice Concerns

No demographic data, including minority or low-income status information, are available for the specific catcher vessel owners, skippers, and crew from Kodiak involved in the GOA trawl fishery who may feel the most direct impacts associated with the proposed alternatives. Data from the 2014 AFSC GOA trawl social survey would suggest that relatively few Kodiak catcher vessel owners and crew members of minority populations (89.9 percent of respondents identified themselves as white/Caucasian and 3.7 percent identified themselves as Hispanic or Latino), the situation is complicated somewhat by EDR data that suggest that 56.0 percent of crew members from Kodiak work aboard vessels owned by residents of the community, these crew members account for about 54.7 percent of all crew members serving on the GOA trawl vessels owned by residents of Kodiak.

- For the overall community, however, the most recent data available indicate that about 62.7 percent Kodiak's population consists of minority residents, with about 11.7 percent of Kodiak's population considered low-income.
- Kodiak's minority population is substantially greater than the minority population percentage of the general population of Alaska, which is 37.1 percent minority; Kodiak's low-income population is somewhat greater than the low-income population percentage of the general population of Alaska, which is 10.1 percent low-income.

No workforce demographic data, including minority or low-income status information, are available for the specific shore-based processing entities in Kodiak involved in the GOA trawl fishery that may feel the most direct impacts associated with the proposed alternatives, other than data from the 2014 AFSC GOA trawl social survey, and then only for worker minority status. Those data suggest 6.0 percent of processing worker respondents identified themselves as white/Caucasian and 19.1 percent identified themselves as Hispanic or Latino. As noted elsewhere, Kodiak group quarter census data cannot be used a proxy for processor demographics as they can for other major fishing ports in southwestern Alaska, due to the largely residential nature of the Kodiak processing workforce and the fact that much of group quarter housing that does exist in the community is not affiliated with processing entities.

Assuming the demographic patterns of those residents engaged in the catcher vessel component of the GOA trawl fishery in Kodiak reflect the 2014 AFSC GOA trawl social survey findings, if high and adverse impacts were to accrue to the catcher vessel sector in Kodiak, under any of the alternatives, disproportionate impacts to minority populations in Kodiak would be unlikely. If, however, catcher vessel crew more closely reflects the demographics of the community as a whole, or Kodiak were to experience community-level impacts as a result of any of the alternatives, disproportionate impacts to minority populations could potentially be of concern, but disproportionate impacts to low-income populations would be less likely to be of concern.

Assuming the demographic patterns of those residents most directly engaged in the shore-based processing component of GOA trawl fishery in King cove mirror the results of the 2014 AFSC GOA trawl social survey in terms of minority populations, if high and adverse impacts were to accrue to the Kodiak shore-based processor sector under any of the alternatives, disproportionate impacts to minority populations would potentially be of concern.

6.1.2.3 Sand Point and King Cove

General

Sand Point and King Cove had similar patterns and somewhat similar levels of direct engagement in the GOA trawl fishery over the period 2003-2014.

- Overall Level of Catcher Vessel Engagement. Sand Point had an annual average of 9.4 and a total of 14 unique resident-owned catcher vessels participating in the fishery over this period, while King Cove had an annual average of 3.3 and a total of 6 unique resident-owned catcher vessels do so.
- Recent Catcher Vessel Engagement. Seven unique Sand Point resident-owned catcher vessels participated in the GOA trawl fishery in all years covered by the data (2003-2014) and a total of 11 unique resident-owned catcher vessels participated in one or more of the most recent 5 years covered by the data (2009-2014). One unique King Cove resident-owned catcher vessel participated in the GOA trawl fishery in all but 1 year covered by the data (2004-2014) and a total of 6 unique resident-owned catcher vessels participated in one or more of the most recent 5 years covered by the data (2009-2014).
- Continuity of Recent Catcher Vessel Engagement. Seven Sand Point resident-owned vessels participated in all 12 years covered by the data, while the other 4 catcher vessels that participated in any of the most recent 5 years covered by the data (2009-2014) participated in the fishery between 5 and 8 years total during 2003-2012. One King Cove resident-owned vessel participated in 11 out of 12 years covered by the data, with the other 5 catcher vessels that participated in any of the most recent 5 years covered by the data (2009-2014) participated in the fishery between 2 and 9 years total during 2003-2012.
- Ex-Vessel Gross Revenue Data. For Sand Point, 2003-2014 average annual GOA trawl ex-vessel gross revenues for resident-owned GOA trawl catcher vessels were approximately $3.75 million, or about 38 percent of all ex-vessel gross revenues from all fisheries for these catcher vessels. For King Cove, 2003-2014 average annual ex-vessel gross revenues for resident-owned GOA trawl catcher vessels cannot be disclosed due to data confidentiality considerations.
- Catcher Vessel Crew Engagement. EDR data indicate that Sand Point and King Cove crew employment aboard GOA trawl catcher vessels in 2015 included:
    - 40 unique Sand Point residents holding 18 CFEC gear operator permits and 22 ADFG crew licenses filled 43 positions on GOA trawl catcher vessels owned by residents of Sand Point, King Cove, and the Seattle MSA (34, 1, and 8 positions, respectively).

  - 9 unique King Cove residents holding 4 CFEC gear operator permits and 5 ADFG crew licenses filled 9 positions on GOA trawl catcher vessels owned by residents of King Cove and Sand Point (8 and 1 positions, respectively).
- Catcher Vessel Crew Compensation Data.
  - For the 8 GOA trawl catcher vessels identified as having Sand Point resident ownership in 2015, a total of 45 crew members on those vessels received $2,264,642 in total labor payments from the GOA trawl fishery, including $807,459 to captains and $1,457,183 to other crew members. Crew members on these vessels included residents of Sand Point (34), two other Alaska communities [Anchorage and King Cove] (3), and unknown locations (11).
  - For King Cove, labor payments to crews on resident-owned GOA catcher vessels cannot be disclosed due to data confidentiality considerations. Crew members on these vessels included residents of King Cove (8), another Alaska community [Sand Point] (1), a Washington community outside of the Seattle MSA (1), and unknown locations (3).
- Overall Level of Shore-Based Processor Engagement. Sand Point had an annual average of 1.0 and 1 unique shore-based processor accepting GOA trawl-caught deliveries during 2003-2014 over this period; King Cove also had an annual average of 1.0 and 1 unique shore-based processor do so.
- Recent Shore-Based Processor Engagement. One unique Sand Point shore-based processor accepted GOA trawl-caught deliveries in every year covered by the data, including the most recent years; one unique King Cove shore-based processor also did so.
- Continuity of Shore-Based Processor Engagement. One unique Sand Point shore-based processor and one unique King Cove shore-based processor accepted GOA trawl-caught deliveries for the 12 consecutive years covered by the data (2003-2014).
- Confidentiality of First Wholesale Gross Revenue Data. For both Sand Point and King Cove, 2003-2014 average annual first wholesale gross revenues for shore-based processors accepting trawl-caught deliveries cannot be disclosed due to data confidentiality considerations.
- Support Services Engagement. Both Sand Point and King Cove have a limited number of small businesses that provide support services to the fleet engaged in the GOA trawl fishery, including: a handful of independent one- or two-person local enterprises that focus on welding, fabrication, mechanical, and shipwright services; general and marine supply stores; lodging, food, and beverage suppliers; and several miscellaneous, small-scale service providers.

The scale of Sand Point and King Cove resident-owned catcher vessel engagement in the GOA trawl fishery during 2003-2014 was substantial relative to resident-owned catcher vessel engagement in other fisheries, particularly in terms of ex-vessel gross revenues (and employment as noted above).

- The Sand Point and King Cove total resident-owned commercial catcher vessel fleets (all fisheries, all gear types, in all areas) annually averaged 76.0 and 32.3 vessels, respectively, over the period 2003-2014.
- Total Sand Point and King Cove resident-owned commercial catcher vessel ex-vessel gross revenues (all fisheries, all gear types, in all areas) over this same period averaged $18.1 million and $9.2 million, respectively, with GOA trawl ex-vessel gross revenues accounting for

approximately 11 percent of the Sand Point total (and the GOA trawl ex-vessel revenue percentage for King Cove being confidential).

Although all revenue data are confidential, a general knowledge of the industry would suggest that the scale of both Sand Point and King Cove shore-based processing engagement in the GOA trawl fishery during 2003-2014 was substantial relative to shore-based processing engagement in other fisheries, particularly in terms of first wholesale gross revenues (and employment as noted elsewhere).

For both Sand Point and King Cove, the relatively substantial level of engagement in the GOA trawl fishery combined with the modest size and relative lack of diversity of the local economy makes adverse community-level impacts from at least some of the proposed GOA trawl bycatch management alternatives and/or alternative options likely.

A recent study for the AEB (Reedy 2015) suggests that one possible scenario in vessel consolidation for Sand Point and King Cove would be for vessels with common ownership to consolidate along with another vessel exiting the fishery altogether, reducing the Sand Point GOA trawl catcher vessel fleet from 12 to 10 vessels, with a net loss of 8 crew positions, and reducing the King Cove GOA trawl catcher vessel fleet from 6 to 4 vessels, with a net loss of 9 crew positions; this same study also provided a scenario of a net loss of 12 crew positions on King Cove vessels when the 100 percent observer coverage was taken into account. EDR data suggest that Sand Point and King Cove residents also held crew positions on vessels from outside of their home communities in 2015, which could also be at risk through consolidation. GOA trawl vessels in Sand Point and King Cove may be less likely to consolidate than those in Kodiak, as the participating vessels in these communities are versatile 58-footers. The GOA trawl fishery represents the winter fishery in the annual round of these vessels, with few if any viable alternatives to otherwise keep vessels active during that time of the year and providing a substantial part of the year's income for their owners.

In terms of support services, in addition to those provided through the local shore-based processors, both communities have a relatively modest vessel support sector that has experienced vessel consolidation before under several different fishery management programs. Except for a couple of the general stores owned by larger entities and lodging and beverage based businesses owned by local corporations, these businesses are owned by families or individuals and primarily employ one or two persons, with few exceptions. Based on their past histories, these businesses are expected to survive, but to experience adverse impacts if substantial vessel consolidation occurs.

In terms of processor consolidation, as both Sand Point and King Cove are the location of a single, large, multi-species, high volume, shore-based processing facility, neither community is likely to experience adverse impacts from processor consolidation.

Depending on the qualifying years interval chosen, the level of engagement of Sand Point and King Cove in the GOA trawl fishery show some variability whether measured in resident-owned catcher vessel participation or in resident owned GOA trawl endorsed active and inactive groundfish LLP licenses.

- Sand Point had an annual average of 9.9 and a total of 14 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2003-2012 period, an annual average of 8.8 and a total of 12 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2007-2012 period, and an annual average of 8.6 and 12 unique resident-owned catcher

vessels participating in the GOA trawl fishery over the 2008-2012 period. Sand Point residents held 7 active and 5 inactive LLPs during the 2003-2012 period, and 6 active and 6 inactive LLPs during the both the 2007-2012 and 2008-2012 periods.

- King Cove had an annual average of 3.4 and a total of 6 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2003-2012 period, an annual average of 3.7 and a total of 6 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2007-2012 period, and an annual average of 3.6 and 6 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2008-2012 period. King Cove residents held 5 active and 1 inactive LLP during all three periods 2003-2012, 2007-2012, and 2008-2012.

The GOA trawl-caught delivery patterns of Sand Point and King Cove resident-owned catcher vessels also vary somewhat by the different qualifying year intervals.

- Sand Point resident-owned catcher vessels made GOA trawl-caught deliveries to Kodiak shore-based processors over 2 years during the 2003-2012 period, but did not make any deliveries to Kodiak during the other two periods. For all three periods, Sand Point resident-owned vessel GOA trawl-caught deliveries were heavily focused on Sand Point with a strong secondary focus on King Cove, with multiple vessels delivering to each community every year. The only other communities receiving GOA trawl-caught deliveries from Sand Point resident-owned catcher vessels were deliveries made in multiple years to Akutan and in a single year to Seattle (which, in reality, was likely a floating processor operating off of Alaska) in all three periods.
- For all three periods, King Cove resident-owned vessel GOA trawl-caught deliveries were focused every year exclusively on King Cove, except for 1 King Cove resident-owned catcher vessel that made deliveries to Seattle (which, in reality, was likely a floating processor operating off of Alaska) in 1 year (2012) that is included in all three periods.

Using 2014 homeport data as a proxy for other potential GOA trawl catcher vessel activity in communities that may or may not correspond to the community of catcher vessel ownership, all 7 Sand Point resident-owned GOA trawl catcher vessel were also homeported in Sand Point. Of the 3 King Cove resident-owned vessels, 1 was also homeported in King Cove, while the other two were homeported elsewhere, 1 in Metlakatla and 1 in the Seattle MSA.

Depending on the qualifying years interval chosen, the level of engagement of Sand Point and King Cove in the GOA trawl fishery show no variability as measured in the number of shore-based processors accepting GOA trawl-caught deliveries.

- Sand Point had an annual average of 1.0 and a total of 1 unique shore-based processor participating in the GOA trawl fishery over all three periods 2003-2012, 2007-2012, and 2008-2012.
- King Cove had an annual average of 1.0 and a total of 1 unique shore-based processor participating in the GOA trawl fishery over all three periods 2003-2012, 2007-2012, and 2008-2012.

The pattern of community of resident ownership of catcher vessels making GOA trawl-caught deliveries to shore-based processors in Sand Point and King Cove also varied somewhat between different qualifying year intervals.

- The Sand Point shore-based processor accepted GOA trawl-caught deliveries from catcher vessels owned by residents of a wide range of communities during all three periods. Catcher vessels owned by residents of Homer and Juneau made GOA trawl-caught deliveries to Sand Point only in the 2003-2012 period, but multiple catcher vessels owned by residents of Sand Point and the Seattle MSA made GOA trawl-caught deliveries to Sand Point every year during the 2003-2012, 2007-2012, and 2008-2012 periods. Catcher vessels owned by Kodiak and Petersburg residents made GOA trawl-caught deliveries in multiple years during all three periods. Additionally, 2 Newport resident-owned catcher vessels made GOA trawl-caught deliveries to Sand Point in 2003-2012, while 1 did so in 2007-2012 and 2008-2012; catcher vessels owned by residents of states other than Alaska, Washington, and Oregon made deliveries to Sand Point in 2 years during the 2003-2012 and 2007-2012 periods, and 1 year during the 2008-2012 period.
- The King Cove shore-based processor accepted GOA trawl-caught deliveries from catcher vessels owned by residents of a wide range of communities during all three periods. A catcher vessel owned by a resident of Newport made GOA trawl-caught deliveries to King Cove only in the 2003-2012 period, but multiple catcher vessels owned by residents of King Cove, Sand Point, and the Seattle MSA made GOA trawl-caught deliveries to King Cove every year during the 2003-2012, 2007-2012, and 2008-2012 periods. Catcher vessels owned by residents of Anchorage, Petersburg, and states other than Alaska, Washington, and Oregon made GOA trawl-caught deliveries in multiple years during all three periods. Additionally, 1 Kodiak resident-owned catcher vessel made GOA trawl-caught deliveries to King Cove in one year (2011) that was included in all three periods.

The potential impacts of Alternative 3 are not as clear on Sand Point and King Cove vessels as they would be on Kodiak vessels. *<< this paragraph to be revisited/expanded following direction coming out of the December 2016 Council meetings and the ultimate decision on fieldwork and/or other follow-up in the community >>*

Both Sand Point and King Cove are CQE eligible communities and both would qualify for inclusion in a CFA under Alternative 4. If Alternative 4 were to be selected, to the extent that the CFA program would succeed in anchoring quota in CFA qualified communities, the large majority of which did not directly participate in the GOA trawl fishery during 2003-2014, Alternative 4 could, all things being equal, tend to move quota out of those communities that did participate in the GOA trawl fishery, potentially including CFA-qualified communities, such as Sand Point and King Cove. The amount of quota that would move and the length of time over which it would move, however, are unknown.

Environmental Justice Concerns

No demographic data, including minority or low-income status information, are available for the specific catcher vessel owners, skippers, and crew from Sand Point or King Cove involved in the GOA trawl fishery who may feel the most direct impacts associated with the proposed alternatives. Data from the 2014 AFSC GOA trawl social survey would suggest that 48.1 percent of Sand Point catcher vessel

owners and crew and 54.5 percent of King Cove catcher vessel owners and crew members of minority populations (almost all of whom were Alaska Native individuals in both cases), the situation is complicated somewhat by EDR data that suggest that while 79.1 percent of crew members from Sand Point and 88.9 percent of crew members from King Cove work aboard vessels owned by residents of their respective communities, these crew members account for about 70.8 and 61.5 percent of all crew members serving on the GOA trawl vessels owned by residents of their respective communities.

- For the communities as a whole, however, the most recent data available indicate that about 86.1 percent Sand Point's population consists of minority residents, with about 17.6 percent of the population considered low-income, while about 89.9 percent King Cove's population consists of minority residents, with about 17.9 percent of the population considered low-income.
- Both figures for both communities are substantially greater than the minority population percentage and the low-income population percentage of the general population of Alaska, which is 37.1 percent minority and 10.1 percent low-income population, respectively.

No workforce demographic data, including minority or low-income status information, are available for the specific shore-based processing entities in Sand Point or King Cove involved in the GOA trawl fishery that may feel the most direct impacts associated with the proposed alternatives. In both Sand Point and King Cove, however, past studies for the NPFMC have shown that shore-based processing workers have tended to be demographically (and socioculturally) relatively distinct from the rest of the local population; processing workers in both communities are overwhelmingly recruited from a labor pool from outside the community, overwhelmingly live in group quarters supplied on-site by the locally operating processing companies, and have tended to include a high proportion of non-White (and non-Alaska Native) minority workers. Due to the almost exclusive use of group quarters by processing workers (other than by some processing management personnel) in both communities, it is possible to estimate the minority population component (but not the low-income population component) of the shore-based processor workforce population.

- For both Sand Point and King Cove, using group quarter resident demographic data as a proxy for shore-based processing worker demographic data, the minority population component of the shore-based processing workforce is greater than the minority component of the overall community population, as well as substantially greater than the minority component of the general population of the state of Alaska.
- As of 2010, based on a combination of race and ethnicity, 96.9 percent of Sand Point's group quarters population consisted of minority residents and 94.5 percent of King Cove's group quarters population consisted of minority residents. Also, as of 2010, those living in group quarters accounted for approximately 35.9 percent of the total population of Sand Point and approximately 46.7 percent of the total population of King Cove.

Assuming the demographic patterns of those residents engaged in the catcher vessel component of the GOA trawl fishery in Sand Point and King Cove mirror those of their respective communities as a whole and/or reflect the 2014 AFSC GOA trawl social survey findings, if high and adverse impacts were to accrue to those communities, or to the catcher vessel sector in these communities in particular,

under any of the alternatives, disproportionate impacts to minority populations and/or low-income populations would potentially be of concern.

Assuming the demographic patterns of those residents most directly engaged in the shore-based processing component of GOA trawl fishery in Sand Point and King Cove mirror those living in group quarters in their respective communities in terms of minority populations, if high and adverse impacts were to accrue to those communities, or the shore-based processor sector in these communities in particular, under any of the alternatives, disproportionate impacts to minority populations would potentially be of concern.

6.1.2.4 Anchorage and Petersburg

General

Anchorage and Petersburg had similar patterns and levels of direct engagement in the GOA trawl fishery over the period 2003-2014.

- Overall Level of Catcher Vessel Engagement. Anchorage had an annual average of 1.3 and a total of 4 unique resident-owned catcher vessels participating in the fishery over this period, while Petersburg had an annual average of 1.1 and a total of 3 unique resident-owned catcher vessels do so.
- Recent Catcher Vessel Engagement. Two unique Anchorage resident-owned catcher vessels participated in the GOA trawl fishery in the 9 most recent years covered by the data (2006-2014), and only 1 vessel participated in the fishery for more than 2 of those years. Similarly, 2 unique Petersburg resident-owned catcher vessels have participated in the GOA trawl fishery in the 7 most recent years covered by the data (2008-2014), and only 1 vessel has participated in more than 1 of those years.
- Continuity of Recent Catcher Vessel Engagement. Both communities had 1 unique vessel with a marked greater continuity of recent participation in the GOA trawl fishery than other GOA trawl resident-owned catcher vessels: 1 Anchorage resident-owned vessel participated in each of the 10 most recent years covered by the data, while 1 Petersburg resident owned vessel participated in each of the 7 most recent years covered by the data.
- Confidentiality of Ex-Vessel Gross Revenue Data. For both Anchorage and Petersburg, 2003-2014 average annual ex-vessel gross revenues for resident-owned GOA trawl catcher vessels cannot be disclosed due to data confidentiality considerations.
- Catcher Vessel Crew Engagement. EDR data indicate that Anchorage and Petersburg crew employment aboard GOA trawl catcher vessels was relatively limited in 2015:
    - 8 unique Anchorage residents holding 3 CFEC gear operator permits and 5 ADFG crew licenses filled 8 positions on GOA trawl catcher vessels owned by residents of Kodiak, Sand Point, the Seattle MSA, Bellingham WA, and Independence OR (3, 2, 1, 1, and 1 positions, respectively).
    - 4 unique Petersburg residents holding 2 CFEC gear operator permits and 2 ADFG crew licenses filled 4 positions on GOA trawl catcher vessels owned by residents of Petersburg and the Seattle MSA (3 and 1 positions, respectively).

- Confidentiality of Catcher Vessel Crew Compensation Data. For both Anchorage and Petersburg, labor payments to resident GOA catcher vessel crew members cannot be disclosed due to data confidentiality considerations.
- Shore-Based Processor Engagement. No shore-based processors in either Anchorage or Petersburg accepted GOA trawl-caught deliveries during this period.
- Support Services Engagement. Neither Anchorage nor Petersburg is known to provide substantial support services to the GOA trawl fishery.

The scale of Anchorage and Petersburg resident-owned catcher vessel engagement in the GOA trawl fishery during 2003-2014 was relatively modest compared to resident-owned catcher vessel engagement in other fisheries.

- The Anchorage and Petersburg total resident-owned commercial catcher vessel fleets (all fisheries, all gear types, in all areas) annually averaged 28.1 and 97.3 vessels, respectively, over the period 2003-2014.
- Total Anchorage and Petersburg resident-owned commercial catcher vessel ex-vessel gross revenues (all fisheries, all gear types, in all areas) over this same period averaged $9.9 million and $51.9 million, respectively.

For Anchorage, the relatively modest level of engagement in the GOA trawl fishery combined with the size and relative diversity of the local economy makes adverse community-level impacts from any of the proposed GOA trawl bycatch management alternatives unlikely, although some adverse impacts may be experienced at the individual enterprise level, depending on the alternative.

Petersburg also has a relatively modest level of engagement in the GOA trawl fishery both in absolute terms and with respect to the local importance of other Southeast Alaska fisheries. While not having a large or particularly diversified economy compared to Anchorage, Petersburg is not exclusively dependent on fisheries, given the local importance of outdoor tourism-oriented enterprises and a relatively large government sector, although it is important to note that Petersburg's economy has been less diversified in recent years following the local exit of the timber industry. As a result of these combined factors, none of the proposed GOA trawl bycatch management alternatives are likely to result in adverse community-level impacts in Petersburg, although some adverse impacts may be experienced at the individual enterprise level, depending on the alternative.

Depending on the qualifying years interval chosen, the level of engagement of Anchorage and Petersburg in the GOA trawl fishery show some variability whether measured in resident-owned catcher vessel participation or in resident owned GOA trawl endorsed active and inactive groundfish LLP licenses.

- Anchorage had an annual average of 1.2 and a total of 3 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2003-2012 period, and an annual average of 1.0 and 1 unique resident-owned catcher vessel participating in the GOA trawl fishery over both the 2007-2012 and 2008-2012 periods. Anchorage residents held 2 active and 0 inactive LLPs during all three periods.

- Petersburg had an annual average of 1.0 and a total of 2 unique resident-owned catcher vessels participating in the GOA trawl fishery over both the 2003-2012 and 2006-2012 periods, and an

annual average of 1.0 and 1 unique resident-owned catcher vessel participating in the GOA trawl fishery in the 2008-2012 period. Petersburg residents held 2 active and 0 inactive LLPs during the 2003-2012 period, and 1 active and 1 inactive LLP during the both the 2007-2012 and 2008-2012 periods.

The GOA trawl-caught delivery patterns of Anchorage and Petersburg resident-owned catcher vessels also vary by the different qualifying year intervals.

- Anchorage resident-owned catcher vessels made GOA trawl-caught deliveries to Kodiak shore-based processors over 3 years during the 2003-2012 period, but did not make any deliveries to Kodiak during the other two periods. For all three periods, Anchorage resident-owned vessel GOA trawl-caught deliveries were heavily focused on King Cove (with deliveries made to that community all but one year 2003-2012 and each year during the 2007-2012 and 2008-2012 periods). The only other communities receiving GOA trawl-caught deliveries from Anchorage resident-owned catcher vessels were deliveries made in 1 year each to Akutan and Seattle (which, in reality, was likely a floating processor operating off Alaska) in all three periods.
- For all three periods, Petersburg resident-owned vessel GOA trawl-caught deliveries were focused largely on King Cove, as deliveries made to that community all but the two most recent years during each of the three periods, with a secondary focus on Sand Point, as deliveries were made to that community in each of the 3 most recent years during each of the three periods. The only other communities receiving GOA trawl-caught deliveries from Petersburg resident-owned catcher vessels were deliveries made in 1 year each to Kodiak and Seattle (which, in reality, was likely a floating processor operating off of Alaska) in all three periods.

Using 2014 homeport data as a proxy for other potential GOA trawl catcher vessel activity in communities that may or may not correspond to the community of catcher vessel ownership, neither Anchorage resident-owned GOA trawl catcher vessel was homeported in Anchorage: 1 was homeported in King Cove and 1 was homeported in Juneau. Both Petersburg resident-owned vessels were also homeported in Petersburg.

Neither Anchorage nor Petersburg are CQE eligible communities (similar to Kodiak, Homer, Seward, Akutan, and Unalaska/Dutch Harbor, the other Alaska communities profiled as being substantially and/or relatively consistently engaged in the GOA trawl fishery, exclusive of Sand Point and King Cove). Neither Anchorage nor Petersburg would qualify for inclusion in a CFA under Alternative 4 (similar to Akutan and Unalaska/Dutch Harbor, but unlike Kodiak, Homer, and Seward). If Alternative 4 were to be selected, to the extent that the CFA program would succeed in anchoring quota in CFA qualified communities, the large majority of which did not directly participate in the GOA trawl fishery during 2003-2014, Alternative 4 would, all things being equal, tend to move quota out of those communities that did participate in the GOA trawl fishery but would not qualify for CFA status, including Anchorage and Petersburg. The amount of quota that would move and the length of time over which it would move, however, are unknown.

Environmental Justice Concerns

No demographic data, including minority or low-income status information, are available for the specific catcher vessel owners, skippers, and crew from Anchorage or Petersburg involved in the GOA trawl fishery who may feel the most direct impacts associated with the proposed alternatives.

- For the communities as a whole, however, the most recent data available indicate that about 37.4 percent Anchorage's population consists of minority residents, with about 8.3 percent of the population considered low-income, while about 21.8 percent Petersburg's population consists of minority residents, with about 10.2 percent of the population considered low-income.
- Neither figure for either community is substantially greater than the minority population percentage or the low-income population percentage of the general population of Alaska, which is 37.1 percent minority and 10.1 percent low-income population, respectively.

Assuming the demographic patterns of those residents engaged in the GOA trawl fishery in Anchorage and Petersburg mirror those of their respective communities as a whole, no disproportionate high and adverse impacts to minority populations or low-income populations in Anchorage or Petersburg are anticipated under any of the alternatives.

6.1.2.5 Homer

General

Homer patterns of direct engagement in the GOA trawl fishery were roughly similar to those of Anchorage and Petersburg over the period 2003-2014, but with somewhat less participation in general and markedly less recent participation in particular. Homer was also the location of a shore-based processor that accepted GOA trawl-caught deliveries during the period 2003-2014 and, although it only did so on a very limited basis, was the only Alaska community other than Kodiak, Sand Point, and King Cove to participate in the GOA trawl fishery during the 2003-2014 period both through resident ownership of GOA trawl catcher vessels and through local operation of a shore-based processor that accepted GOA trawl-caught deliveries.

- Overall Level of Catcher Vessel Engagement. Homer had an annual average of 0.3 and a total of 2 unique resident-owned catcher vessels participating in the fishery over this period.
- Recent Catcher Vessel Engagement. No Homer resident-owned catcher vessels have participated in the GOA trawl fishery in the 8 most recent years covered by the data (2007-2014).
- Continuity of Recent Catcher Vessel Engagement. No Homer resident-owned catcher vessel is shown in the data as participating in the GOA trawl fishery more recently than 2006 or for more than any 3 years 2003-2014; only 1 Homer resident-owned catcher vessel participated in the fishery 2 years in a row.

- Confidentiality of Ex-Vessel Gross Revenue Data. 2003-2014 average annual ex-vessel gross revenues for Homer resident-owned GOA trawl catcher vessels cannot be disclosed due to data confidentiality considerations.
- Catcher Vessel Crew Engagement. EDR data indicate that no Homer residents were employed as crew aboard GOA trawl catcher vessels in 2015.
- Shore-Based Processor Engagement. One shore-based processor in Homer accepted GOA trawl-caught deliveries during 1 year (2003) during the 2003-2014 this period.
- Confidentiality of First Wholesale Gross Revenues. First wholesale gross revenues from GOA trawl-caught deliveries to Homer shore-based processors cannot be disclosed due to data confidentiality considerations.
- Support Services Engagement. Homer is not known to provide substantial support services to the GOA trawl fishery.

The scale of Homer resident-owned catcher vessel engagement in the GOA trawl fishery during 2003-2014 was relatively modest compared to resident-owned catcher vessel engagement in other fisheries, with the overall resident fleet size and associated ex-vessel gross revenues being of a similar magnitude of those seen in Petersburg.

- The Homer total resident-owned commercial catcher vessel fleets (all fisheries, all gear types, in all areas) annually averaged 90.4 vessels over the period 2003-2014.
- Total Homer resident-owned commercial catcher vessel ex-vessel gross revenues (all fisheries, all gear types, in all areas) over this same period averaged $41.8 million, respectively.

Homer has a modest level of engagement in the GOA trawl fishery both in absolute terms and with respect to the local importance of other area fisheries, especially the halibut and salmon fisheries. While not having a large or particularly diversified economy compared to Anchorage, Homer, like Petersburg, is not exclusively dependent on fisheries, given the local importance of outdoor tourism-oriented enterprises in particular and relatively active health care, construction, and government sectors. As a result of these combined factors, none of the proposed GOA trawl bycatch management alternatives are likely to result in adverse community-level impacts in Homer, and the lack of recent participation in the GOA trawl fishery make adverse impacts unlikely at the individual enterprise level as well.

Depending on the qualifying years interval chosen, the level of engagement of Homer in the GOA trawl fishery show some variability whether measured in resident-owned catcher vessel participation or in resident owned GOA trawl endorsed active and inactive groundfish LLP licenses.

- Homer had an annual average of 0.4 and a total of 2 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2003-2012 period. No Homer resident-owned catcher vessel participated in the GOA trawl fishery during either the 2007-2012 or 2008-2012 periods.

- Homer residents held 3 active and 0 inactive LLPs during both the 2003-2012 and 2007-2012 periods, and 2 active and 1 inactive LLP during the 2008-2012 period.

The GOA trawl-caught delivery patterns of Homer resident-owned catcher vessels also vary by the different qualifying year intervals.

- Homer resident-owned catcher vessels made GOA trawl-caught deliveries to Sand Point and Kodiak shore-based processors over 3 and 1 year(s), respectively, during the 2003-2012 period.
- No Homer resident-owned catcher vessels made GOA trawl-caught deliveries to any community during the 2007-2012 or 2008-2012 periods.

Homer is not a CQE eligible community (similar to Kodiak, Anchorage, Petersburg, Seward, Akutan, and Unalaska/Dutch Harbor, the other Alaska communities profiled as being substantially and/or relatively consistently engaged in the GOA trawl fishery, exclusive of Sand Point and King Cove). Homer, however, would qualify for inclusion in a CFA under Alternative 4 (similar to Kodiak and Seward, but unlike Anchorage, Petersburg, Akutan, and Unalaska/Dutch Harbor).

Environmental Justice Concerns

No demographic data, including minority or low-income status information, are available for the specific catcher vessel owners, skippers, and crew from Homer involved in the GOA trawl fishery who may feel the most direct impacts associated with the proposed alternatives.

- For the community as a whole, however, the most recent data available indicate that about 11.7 percent Homer's population consists of minority residents, with about 12.1 percent of the population considered low-income.
- Homer's minority population percentage is not greater than the minority population percentage of the general population of Alaska (37.1 percent), but its low-income population percentage is somewhat greater than that of the low-income population percentage of the general population of Alaska (10.1 percent).

Assuming the demographic patterns of those residents engaged in the GOA trawl fishery in Homer mirror those of the community as a whole, no disproportionate high and adverse impacts to minority populations in Homer are anticipated under any of the alternatives. In the case of low-income populations, while the community has a somewhat greater proportion of low-income residents than does the general population of the state as a whole, there are no indications that low-income residents of Homer would experience disproportionate high and adverse impacts from any of the alternatives, particularly given the lack of recent participation by Homer vessels in the fishery.

6.1.2.6 Seward

General

Seward's overall pattern of direct engagement in the GOA trawl fishery over the period 2003-2014 was focused on its shore-based processing sector.

- Catcher Vessel Engagement. No Seward resident-owned catcher vessels participated in the GOA trawl fishery during this period.
- Catcher Vessel Crew Engagement. EDR data indicate that no Seward residents were employed as crew aboard GOA trawl catcher vessels in 2015.

- Overall Level of Shore-Based Processor Engagement. Seward had an annual average of 0.8 and a total of 3 unique shore-based processors participating in the fishery over this period.
- Recent Shore-Based Processor Engagement. One Seward shore-based processor participated in the fishery in the most recent 2 years covered by the data (2013-2014), 2 accepted GOA trawl-caught deliveries in 2011 and 2012, and 1 accepted GOA trawl-caught deliveries in 2010. No Seward shore-based processors accepted GOA trawl-caught deliveries in the years 2006-2009.
- Continuity of Recent Shore-Based Processor Engagement. Seward had 1 shore-based processor with a greater continuity of participation in the GOA trawl fishery than other shore-based processors accepting GOA trawl-caught deliveries in the community: 1 Seward shore-based processor accepted GOA trawl-caught deliveries in each of the 4 most recent years covered by the data (2011-2014), while another accepted GOA trawl-caught deliveries in 3 consecutive years (2010-2012) covered by the data; no other Seward shore-based processor accepted GOA trawl-caught deliveries in more than 2 consecutive years 2003-2014.
- Confidentiality of First Wholesale Gross Revenue Data. For Seward, 2003-2014 average annual first wholesale gross revenues for shore-based processors accepting trawl-caught deliveries cannot be disclosed due to data confidentiality considerations.
- Support Services Engagement. Seward is not known to provide substantial support services specific to the GOA trawl fishery, although it is one of Alaska's centers of ship services and repairs. *<< this paragraph to be revisited/expanded following direction coming out of the December 2016 Council meetings and the ultimate decision on fieldwork and/or other follow-up in the community >>*

The scale of Seward shore-based processor engagement in the GOA trawl fishery during 2003-2014 was relatively modest compared to shore-based processor engagement in other fisheries.

- As noted in the Seward profile above, while all first wholesale gross revenue information related to the processing of GOA trawl-caught deliveries to Seward is confidential, a general knowledge of the industry and previous community analyses would suggest, however, that during the 2003-2014, these revenues were likely a relatively minor component of overall processing first wholesale gross revenues for Seward shore-based processors as a group, although it is important to note that (1) these revenues may not have been insignificant to individual processors, as there is considerable variability between processors in both overall scale of operations and level of participation in the GOA trawl fishery and (2) as GOA-focused operations, Seward shore-based processors may be looking to continuing access, or potential future access, to GOA trawl-caught landings as important to maintaining a desired flexibility and diversity of operations.

- The Seward shore-based processing sector (including those accepting deliveries from all fisheries, gear types, and areas) annually averaged 4.3 shore-based processors over the period 2003-2014.

- Total Seward shore-based first wholesale gross revenues (including deliveries from all fisheries, gear types, and areas) annually averaged $70 million over the period 2003-2014, excluding the years for which all data were confidential (2003 and 2008).

Seward has a modest level of engagement in the GOA trawl fishery both in absolute terms and with respect to the local importance of other area fisheries. While not having a large or particularly diversified economy compared to Anchorage, Seward, like Petersburg and Homer, is not exclusively dependent on fisheries, given the local importance of outdoor tourism-oriented enterprises in particular and relatively active transportation, education, research, and government sectors. Because of these combined factors, none of the proposed GOA trawl bycatch management alternatives are likely to result in adverse community-level impacts in Seward, although adverse impacts to individual enterprises could result if the chosen alternative were to effectively result in the preclusion of a desired continuing access to and local development of the fishery as a long-term shore-based processing diversification strategy.

Depending on the qualifying years interval chosen, the level of engagement of Seward in the GOA trawl fishery showed some variability as measured in the number of shore-based processors accepting GOA trawl-caught deliveries.

- Seward had an annual average of 0.7 and a total of 3 unique shore-based processors participating in the GOA trawl fishery 2003-2012.
- Seward had an annual average of 0.8 and 1.0 shore-based processors participating in the GOA trawl fishery 2007-2012 and 2008-2012, respectively, and a total of 2 unique shore-based processors participating in the GOA trawl fishery during both of those periods.

The pattern of community of resident ownership of catcher vessels making GOA trawl-caught deliveries to shore-based processors in Seward also varied somewhat between different qualifying year intervals.

- Seward shore-based processors most commonly accepted GOA trawl-caught deliveries from catcher vessels owned by residents of Kodiak over all three periods. Catcher vessels owned by residents of Kodiak made GOA trawl-caught deliveries to Seward either 5 or 6 years each during 2003-2012, 2007-2012, and 2008-2012, with the Seattle MSA being the only other community that had resident-owned catcher vessels make GOA trawl-caught deliveries to Seward shore-based processors in more than one year in each of the three periods (with 2 years of deliveries in each period).
- Seward shore-based processors also accepted GOA trawl-caught deliveries from catcher vessels owned by residents of Oregon communities outside of Newport 2 years during the 2003-2012 periods and 1 year each during the 2007-2012 and 2008-2012 periods. The only other GOA trawl-caught deliveries accepted by Seward shore-based processors during any of the three periods were made by a catcher vessel owned by a resident of Washington outside of the Seattle MSA in 1 year during the 2003-2012 period only.

Seward is not a CQE eligible community (similar to Kodiak, Anchorage, Petersburg, Homer, Akutan, and Unalaska/Dutch Harbor, the other Alaska communities the other Alaska communities profiled as being substantially and/or relatively consistently engaged in the GOA trawl fishery, exclusive of Sand

Point and King Cove). Seward, however, would qualify for inclusion in a CFA under Alternative 4 (similar to Kodiak and Homer, but unlike Anchorage, Petersburg, Akutan, and Unalaska/Dutch Harbor).

Environmental Justice Concerns

No workforce demographic data, including minority or low-income status information, are available for the specific shore-based processing entities in Seward involved in the GOA trawl fishery that may feel the most direct impacts associated with the proposed alternatives. In Seward, however, if it is assumed that within the group quarters housing type, "workers' group living quarters and Job Corps centers" are utilized predominately if not exclusively by processing workers in the community, it is possible to estimate the minority population component (but not the low-income population component) of that segment of the shore-based processor workforce population. *<< this paragraph/section to be revisited/expanded following direction coming out of the December 2016 Council meetings >>*

- For the community as a whole, however, the most recent data available indicate that about 33.1 percent Seward's population consists of minority residents, with about 5.5 percent of the population considered low-income.
- Neither figure for Seward is substantially greater than the minority population percentage or the low-income population percentage of the general population of Alaska, which is 37.1 percent minority and 10.1 percent low-income population, respectively.
- For Seward, using the "workers' group living quarters and Job Corps centers" classification within group quarter resident demographic data as a proxy for shore-based processing worker demographic data, the minority population component of the shore-based processing workforce is greater than that of the community as a whole as well as greater than the minority component of the general population of the state of Alaska. As of 2010, based on a combination of race and ethnicity, 45.3 percent of Seward's "workers' group living quarters and Job Corps centers" population segment consisted of minority residents. Also, as of 2010, those living in "workers' group living quarters and Job Corps centers" accounted for approximately 4.3 percent of the total population of Seward.[78] *<< this paragraph/section to be revisited/expanded following direction coming out of the December 2016 Council meetings >>*

Assuming the demographic patterns of those residents most directly engaged in the GOA trawl fishery in Seward mirror those living in "workers' group living quarters and Job Corps centers" in terms of minority populations, if high and adverse impacts were to accrue to Seward under any of the alternatives, disproportionate impacts to minority populations would potentially be of concern. Assuming the demographic patterns of those residents most directly engaged in the GOA trawl fishery in Seward mirror those of the community as a whole in terms of low-income populations, if high and adverse impacts were to accrue to Seward under any of the alternatives, disproportionate impacts to low-income populations would not be a particular concern. However, no high and adverse impacts are anticipated for Seward as a whole, or to the shore-based processing sectors in the community in

[78] Those living in all types of group quarters in Seward accounted for approximately 26.3 percent of the total population of the community, but the large majority (approximately 83 percent) of those individuals were institutionalized, with the local state prison being the single largest institution in that category.

particular, under any of the alternatives. *<< this paragraph/section to be revisited/expanded following direction coming out of the December 2016 Council meetings >>*

6.1.2.7 Akutan and Unalaska/Dutch Harbor

General

Akutan and Unalaska/Dutch Harbor had similar overall patterns and levels of direct engagement in the GOA trawl fishery over the period 2003-2014, but with a number of marked variations as well.

- Catcher Vessel Engagement. No Akutan or Unalaska/Dutch Harbor resident-owned catcher vessels participated in the GOA trawl fishery during this period.
- Catcher Vessel Crew Engagement. EDR data indicate that no Akutan or Unalaska/Dutch Harbor residents were employed as crew aboard GOA trawl catcher vessels in 2015.
- Overall Level of Shore-Based Processor Engagement. Akutan had an annual average of 1.0 and 1 unique shore-based processor participating in the fishery over this period, while Unalaska/Dutch Harbor had an annual average of 1.0 and a total of 3 unique shore-based processors do so.
- Recent Shore-Based Processor Engagement. One unique Akutan shore-based processor accepted GOA trawl-caught deliveries in every year covered by the data, including the most recent years. No Unalaska/Dutch Harbor shore-based processors participated in the fishery in the most recent 2 years covered by the data (2013-2014) and, while 3 local shore-based processors accepted GOA trawl-caught deliveries in either 2011 and/or 2012, only 1 Unalaska/Dutch Harbor shore-based processor accepted GOA trawl-caught deliveries in more than 1 year since 2004.
- Continuity of Shore-Based Processor Engagement. Both communities had 1 shore-based processor with a marked greater continuity of participation in the GOA trawl fishery than other shore-based processors accepting GOA trawl-caught deliveries in either community: 1 Akutan shore-based processor accepted GOA trawl-caught deliveries in all 12 years covered by the data, while 1 Unalaska/Dutch Harbor shore-based processor accepted GOA trawl-caught deliveries in 9 consecutive years (2003-2011) covered by the data; no other Unalaska/Dutch Harbor processor accepted GOA trawl-caught deliveries in 2 consecutive years 2003-2014.
- Confidentiality of First Wholesale Gross Revenue Data. For both Akutan and Unalaska/Dutch Harbor, 2003-2014 average annual first wholesale gross revenues for shore-based processors accepting trawl-caught deliveries cannot be disclosed due to data confidentiality considerations.
- Support Services Engagement. Akutan is not known to provide substantial support services to the GOA trawl fishery, while Unalaska/Dutch Harbor is the main regional supplier of support services in the Bering Sea which, at a minimum, would include catcher vessels and catcher processors that work both the Bering Sea and the GOA trawl fisheries.

The scale of Akutan and Unalaska/Dutch Harbor shore-based processor engagement in the GOA trawl fishery during 2003-2014 was relatively modest compared to shore-based processor engagement in other fisheries.

- As noted in the Akutan profile above, while all first wholesale gross revenue information related to the processing of GOA trawl-caught deliveries to Akutan is confidential, a general knowledge of the industry and previous community analyses would suggest that during the period 2003-2014, these revenues were likely a relatively minor component of overall processing first wholesale gross revenues for Akutan shore-based processing. As also indicated in that same section, however, it is important to note that (1) these revenues likely varied considerably from year to year and well may have been substantial in absolute terms at least some years, (2) the timing of this processing may have been important to the operational flow of the plant and provided an important source of labor hours for processing staff, and (3) the processing of GOA trawl-caught deliveries in Akutan may have been important to the overall operations of the entity that owns the plant in Akutan beyond the operations of the Akutan plant itself.

- Similarly, as noted in the Unalaska/Dutch Harbor profile above, while all first wholesale gross revenue information related to the processing of GOA trawl-caught deliveries to Unalaska/Dutch Harbor is confidential, a general knowledge of the industry and previous community analyses would suggest that during the period 2003-2014, these revenues were likely a relatively minor component of overall processing first wholesale gross revenues for Unalaska/Dutch Harbor shore-based processors as a group. As also indicated in that same section, however, it is important to note that (1) these revenues likely varied considerably from year to year and may have been substantial in absolute terms at least some years, (2) the timing of this processing may have been important to the operational flow of the plant most directly and consistently involved, providing an important source of labor hours for processing staff, and (3) the processing of GOA trawl-caught deliveries in Unalaska/Dutch Harbor may have been strategically important to the overall operations of at least one processor looking to continuing access, or potential future access, to GOA trawl-caught landings as important to maintaining a desired flexibility and diversity of operations and to maintaining mutually beneficial relationships with some of its delivery fleet that participated in other fisheries with the plant.

    - The Unalaska/Dutch Harbor shore-based processing sector (including those accepting deliveries from all fisheries, gear types, and areas) annually averaged 6.2 shore-based processors over the period 2003-2014.

    - Total Unalaska/Dutch Harbor shore-based first wholesale gross revenues (including deliveries from all fisheries, gear types, and areas) annually averaged $249 million over the period 2003-2014.

For Akutan, the local focus of direct engagement in the GOA trawl fishery residing nearly exclusively in the shore-based processing sector; the enclave nature of the local processing development with

respect to a relatively distinct traditional community, both in spatial and socioeconomic or sociocultural terms; and the relatively modest engagement of the local processing operation in GOA fisheries relative to BSAI fisheries, combined with scale of local processing operations, makes adverse community-level impacts from any of the proposed GOA trawl bycatch management alternatives unlikely, although some adverse impacts may be experienced at the individual enterprise level, depending on the alternative.

For Unalaska/Dutch Harbor, the local focus of direct engagement in the GOA trawl fishery residing heavily in the shore-based processing sector and the relatively modest engagement of the local processing operations in GOA fisheries relative to BSAI fisheries, combined with scale of local processing operations, makes adverse community-level impacts from any of the proposed GOA trawl bycatch management alternatives unlikely, although some adverse impacts may be experienced at the individual enterprise level, depending on the alternative. This could include preclusion of historic strategies of diversification for at least one processor, and a decline in support service opportunities for some local businesses, if the amount of catcher vessel or catcher processor port calls were to decrease.

Depending on the qualifying years interval chosen, the level of engagement of Akutan and Unalaska/Dutch Harbor in the GOA trawl fishery show no variability as measured in the number of shore-based processors accepting GOA trawl-caught deliveries.

- Akutan had an annual average of 1.0 and a total of 1 unique shore-based processor participating in the GOA trawl fishery over all three periods 2003-2012, 2007-2012, and 2008-2012.
- Unalaska/Dutch Harbor had an annual average of 1.2 and a total of 3 unique shore-based processors participating in the GOA trawl fishery over all three periods 2003-2012, 2007-2012, and 2008-2012.

The pattern of community of resident ownership of catcher vessels making GOA trawl-caught deliveries to shore-based processors in Akutan and Unalaska/Dutch Harbor also varied relatively little between different qualifying year intervals.

- The Akutan shore-based processor accepted GOA trawl-caught deliveries from catcher vessels owned by residents of a wide range of communities during all three periods. Catcher vessels owned by residents of Kodiak, Sand Point, and Anchorage made GOA trawl-caught deliveries to Akutan between 1 and 3 years each during 2003-2012, 2007-2012, and 2008-2012, with Sand Point being the only community among these to have had multiple vessels make GOA trawl-caught deliveries in any single year. Seattle MSA resident-owned catcher vessels made GOA trawl-caught deliveries in all but one year during each period (and with multiple vessels making deliveries in multiple years being common), while catcher vessels owned by residents of Washington outside of the Seattle MSA did so in all but 3 years during each period. The only marked difference seen among the three periods was with respect to catcher vessels owned by residents of states other than Alaska, Washington, and Oregon; in that case, GOA trawl-caught deliveries were made to Akutan during 3 years 2003-2012, during 1 year 2007-2012, and during 2008-2012 none were made at all.
- Unalaska/Dutch Harbor shore-based processors accepted GOA trawl-caught deliveries exclusively from catcher vessels owned by residents of the Seattle MSA every year 2003-2012, 2007-2012, and 2008-2012, except for deliveries from one catcher vessel owned by a resident

of a state other than Alaska, Washington, or Oregon during one year in the 2003-2012 period only.

Neither Akutan nor Unalaska/Dutch Harbor are CQE eligible communities (similar to Kodiak, Anchorage, Petersburg, Homer, and Seward, the other Alaska communities profiled as being substantially and/or relatively consistently engaged in the GOA trawl fishery, exclusive of Sand Point and King Cove). Neither Akutan nor Unalaska/Dutch Harbor would qualify for inclusion in a CFA under Alternative 4 (similar to Anchorage and Petersburg, but unlike Kodiak, Homer, and Seward). If Alternative 4 were to be selected, to the extent that the CFA program would succeed in anchoring quota in CFA qualified communities, the large majority of which did not directly participate in the GOA trawl fishery during 2003-2014, Alternative 4 would, all things being equal, tend to move quota out of those communities that did participate in the GOA trawl fishery but would not qualify for CFA status, including Akutan and Unalaska/Dutch Harbor. The amount of quota that would move and the length of time over which it would move, however, are unknown.

Environmental Justice Concerns

No workforce demographic data, including minority or low-income status information, are available for the specific shore-based processing entities in Akutan or Unalaska/Dutch Harbor involved in the GOA trawl fishery that may feel the most direct impacts associated with the proposed alternatives. In both Unalaska and Akutan, however, past studies for the NPFMC have shown that shore-based processing workers have tended to be demographically (and socioculturally) relatively distinct from the rest of the local population; processing workers in both communities are overwhelmingly recruited from a labor pool from outside the community, overwhelmingly live in group quarters supplied on-site by the locally operating processing companies, and have tended to include a high proportion of non-White (and non-Alaska Native) minority workers. Due to the almost exclusive use of group quarters by processing workers (other than by some processing management personnel) in both communities, it is possible to estimate the minority population component (but not the low-income population component) of the shore-based processor workforce population.

- For the communities as a whole, the most recent data available indicate that about 90.8 percent Akutan's population consists of minority residents, with about 14.6 percent of the population considered low-income, while about 66.3 percent Unalaska/Dutch Harbor's population consists of minority residents, with about 7.6 percent of the population considered low-income.
- For both Akutan and Unalaska/Dutch Harbor, the minority population percentage of the community is substantially greater than the minority population percentage (37.1 percent) of the general population of Alaska. For Akutan, but not for Unalaska/Dutch Harbor, the low-income population percentage of the community is substantially greater than the low-income population percentage (10.1 percent) of the general population of Alaska.
- For both Akutan and Unalaska/Dutch Harbor, using group quarter resident demographic data as a proxy for shore-based processing worker demographic data, the minority population component of the shore-based processing workforce is greater than that of the community as well as greater than the minority component of the general population of the state of Alaska. As of 2010, based on a combination of race and ethnicity, 91.4 percent of Akutan's group quarters population consisted of minority residents and 78.1 percent of Unalaska's group

quarters population consisted of minority residents. Also, as of 2010, those living in group quarters accounted for approximately 91.2 percent of the total population of Akutan and approximately 48.0 percent of the total population of Unalaska/Dutch Harbor.

Assuming the demographic patterns of those residents most directly engaged in the GOA trawl fishery in Akutan and Unalaska/Dutch Harbor mirror those living in group quarters in their respective communities in terms of minority populations, if high and adverse impacts were to accrue to those communities under any of the alternatives, disproportionate impacts to minority populations would potentially be of concern. Assuming the demographic patterns of those residents most directly engaged in the GOA trawl fishery in Akutan and Unalaska/Dutch Harbor mirror those of their respective communities in terms of low-income populations, if high and adverse impacts were to accrue to those communities under any of the alternatives, disproportionate impacts to low-income populations would potentially be of concern in Akutan, but not Unalaska/Dutch Harbor. However, no high and adverse impacts are anticipated for either the communities of Akutan and Unalaska/Dutch Harbor, or to the shore-based processing sectors in those communities in particular, under any of the alternatives.

6.1.2.8 Other Alaska Communities

General

In addition to the communities summarized above as having the most direct/continuing engagement in the GOA trawl fishery over the 2003-2014 period (Kodiak, Sand Point, King Cove, Anchorage, Petersburg, Homer, Seward, Akutan, and Unalaska/Dutch Harbor), a total of 17 other Alaska communities appear in the data as having at least limited direct of engagement in the GOA trawl fishery through: resident ownership of GOA trawl catcher vessels, and/or being the location of shore-based processors accepting GOA trawl-caught deliveries in the 2003-2014 period; resident ownership of GOA trawl-endorsed groundfish LLP licenses during the 2003-2012 period; being the homeport of GOA trawl catcher vessels in 2014; and/or being indicated by EDR data as the location of residence of crew members on GOA trawl catcher vessels in 2015. These communities are Anchor Point, Cantwell, Chiniak, Cordova, Gustavus, Juneau, Kenai, Metlakatla, Nikolaevsk, Ninilchik, Old Harbor, Palmer, Salcha, Sitka, Soldotna, Unalakleet, and Wasilla.

- Catcher Vessel Engagement. Anchor Point, Juneau, and Nikolaevsk had resident-owned catcher vessels that participated in the GOA trawl fishery during the 2003-2014 period. In each case, participation was limited to one vessel for one year, which was 2003 for all 3 communities.
- Confidentiality of Ex-Vessel Gross Revenue Data. Ex-vessel gross revenues for Anchor Point, Juneau, and Nikolaevsk resident-owned GOA trawl catcher vessels cannot be disclosed due to data confidentiality considerations.
- Catcher Vessel Crew Engagement. EDR data indicate that 15 unique residents of Alaska communities other than Kodiak, Sand Point, King Cove, Anchorage and Petersburg held a total 2 CFEC gear operator permits and 13 ADFG crew licenses filled 16 crew positions aboard GOA trawl catcher vessels in 2015:

  - 4 unique residents of Palmer, holding 0 CFEC gear operator permits and 4 ADFG crew licenses, filled 1 position each on GOA trawl catcher vessels owned by residents of Kodiak, the Seattle MSA, Newport, and Independence OR.
  - 2 unique residents of Anchor Point, holding 1 CFEC gear operator permit and 1 ADFG crew license, filled 2 positions on GOA trawl catcher vessels owned by residents of Kodiak.
  - 1 unique resident of Chiniak, holding an ADFG crew license, filled 2 positions on GOA trawl catcher vessels owned by residents of Kodiak.
  - 1 unique resident of Juneau, holding a CFEC gear operator permit, filled a position on a GOA trawl catcher vessel owned by a resident of Kodiak.
  - 1 unique resident of Old Harbor and 1 unique resident of Gustavus, each holding an ADFG crew license, each filled a position on a GOA trawl catcher vessel owned by a resident of Kodiak.
  - 1 unique resident each of Cantwell, Salcha, Soldotna, Unalakleet, and Wasilla, each holding an ADFG crew license, each filled a position on a GOA trawl catcher vessel owned a resident of the Seattle MSA.
- Confidentiality of Catcher Vessel Crew Compensation Data. For Anchor Point, Cantwell, Chiniak, Gustavus, Juneau, Old Harbor, Palmer, Salcha, Soldotna, Unalakleet, and Wasilla, labor payments to resident GOA catcher vessel crew members cannot be disclosed due to data confidentiality considerations.
- Catcher Vessel Homeport Data. Of the five GOA trawl catcher vessels with homeports other than Kodiak, Sand Point, King Cove, Anchorage, Petersburg, Homer, Seward, Akutan, and/or Unalaska/Dutch Harbor in 2014, four (owned one each in Kodiak, Anchorage, Seattle MSA, and "Other WA") were homeported in Juneau; the fifth (owned in King Cove) was homeported in Metlakatla.
- Shore-Based Processor Engagement. Kenai, Ninilchik, and Sitka had shore-based processors that accepted GOA trawl-caught deliveries during the 2003-2014.
  - In the case of Kenai and Sitka, participation was limited to one shore-based processor for one year, which was 2003 for Kenai and 2012 for Sitka.
  - In the case of Ninilchik, participation was limited to one shore-based processor for two years, which were 2003 and 2006.
- Confidentiality of First Wholesale Gross Revenue Data. First wholesale gross revenues for Kenai, Ninilchik, and Sitka shore-based processors accepting trawl-caught deliveries cannot be disclosed due to data confidentiality considerations.
- Support Services Engagement. Anchor Point, Juneau, Kenai, Nikolaevsk, Ninilchik, and Sitka are not known to provide substantial support services to the GOA trawl fishery.

In summary, Anchor Point, Juneau, Kenai, Nikolaevsk, Ninilchik, and Sitka, each participated directly in the GOA trawl fishery through catcher vessel ownership and/or local shore-based processing all had modest levels of engagement in the GOA trawl fishery both in absolute terms and with respect to the local importance of other area fisheries. Further, direct participation in the fishery during the period 2003-2014 was limited to 2003 exclusively for all communities except Ninilchik and Sitka, with Ninilchik most recently participating in the shore-based processing sector in 2006 and with Sitka's participation limited shore-based processing in a single relatively recent year. As a result, none of the

proposed GOA trawl bycatch management alternatives are likely to result in adverse community-level impacts in Anchor Point, Juneau, Kenai, Nikolaevsk, Ninilchik, and/or Sitka, and the lack of relatively recent participation in the GOA trawl fishery for all communities except Sitka make adverse impacts unlikely at the individual enterprise level as well. In the case of crew positions, while even a single crew position may be important for a small community, the known limitations of the first year of EDR data make drawing firm conclusions about community-level impacts based on crew alone problematic.

Depending on the qualifying years interval chosen, the level of engagement of Anchor Point, Juneau, and Nikolaevsk in the GOA trawl fishery show some variability whether measured in resident-owned catcher vessel participation or in resident-owned GOA trawl endorsed active and inactive groundfish LLP licenses.

- Anchor Point, Juneau, and Nikolaevsk each had an annual average of 0.1 and a total of 1 unique resident-owned catcher vessel each participating in the GOA trawl fishery over the 2003-2012 period. No Kenai, Ninilchik, or Sitka resident-owned catcher vessel participated in the GOA trawl fishery during the 2003-2012 period.
- No Anchor Point, Juneau, Kenai, Nikolaevsk, Ninilchik, or Sitka resident-owned catcher vessel participated in the GOA trawl fishery during either the 2007-2012 or 2008-2012 periods.
- Juneau residents held 1 active and 0 inactive LLPs during the 2003-2012 period. No active and 1 inactive LLP was held by a Kenai resident during this same period; no active and 1 inactive LLP was held by a Cordova resident during this same period as well. No Anchor Point, Nikolaevsk, Ninilchik, or Sitka residents held any active or inactive LLPs during the 2003-2012 period.
- During the 2007-2012 and 2008-2012 periods, a total of 0 active and 3 inactive LLPs, one in each community, were held by individual Juneau, Kenai, and Cordova residents. No Anchor Point, Nikolaevsk, Ninilchik, or Sitka residents held any active or inactive LLPs during the 2007-2012 or 2008-2012 periods.

The GOA trawl-caught delivery patterns of Anchor Point, Juneau, and Nikolaevsk resident-owned catcher vessels also vary by the different qualifying year intervals.

- An Anchor Point resident-owned catcher vessel and a Nikolaevsk resident-owned catcher vessel made at least one GOA trawl-caught delivery to a Kodiak shore-based processor in 1 year (2003), during the 2003-2012 period, while a Juneau resident-owned catcher vessel made at least one GOA trawl-caught delivery to a Sand Point shore-based processor in 1 year (2003), during the 2003-2012 period.
- No Anchor Point, Juneau, and/or Nikolaevsk resident-owned catcher vessels made GOA trawl-caught deliveries to any community during the 2007-2012 or 2008-2012 periods.

Depending on the qualifying years interval chosen, the level of engagement of Kenai, Ninilchik, and Sitka in the GOA trawl fishery showed some variability as measured in the number of shore-based processors accepting GOA trawl-caught deliveries.

- Kenai and Sitka each had an annual average of 0.1 and a total of 1 unique shore-based processor each participating in the GOA trawl fishery over the 2003-2012 period, while Ninilchik had an

annual average of 0.2 and a total of 1 unique shore-based processor participating in the GOA trawl fishery over the 2003-2012 period.

- Sitka had an annual average of 0.2 and 1 unique shore-based processor participating in the GOA trawl fishery in both the 2007-2012 and 2008-2012 periods. Neither Kenai nor Ninilchik shore-based processors participated in the GOA trawl fishery during either of those periods.

The pattern of community of resident ownership of catcher vessels making GOA trawl-caught deliveries to shore-based processors in Kenai, Ninilchik, and Sitka also varied somewhat between different qualifying year intervals.

- One Sitka shore-based processor accepted GOA trawl-caught deliveries from a catcher vessel owned by a resident of Kodiak during one year (2012) included in all three periods (2003-2012, 2007-2012, and 2008-2012).
- One Ninilchik shore-based processor accepted GOA trawl-caught deliveries from a catcher vessel owned by a resident of a Washington community other than the Seattle MSA in 2 years during the period 2003-2012. No GOA trawl deliveries were accepted from catcher vessels from any community in Ninilchik during either of the other periods (2007-2012 or 2008-2012).
- One Kenai shore-based processor accepted GOA trawl-caught deliveries from a catcher vessel in 1 year during the period 2003-2012, but the data field for community of ownership of that catcher vessel is blank. No GOA trawl deliveries were accepted from catcher vessels from any community in Kenai during either of the other periods (2007-2012 or 2008-2012).

Of the 17 Alaska communities whose participation in the GOA trawl fishery is summarized in this section, three are CQE eligible communities (Gustavus, Metlakatla, and Old Harbor). Two of the 17 communities, Cordova and Old Harbor, would qualify for inclusion in a CFA under Alternative 4. If Alternative 4 were to be selected, to the extent that the CFA program would succeed in anchoring quota in CFA qualified communities, the large majority of which did not directly participate in the GOA trawl fishery during 2003-2014, Alternative 4 would, all things being equal, tend to move quota out of those communities that did participate in the GOA trawl fishery but would not qualify for CFA status. The amount of quota that would move and the length of time over which it would move, however, are unknown. A summary of the type and level of engagement of these communities and eligibility for CFA status is provided in Table 77.

The 22 communities that would qualify for CFA status, but did not directly participate in the GOA trawl fishery through resident ownership of GOA trawl catcher vessels or local shore-based processing of GOA trawl-caught deliveries 2003-2014 include:

- 3 Western GOA communities: Cold Bay, Ivanof Bay, and Perryville.
- 5 Central GOA Chirikof District communities: Akhiok, Chignik, Chignik Lagoon, Chignik Lake, and Karluk.
- 11 Central GOA Kodiak District communities: Chenega Bay, Halibut Cove, Larsen Bay, Nanwalek, Old Harbor, Ouzinkie, Port Graham, Port Lions, Seldovia, Tyonek, and Whittier.
- 3 Eastern GOA West Yakutat District communities: Cordova, Tatitlek, and Valdez.

Table 77. Summary of GOA Trawl Fishery Engagement, Select Alaska Communities with Minimal Direct Engagement

Community	Resident CV Ownership (year)	Local Shore-Based Processing (year[s])	GOA Trawl Endorsed Groundfish LLPs						GOA Trawl CVs Homeported in Community in 2014 (number)	GOA Trawl CV Crew in 2015		CFA Eligible (Alt 4)	CQE Eligible
			2003-2012		2007-2012		2008-2012						
			Active Permits Held (number)	Inactive Permits Held (number)	Active Permits Held (number)	Inactive Permits Held (number)	Active Permits Held (number)	Inactive Permits Held (number)		GFEC Gear Operator Permit Holders (number)	ADFG Crew License Holders (number)		
Anchor Point	2003	--	--	--	--	--	--	--	--	1	1	No	No
Cantwell	--	--	--	--	--	--	--	--	--	0	1	No	No
Chiniak	--	--	--	--	--	--	--	--	--	0	1	No	No
Cordova	--	--	0	1	0	1	0	1	--	--	--	Yes	No
Gustavus	--	--	--	--	--	--	--	--	--	0	1	No	Yes
Juneau	2003	--	1	0	0	1	0	1	4	1	0	No	No
Kenai	--	2003	0	1	0	1	0	1	--	--	--	No	No
Metlakatla	--	--	--	--	--	--	--	--	1	0	0	No	Yes
Nikolaevsk	2003	--	--	--	--	--	--	--	--	--	--	No	No
Ninilchik	--	2003 & 2006	--	--	--	--	--	--	--	--	--	No	No
Old Harbor	--	--	--	--	--	--	--	--	--	0	1	Yes	Yes
Palmer	--	--	--	--	--	--	--	--	--	0	4	No	No
Salcha	--	--	--	--	--	--	--	--	--	0	1	No	No
Sitka	--	2012	--	--	--	--	--	--	--	--	--	No	No
Soldotna	--	--	--	--	--	--	--	--	--	0	1	No	No
Unalakleet	--	--	--	--	--	--	--	--	--	0	1	No	No
Wasilla	--	--	--	--	--	--	--	--	--	0	1	No	No

Source: AKFIN 2016b; National Marine Fisheries Service 2016b

Environmental Justice Concerns

No demographic data, including minority or low-income status information, are available for the specific catcher vessel owners, skippers, or crew; shore-based processing workers; GOA trawl endorsed groundfish LLP holders, or others from the 17 communities noted in this section as involved in the GOA trawl fishery who may feel the most direct impacts associated with the proposed alternatives.

- 13 of the 17 communities had minority population percentages lower than that of the general population of the state of Alaska (37.1 percent minority). The three communities that had greater percentage of minority residents than the state overall at the time of the 2010 census were Metlakatla, Old Harbor, and Unalakleet. Those communities each had a predominately Alaska Native population, accounting for 82.7 percent, 87.6 percent, and 77.3 percent of their total populations, respectively.
- With respect to low-income populations, the low-income population percentage of the general population of Alaska at the time of the 2010 census was 10.1 percent. Of the 17 communities discussed in this section, seven had low-income populations greater than 11.0 percent of their total populations in 2010. These were: Metlakatla (12.8 percent), Nikolaevsk (22.9 percent), Ninilchik (23.0 percent), Old Harbor (27.1 percent), Salcha (18.8 percent), Unalakleet (18.3 percent), and Wasilla (13.1 percent).

Assuming the demographic patterns of those residents engaged in the GOA trawl fishery in these communities mirror those of their respective communities as a whole, if high and adverse impacts from any of the alternatives were to be felt in these 17 communities, disproportionate high and adverse impacts to minority populations and/or low-income populations would potentially be of concern. Those impacts are considered unlikely, however, given the lack of recent participation in the GOA trawl fishery by residents of Nikolaevsk and Ninilchik, the limitation of Metlakatla's participation to the homeporting of one vessel, and the known participation of Old Harbor, Salcha, Unalakleet, and Wasilla to one crew member each in 2015, although it is important to recognize that each crew position is important, particularly in traditional communities with relatively high poverty rates, such as Old Harbor and Unalakleet.

6.1.3 GOA Trawl Fishery Dependency and Vulnerability to Adverse Community-Level Impacts of the Proposed Action Alternatives Among Communities in the Pacific Northwest and Elsewhere

6.1.3.1 Seattle MSA and Other Washington Communities

General

The Seattle MSA and other Washington communities as a group had similar patterns if not levels of direct engagement in the GOA trawl fishery over the period 2003-2014 with respect to resident-owned catcher vessels, but the two groups of communities differed substantially with respect to other types of engagement in the fishery.

- Overall Level of Catcher Vessel Engagement. The Seattle MSA had an annual average of 19.0 and a total of 42 unique resident-owned catcher vessels participating in the fishery over this period, while other Washington communities combined had an annual average of 6.7 and a total of 15 unique resident-owned catcher vessels do so.
- Ex-Vessel Gross Revenue Data. For the Seattle MSA, 2003-2014 average annual ex-vessel gross revenues for resident-owned GOA trawl catcher vessels was approximately $8.5 million, with the analogous figure for the GOA trawl catcher vessels owned by residents of other Washington communities was approximately $7.6 million.
- Ex-Vessel Gross Revenue Reliance/Dependency. For Seattle MSA resident-owned GOA trawl catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 23 percent of all ex-vessel gross revenues. For the Seattle MSA resident-owned community fleet (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 2 percent of all ex-vessel gross revenues.
- Catcher Vessel Crew Engagement. EDR data indicate the following for Seattle MSA and other Washington crew employment aboard GOA trawl catcher vessels in 2015:
    - 19 unique Seattle MSA residents holding 6 CFEC gear operator permits and 13 ADFG crew licenses filled 22 positions on GOA trawl catcher vessels owned by residents of Kodiak, the Seattle MSA, and Bellingham WA (1, 20, and 1 positions, respectively).
    - 23 unique residents of other Washington communities holding 5 CFEC gear operator permits and 18 ADFG crew licenses filled 38 positions on GOA trawl catcher vessels owned by residents of a wide range of communities.
- Catcher Vessel Crew Compensation. EDR data indicate that in 2015:

  - There were a total of 120 crew positions on Seattle MSA resident-owned GOA trawl catcher vessels, including 29 positions whose occupant held a CFEC gear operator permit and 91 positions whose occupant held an ADFG crew license. These positions were filled by individuals from Alaska (29), Washington (38), Oregon (28), multiple other states (13), and unknown locations (12). Crew members on those vessels received $5,649,536 in total labor payments from the GOA trawl fishery, including $2,155,512 to captains and $3,494,024 to other crew members.
  - There were a total of 34 crew positions on other Washington resident-owned GOA trawl catcher vessels, including 7 positions whose occupant held a CFEC gear operator permit and 27 positions whose occupant held an ADFG crew license. Crew members on those vessels received $2,700,017 in total labor payments from the GOA trawl fishery, including $1,016,096 to captains and $1,683,921 to other crew members.
- Catcher Processor Engagement. On a 2003-2014 annual average basis, about 84 percent of the catcher processors participating in the GOA trawl fishery had ownership addresses in the Seattle MSA, with Washington state averaging about 93 percent of the participating catcher processors on an annual average basis over this same period.
- Confidentiality of First Wholesale Gross Revenue Data. Due to the low number of participating catcher processors outside of the Seattle MSA in any given year, a separate breakdown of first wholesale gross revenues cannot be provided, but it is assumed that the large majority of the $14 million average annual GOA trawl catcher processor first wholesale gross revenues would accrue to the Seattle MSA- and Washington-owned portions of the fleet.
- Shore-Based Processor Engagement. A total of 3 shoreside processors with Seattle MSA addresses accepted GOA trawl-caught deliveries during 2003-2014, but the data suggest that these are stationary floating processors owned by firms with Seattle addresses that operate in Alaska.
- Confidentiality of First Wholesale Gross Revenue Data. 2003-2014 average annual first wholesale gross revenues for Seattle shoreside processors accepting trawl-caught deliveries cannot be disclosed due to data confidentiality considerations.
- Support Services Engagement. While no systematically collected quantitative data are readily available, the Seattle MSA is known to function as a major support service center for the GOA trawl catcher vessel and GOA trawl catcher processor fleets.

The Seattle MSA, despite the substantial level of engagement in the GOA trawl fishery, is unlikely to experience adverse community-level impacts under any of the proposed GOA trawl bycatch management alternatives, due to the relatively modest reliance of the overall community fleet on the GOA trawl fishery in combination with the large size and relative diversity of the local economy, although some adverse impacts may be experienced at the individual enterprise level, or even at the sector level, depending on the alternative.

Depending on the qualifying years interval chosen, the level of engagement of Seattle MSA and other Washington communities in the GOA trawl fishery show some variability whether measured in resident-owned catcher vessel participation or in resident owned GOA trawl endorsed active and inactive groundfish LLP licenses.

- The Seattle MSA had an annual average of 18.5 and a total of 41 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2003-2012 period, an annual average

of 19.7 and a total of 35 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2007-2012 period, and an annual average of 19.4 and 32 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2008-2012 period. Seattle MSA residents held 62 active and 8 inactive LLPs during the 2003-2012 period, 51 active and 19 inactive LLPs during the 2007-2012 period, and 49 active and 21 inactive LLPs during the 2008-2012 period.

- Washington communities outside of the Seattle MSA had an annual average of 6.8 and a total of 15 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2003-2012 period, an annual average of 5.8 and a total of 9 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2007-2012 period, and an annual average of 6.0 and 9 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2008-2012 period. Residents of Washington communities outside of the Seattle MSA held 8 active and 2 inactive LLPs during the 2003-2012, 2007-2012, and 2008-2012 periods.

The GOA trawl-caught delivery patterns of Seattle MSA resident-owned catcher vessels also vary somewhat by the different qualifying year intervals, but in terms of the proportion of Seattle MSA resident-owned catcher vessels making GOA trawl-caught deliveries the overall pattern is consistent. The largest number of Seattle MSA resident-owned catcher vessels remain focused on Sand Point and Kodiak, in that order, in all three periods, followed by King Cove, Seward, Unalaska/Dutch Harbor, and Seattle (with the latter being stationary floating processors operating in Alaska), in that order in all three periods.

Using 2014 homeport data as a proxy for other potential GOA trawl catcher vessel activity in communities that may or may not correspond to the community of catcher vessel ownership:

- 13 of the 20 Seattle MSA resident-owned GOA trawl catcher vessels were homeported in a community outside of the Seattle MSA: 6 were homeported in Kodiak, 2 in Sand Point, 2 in Anchorage, 1 in Juneau, and 2 in Newport.
- 4 of the 6 GOA trawl catcher vessels owned by residents of Washington communities outside of the Seattle MSA were homeported in communities elsewhere: 3 were homeported in Kodiak and 1 was homeported in Juneau.

Environmental Justice Concerns

No demographic data, including minority or low-income status information, are available for the specific catcher vessel owners, skippers, and crew from the Seattle MSA involved in the GOA trawl fishery who may feel the most direct impacts associated with the proposed alternatives.

- For the Seattle MSA as a whole, the most recent data available indicate that about 32.0 percent of the area's population consists of minority residents, with about 10.2 percent of the population considered low-income.
- The Seattle MSA's minority population percentage is somewhat greater than the minority population percentage of the general population of Washington (27.5 percent), but its low-income population percentage is lower than that of the low-income population percentage of the general population of Washington (13.5 percent).

Assuming the demographic patterns of those residents engaged in the catcher vessel sector of the GOA trawl fishery in the Seattle MSA mirror those of the larger community, no disproportionate high and adverse impacts to low-income populations in the Seattle MSA are anticipated under any of the alternatives. In the case of minority populations, while the Seattle MSA has a somewhat greater proportion of minority residents than does the general population of the state, there are no indications that minority residents of the Seattle MSA affiliated with the GOA trawl catcher vessel sector would experience disproportionate high and adverse impacts from any of the alternatives.

While it is assumed that fishery-wide catcher vessel skippers and crew are more-or-less representative of the general population of community of vessel ownership (or widely dispersed communities where crew recruiting likely takes place), for catcher processor crew a different set of assumptions are used.

No recent information from secondary sources on sector-wide catcher processor crew demographics is readily available for this community impact analysis, but an earlier (and now dated) Steller sea lion protection measure social impact assessment (National Marine Fisheries Service 2001) indicated that the workforce population of the North Pacific groundfish catcher processor sector was substantially different demographically from the overall greater Seattle area. Based on 2000 U.S. Census data for the community and on industry self-reported information for the same year; individual reporting entities were anywhere from about 36 percent minority to about 86 percent minority (National Marine Fisheries Service 2001). Although more recent data are not available for the entire sector, to facilitate a recent BSAI Halibut PSC analysis (AECOM 2016), employee demographic information-based 2014 Equal Employment Opportunity Commission (EEOC) data were supplied by five firms with catcher processors operating in the Amendment 80 catcher processor sector. Based on location of ownership information in the 2003-2014 dataset being used for this GOA trawl bycatch management analysis, the relevant vessels owned and operated by these firms have all been attributed to the Seattle MSA. Together, these firms accounted about two-thirds (14 of 22) trawl catcher processors operating in any year 2003-2014 in the GOA trawl fisheries and roughly two-thirds (7 of 11) of the trawl catcher processors operating in the GOA trawl fisheries in 2014, the year for which crew demographic data were provided by these firms.

The demographic data supplied by these firms are presented in Table 113 in Attachment 5. Using those data as a proxy for likely GOA trawl catcher processor workforces, as shown in that attachment, 66 percent of all employees working on the 10 catcher processors represented in these data are minority employees. Minority representation is substantially higher for two of the job categories (factory foreman/quality control and processing labor/galley crew/cleaning, both around 75 percent), and in all but two job categories (captains and engineers) minority employees represented greater than 50 percent of all employees in that category. Given the demographic characteristics summarized here, and assuming they are representative of the overall GOA trawl processor fleet, if high and adverse impacts were to accrue to the Seattle MSA-owned GOA trawl catcher processor workforce due to implementation of the proposed alternatives, environmental justice would potentially be an issue of concern.

6.1.3.2 Newport and Other Oregon Communities

General

The Newport and other Oregon communities as a group had similar patterns and often levels of direct engagement in the GOA trawl fishery over the period 2003-2014.

- Overall Level of Catcher Vessel Engagement. Newport had an annual average of 6.9 and a total of 13 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2003-2014 period, while other Oregon communities combined had an annual average of 8.8 and a total of 14 unique resident-owned catcher vessels do so.
- Ex-Vessel Gross Revenue Data. For Newport, 2003-2014 average annual ex-vessel gross revenues for resident-owned GOA trawl catcher vessels was approximately $6.9 million, with the analogous figure for the GOA trawl catcher vessels owned by residents of other Oregon communities was approximately $9.4 million.
- Ex-Vessel Gross Revenue Reliance/Dependency. For Newport resident-owned GOA trawl catcher vessels, on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 49 percent of all ex-vessel gross revenues. For the Newport resident-owned community fleet (including all area, gear, and species fisheries), on an annual average basis for the years 2003-2014, ex-vessel gross revenues from GOA trawl-caught deliveries accounted for approximately 16 percent of all ex-vessel gross revenues.
- Catcher Vessel Crew Engagement. EDR data indicate the following for Newport and other Oregon crew employment aboard GOA trawl catcher vessels in 2015:
    - 22 unique Newport residents holding 7 CFEC gear operator permits and 15 ADFG crew licenses filled 23 positions on GOA trawl catcher vessels owned by residents of Kodiak, the Seattle MSA, Newport, and other Oregon communities (1, 4, 5, and 13 positions, respectively).
    - 54 unique residents of other Oregon communities holding 15 CFEC gear operator permits and 39 ADFG crew licenses filled 60 positions on GOA trawl catcher vessels owned by residents of a wide range of communities.
- Catcher Vessel Crew Compensation. EDR data indicate that in 2015:
    - There were a total of 29 crew positions on Newport resident-owned GOA trawl catcher vessels, including 7 positions whose occupant held a CFEC gear operator permit and 22 positions whose occupant held an ADFG crew license. These positions were filled by individuals from Kodiak (11), Palmer AK (1), Newport (5), other Oregon communities (7), and unknown locations (5). Crew members on those vessels received $2,361,787 in total labor payments from the GOA trawl fishery, including $929,965 to captains and $1,431,822 to other crew members.
    - There were a total of 39 crew positions on other Oregon resident-owned GOA trawl catcher vessels, including 12 positions whose occupant held a CFEC gear operator permit and 27 positions whose occupant held an ADFG crew license. Crew members on those vessels received $2,765,809 in total labor payments from the GOA trawl fishery, including $1,123,595 to captains and $1,642,214 to other crew members.

- Shore-Based Processor Engagement. No shore-based processors in Newport or any other Oregon communities accepted GOA trawl-caught deliveries during this period.
- Support Services Engagement. While no systematically collected quantitative data are readily available, Newport, in combination with other nearby Oregon communities, is known to function as a support service center for the GOA trawl catcher vessel fleet.

Newport, despite the substantial level of engagement in the GOA trawl fishery, is unlikely to experience adverse community-level impacts under any of the proposed GOA trawl bycatch management alternatives, due to the relatively modest reliance of the overall community fleet on the GOA trawl fishery in combination with size and relative diversity of the local economy, although some adverse impacts may be experienced at the individual enterprise level, depending on the alternative.

Depending on the qualifying years interval chosen, the level of engagement of Newport and other Oregon communities in the GOA trawl fishery show some variability whether measured in resident-owned catcher vessel participation or in resident owned GOA trawl endorsed active and inactive groundfish LLP licenses.

- Newport had an annual average of 7.5 and a total of 13 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2003-2012 period, an annual average of 6.5 and a total of 9 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2007-2012 period, and an annual average of 6.4 and 9 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2008-2012 period. Newport residents held 6 active and 0 inactive LLPs during the 2003-2012 period and 5 active and 1 inactive LLPs during the 2007-2012 and 2008-2012 periods.

- Oregon communities outside of Newport had an annual average of 9.3 and a total of 13 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2003-2012 period, an annual average of 8.5 and a total of 10 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2007-2012 period, and an annual average of 8.4 and 9 unique resident-owned catcher vessels participating in the GOA trawl fishery over the 2008-2012 period. Residents of Oregon communities outside of Newport held 11 active and 0 inactive LLPs during the 2003-2012 period and 9 active and 2 inactive LLPs during the 2007-2012 and 2008-2012 periods.

The GOA trawl-caught delivery patterns of Newport resident-owned catcher vessels also vary somewhat by the different qualifying year intervals, but in terms of the proportion of Newport resident-owned catcher vessels making GOA trawl-caught deliveries the overall pattern is consistent. The largest number of Newport resident-owned catcher vessels remain focused on Kodiak in all three periods, with every Newport vessel making deliveries to Kodiak in the more recent two periods. In every period at GOA trawl-caught deliveries by at least one Newport resident-owned vessel were made in Sand and Seattle (with the latter being stationary floating processors operating in Alaska), but the years were relatively few in both cases (Sand Point deliveries occurred in 2 years in the 2003-2012 period, but only 1 year in the 2007-2012 and 2008-2012 periods; similarly, Seattle deliveries occurred in 4 years in the 2003-2012 period, but only 2 years in the 2007-2012 and 2008-2012 periods).

Using 2014 homeport data as a proxy for other potential GOA trawl catcher vessel activity in communities that may or may not correspond to the community of catcher vessel ownership:

- 1 of the 4 Newport resident-owned GOA trawl catcher vessels was homeported in a community outside of Newport: that vessel was homeported in Kodiak.
- 3 of the 6 GOA trawl catcher vessels owned by residents of Oregon communities outside of the Newport were homeported in communities elsewhere: all 3 were homeported in Newport.

Environmental Justice Concerns

No demographic data, including minority or low-income status information, are available for the specific catcher vessel owners, skippers, and crew from Newport involved in the GOA trawl fishery who may feel the most direct impacts associated with the proposed alternatives.

- For the community as a whole, however, the most recent data available indicate that about 22.0 percent Newport's population consists of minority residents, with about 18.5 percent of the population considered low-income.
- Newport's minority population percentage is not substantially greater than the minority population percentage of the general population of Oregon (21.5 percent), but its low-income population percentage is somewhat greater than that of the low-income population percentage of the general population of Oregon (16.7 percent).

Assuming the demographic patterns of those residents engaged in the GOA trawl fishery in Newport mirror those of the community, no disproportionate high and adverse impacts to minority populations in Newport are anticipated under any of the alternatives. In the case of low-income populations, while the community has a somewhat greater proportion of low-income residents than does the general population of the state, there are no indications that low-income residents of Newport would experience disproportionate high and adverse impacts from any of the alternatives.

6.1.3.3 Communities in States other than Alaska, Washington, and Oregon and in U.S. Territories

General

Communities states other than Alaska, Washington, and Oregon participated in the GOA trawl fishery through resident ownership of trawl catcher vessels or trawl catcher processors during the 2003-2014. Yet more communities in these states and one U.S. territory were involved in the fishery as the home of crew members in either the catcher vessel or catcher processor sectors, according to 2015 EDR data.

- During the 2003-2014 period, an annual average of 1.8 catcher vessels and a total of 4 unique catcher vessels owned by residents of states other than Alaska, Washington, or Oregon. participated in the GOA trawl fishery.
- During the 2003-2014 period, an annual average of 0.8 catcher processors and a total of 2 unique catcher processors owned by residents of states other than Alaska, Washington, or Oregon. participated in the GOA trawl fishery.
- In 2015, according to EDR data, a total of 21 crew members from 21 different communities in 12 states other than Alaska, Washington, and Oregon worked on GOA trawl catcher vessels.

- In 2015, according to EDR data, crew members from 118 different communities in 19 states other than Alaska, Washington, and Oregon and 1 U.S. territory worked onboard GOA trawl catcher processors.

Given the minimal level of involvement in the GOA trawl fishery, none of these communities would be expected to experience substantial adverse community level impacts from any of the proposed alternatives, although adverse impacts could be felt on an individual enterprise level.

Environmental Justice Concerns

Given the small number of individuals in any one community in states other than Alaska, Washington, or Oregon or in any U.S. territory, no disproportionate high and adverse impacts to minority populations or low-income populations in these states or territories are likely.

6.1.4 Risks to Fishing Community Sustained Participation in the GOA Trawl Fisheries

<< to be completed after finalizing the SIA analysis >>

6.2 Potential Distribution of Community-Level Impacts to GOA Halibut Fishery Dependent Communities

6.2.1 Overview

The potential for community-level impacts from the GOA halibut PSC limit revisions proposed under Alternative 2 in any given community is in part a function of present and future dependence of the community on the potentially affected GOA halibut fisheries. Similar to what was described for GOA trawl fisheries, dependency on the GOA halibut fishery is influenced by the relative importance of GOA halibut fisheries in the larger community fisheries sector(s), as well as the relative importance of the overall community fishery sector(s) within the larger community economic base (both in terms of private sector business activity and public revenues). Also important to community-level impact outcomes is the specific nature of local engagement in the potentially affected GOA halibut fisheries and alternative employment, income, business, and public revenue opportunities available within the community as a result of the location, scale, and relative economic diversity of the community.

Consistent with assumptions made in recent proposed GOA (and BSAI) halibut PSC limit reduction social impact analyses (AECOM 2016; AECOM 2013), it is assumed that directed GOA halibut fisheries, including the commercial, subsistence, and sport halibut fisheries, would potentially benefit from the various proposed GOA halibut PSC limit reduction Alternative 2 options relative to the degree that the GOA halibut stock itself would potentially benefit from these proposed actions (and, in the case of the commercial and charter directed halibut fisheries, the effective redistribution of overall allocations between sectors that may occur with the various options). Within a few Alaska communities, beneficial impacts to these directed halibut fisheries would, in some measure, potentially serve to offset adverse impacts to direct participation in GOA trawl fisheries resulting from the proposed GOA halibut PSC limit reductions at the community level if not at the individual or sector operational level within the same communities.

The communities most heavily engaged in the relevant GOA trawl fisheries, however, are not often the communities most heavily engaged in/dependent upon the directed GOA halibut fisheries. Further, it is important to note that there would be differences in the timing of adverse and beneficial impacts. While to the extent that they would be felt, impacts to communities engaged in the GOA trawl fisheries from GOA halibut PSC reductions would be immediate and adverse; potential impacts to communities engaged in the GOA halibut fisheries, to the extent that they would be felt, would not (except for a de-facto reallocation of halibut between fisheries) be immediately apparent and the full extent of their beneficial impact would be unrealized for several years.

Further, as noted in the discussion of Alternative 2 in the RIR to which this SIA document is appended, the recent (2013) Environmental Assessment/RIR/Initial Regulatory Flexibility Analysis to revise GOA halibut PSC limits (Amendment 95 of the GOA groundfish fishery management plan) clearly stated that direct comparisons should not be made between gross revenue increases in the directed halibut fisheries and the gross revenue foregone in the groundfish fisheries. In that analysis, as in the current analysis, estimates for the two sectors were made using different methodologies and assumptions and direct comparisons may generate misleading results in terms of changes in gross revenue gained or foregone by this action. As a result, the quantitative data presented in this section are

limited to estimates of potential changes to the GOA halibut fisheries themselves that would directly result from Alternative 2 GOA halibut PSC limit reduction options.

In qualitative terms, the potential differential distribution of adverse and beneficial impacts is expected to vary within and among communities, but the greatest overlap of potential negatively affected and positively affected populations would most likely occur in the GOA trawl communities profiled. Among these nine communities, however, the mix of local engagement in the varied GOA trawl and GOA halibut sectors varies substantially. For example, while Kodiak residents are heavily engaged in all of the GOA trawl and GOA halibut fishery sectors, King Cove and Sand Point, while substantially engaged in the GOA trawl fisheries, do not have a local halibut sport charter fishery. In contrast, while Homer and Kodiak are heavily engaged in the sport charter halibut fisheries, a number of other communities with active halibut sport charter operations have little or no engagement in the relevant GOA trawl fisheries. Similarly, while Homer, Kodiak, and Petersburg have substantial concentrations of commercial GOA halibut fishing activity, many other communities with little or no engagement in the relevant GOA trawl fisheries have at least locally substantial engagement in the commercial GOA halibut fisheries.

Especially when including communities outside of Alaska, it is also likely that the potential beneficial impacts to commercial halibut fishery participants would be relatively modest in absolute economic terms compared to potential negative impacts to GOA trawl fishery participants likely to be the most directly affected by the GOA halibut PSC limit revision options, at least over the short term. This does not, of course, take into account a range of social and economic impacts on both the operational and community levels that would extend beyond gross revenue changes that may be experienced by direct sector participants. Particularly important is the fact that they do not take into account the sociocultural as well as the socioeconomic importance of the halibut fishery, across its multiple sectors, to numerous Alaska communities, especially small, remote, primarily indigenous communities, and the direct and indirect benefits that would accrue to these communities as a result of an incremental contribution to sustaining and improving the overall vitality of the GOA halibut fisheries (and not just an effective redistribution of access the fisheries) over the long run.

6.2.2 GOA Communities Engaged in the Commercial Halibut Fishery

Attachment 1 provides a series of tables that provides quantitative information on communities that were engaged in the GOA commercial halibut fishery over the 2003-2014 period, beyond what was included in Section 4.2. These include tables that show engagement in the fishery through local resident ownership of GOA halibut catcher vessels, locally operating shore-based processors that accepted GOA halibut deliveries, and local holding of GOA halibut quota shares.

- Table 80 provides a count, by community and year (2003-2014), of resident-owned GOA halibut catcher vessels for all Alaska communities; Newport and other Oregon communities as a group; the Seattle MSA and other Washington communities as a group; and all states other than Alaska, Oregon, and Washington combined. Also provided are annual averages by number

of resident-owned catcher vessels and percentage of all catcher vessels participating in the commercial GOA halibut fishery, along with the number of unique resident-owned catcher vessels that participated in the fishery over this period.

- A total of 74 Alaska communities participated in the commercial GOA halibut fishery over the 2003-2014 period through resident ownership of GOA halibut catcher vessels.
- Of the 10 Alaska communities with the greatest involvement in the GOA halibut fishery as measured by the annual average number of catcher vessels participating in the fishery include 5 of the 6 communities profiled as having the greatest involvement in the GOA trawl fishery as measured by the annual average number of catcher vessels participating in that fishery over the same period (Kodiak, Homer, Petersburg, Sand Point, and Anchorage), with the 6th community (King Cove) ranking 20th.
- Of the 6 communities profiled as having the greatest involvement in the GOA trawl fishery as measured through shore-based processing, 2 (Kodiak and Sand Point) are in the 10 Alaska communities with the greatest involvement in the GOA halibut fishery as measured by the annual average number of catcher vessels participating in the fishery and another 3 are in the top 20 (Seward, Unalaska/Dutch Harbor, and King Cove), with the 6th community (Akutan) ranking 34th.

- Table 81 provides a listing of GOA halibut ex-vessel gross revenues, by community and year (2003-2014), for all Alaska communities with the minimum number of participants that would allow data disclosure, other Alaska communities as a group; Oregon communities as a group; the Seattle MSA and other Washington communities as a group; and all states other than Alaska, Oregon, and Washington combined. Also provided are annual averages by dollars and percentage of all ex-vessel gross revenues generated by the fishery over this period.
  - Of the 13 Alaska communities for which GOA halibut ex-vessel gross revenues can be disclosed, 7 of the 9 communities that are profiled as having the greatest involvement in the GOA trawl fishery as measured by either the annual average number of catcher vessels participating in that fishery or local shore-based processing over the same period (Kodiak, Homer, Petersburg, Seward, Anchorage, Sand Point, and King Cove), are included in the list (i.e. all but Akutan and Unalaska/Dutch Harbor).
  - Table 82 provides GOA halibut vessel ex-vessel gross revenue diversification for the communities listed in Table 81. As shown, among the 7 listed communities profiled as having the greatest involvement in the GOA trawl fishery as measured by either the annual average number of catcher vessels participating in that fishery or local shore-based processing over the same period, GOA halibut accounted for between 19.5 percent (Sand Point) and 53.9 percent (Homer) of all ex-vessel gross revenues for the local GOA halibut fleet.
  - Table 83 provides parallel information for all local resident-owned commercial fishing vessels (all fisheries, all gear types, all areas) for these same communities. As shown, among the 7 listed communities profiled as having the greatest involvement in the

GOA trawl fishery as measured by either the annual average number of catcher vessels participating in that fishery or local shore-based processing over the same period, GOA halibut accounted for between 5.5 percent (Anchorage) and 25.1 percent (Homer) of all ex-vessel gross revenues for the entire local resident owned commercial fishing fleet.

- Table 84 provides a count, by community and year (2003-2014), of locally operating shore-based processors that accepted GOA halibut deliveries over this period for all Alaska communities and for all Washington communities as a group. Also provided are annual averages by number of locally operating shore-based processors and percentage of all shore-based processors participating in the commercial GOA halibut fishery, along with the number of unique locally operating shore-based processors that participated in the fishery over this period.
    - A total of 33 Alaska communities participated in the commercial GOA halibut fishery over the 2003-2014 period through local operation of a shore-based processor that accepted GOA halibut deliveries.
    - Of the 10 Alaska communities with the greatest involvement in the GOA halibut fishery as measured by the annual average number of shore-based processors participating in the fishery include 3 of the 6 communities profiled as having the greatest involvement in the GOA trawl fishery as measured by the annual average number of catcher vessels participating in that fishery over the same period (Kodiak, Homer, and Anchorage), with the other 3 communities (Petersburg, King Cove, and Sand Point) ranking 12th (Petersburg) and part of a 4-way tie for 16th (King Cove and Sand Point).
    - Of the 6 communities profiled as having the greatest involvement in the GOA trawl fishery as measured through shore-based processing, 3 (Kodiak, Seward, and Unalaska) are in the 10 Alaska communities with the greatest involvement in the GOA halibut fishery as measured by the annual average number of shore-based processors participating in the fishery and the other 3 are in the top 20 (Akutan, King Cove, and Sand Point), all part of a 4-way tie for 16th.
- Table 85 provides a listing of GOA halibut first wholesale gross revenues, by community and year (2003-2014), for all Alaska communities with the minimum number of participants that would allow data disclosure, and all other geographies combined. Also provided are annual averages by dollars and percentage of all first wholesale gross revenues generated by the fishery over this period.
    - First wholesale gross revenues can be disclosed for Kodiak and Homer only.
    - Table 86 provides GOA halibut ex-vessel gross revenue diversification for deliveries at local shore-based processors for the communities listed in Table 85. As shown, GOA halibut accounted for 24.5 percent and 85.1 percent of all ex-vessel gross revenues of

landings at shore-based processors accepting GOA halibut landings in Kodiak and Homer, respectively.

  - Table 87 provides parallel information for all locally operating shore-based processors accepting any commercial fishery landings (all fisheries, all gear types, all areas) for these same communities. As shown, GOA halibut accounted for 12.6 percent and 4.8 percent of all ex-vessel gross revenues of landings at shore-based processors accepting any commercial fisheries landings in Kodiak and Homer, respectively.

- Table 88 provides a count of unique resident IFQ holders by community for GOA and BSAI halibut by IPHC management area for 2016. Table 89 provides a count of the number of quota shares held by community for GOA and BSAI halibut by IPHC management area for 2016.
  - A total of 81 Alaska communities participated in the commercial GOA halibut fishery in 2016 through the holding of IFQ permits.
  - As shown, among the 9 Alaska communities profiled as having the greatest involvement in the GOA trawl fishery, through either GOA trawl catcher vessel resident ownership and/or local shore-based processors accepting GOA trawl-caught deliveries, 4 or 5 of those communities ranked in the top 10 communities participating in the GOA halibut fishery as measured by number of GOA halibut IFQ holders or number of GOA halibut quota shares held (Petersburg, Kodiak, Homer, and Anchorage for the former, and Kodiak, Petersburg, Homer, Anchorage, and Seward for the latter) and all 7 profiled communities that are located within the geography of the GOA region itself are within the top 20 (the above noted communities, plus Sand Point and King Cove).
  - Residents of Unalaska/Dutch Harbor and Akutan, the other two communities most directly engaged in the GOA trawl fishery, both of which are located in the BSAI region, had relatively modest GOA halibut IFQ holdings (Unalaska/Dutch Harbor) or no GOA halibut IFQ holdings (Akutan), but did hold halibut IFQ in the BSAI region.

Analysis presented "Halibut Directed Fisheries" discussion in the RIR to which this SIA document is appended assumes that if the amount of PSC reductions is less than the difference between the average PSC usage in the three most recent years and a given PSC limit reduction option, then the PSC limit reduction option would not constrain the trawl fishery and, therefore would not directly affect the directed halibut fisheries. In practical terms, that analysis suggests that proposed GOA halibut PSC limit reduction options below the 20 percent level would be unlikely to be constraining to the GOA trawl fishery (but that negative impacts to the GOA trawl fishery could still occur at lower proposed GOA halibut PSC limit reduction levels in the form increased costs); similarly, substantive beneficial impacts to the directed GOA halibut fisheries would be unlikely under GOA halibut PSC limit reduction options of less than 20 percent, but would likely occur under GOA halibut PSC limit reduction options of 20 percent or greater.

Both potential constraints to the GOA trawl fishery and benefits to the directed GOA halibut fisheries would be limited to IPHC areas 3A, 3B, and 4A, as no trawling occurs in area 2C. Potential beneficial

impacts accruing to the charter sector would be limited to area 3A only, as areas 3B and 4A are not managed under sport charter regulations. Among the Alaska communities most directly engaged in the GOA trawl fishery through participation of resident-owned catcher vessels and/or locally operating shore-based processors, Kodiak, Anchorage, Homer, and Seward are in area 3A; Sand Point and King Cove are in area 3B; Akutan and Unalaska/Dutch Harbor are in area 4A; and Petersburg is in Area 2C.

Table 78 and Table 79 provide information on estimated increases in directed GOA halibut fishery catch limits and gross revenues under the Alternative 2 GOA halibut PSC limit 20 percent and 25 percent options. As shown, depending on the specific area:

- Under the proposed 20 percent GOA halibut PSC limit reduction option, commercial catch limits and gross revenue values would increase between roughly 0.5 percent and 1.3 percent.
- Under the proposed 25 percent GOA halibut PSC limit reduction option, commercial catch limits and gross revenue values would increase between roughly 1.2 percent and 3.1 percent.

Table 78. Estimated Increase in Directed GOA Halibut Commercial and Charter Fishery Catch Limits as a Direct Result of Alternative 2 GOA Halibut PSC Reduction Options, by IPHC Area, 2016

	2016 IPHC Recommended Catch Limit			20% PSC Limit Reduction				25% PSC Limit Reduction			
				Increased Catch Limit (1,000's net lbs)		Increased Catch Limit (percentage)		Increased Catch Limit (1,000's net lbs)		Increased Catch Limit (percentage)	
Area	Combined	Commercial	Charter	Commercial	Charter	Commercial	Charter	Commercial	Charter	Commercial	Charter
3A	9,600.0	7,785.6	1,814.4	45.1	10.5	0.6%	0.6%	107.5	25.0	1.4%	1.4%
3B	2,710.0	2,710.0	0.0	17.7	0.0	0.7%	0.0%	42.0	0.0	1.5%	0.0%
4A	1,390.0	1,390.0	0.0	17.7	0.0	1.3%	0.0%	42.0	0.0	3.0%	0.0%

Source: IPHC 2016 catch projections; see RIR section 1.7.2.2 Directed Halibut Fisheries for detail.

Table 79. Estimated Increase in Directed GOA Commercial Halibut Fishery Gross Revenues as a Direct Result of Alternative 2 GOA Halibut PSC Reduction Options, by IPHC Area, 2016

	Status Quo Gross Revenue (thousands of dollars)		20% PSC Limit Reduction				25% PSC Limit Reduction			
			Gross Revenue Increase (thousands of dollars)		Gross Revenue Increase (percentage)		Gross Revenue Increase (thousands of dollars)		Gross Revenue Increase (percentage)	
Area	Ex-vessel	First Wholesale	Ex-vessel	First Wholesale	Ex-vessel	First Wholesale	Ex-vessel	First Wholesale	Ex-vessel	First Wholesale
3A	$60,422	$78,811	$293	$384	0.5%	0.5%	$699	$913	1.2%	1.2%
3B	$17,057	$22,248	$115	$150	0.7%	0.7%	$273	$357	1.6%	1.6%
4A	$8,749	$11,412	$115	$150	1.3%	1.3%	$273	$357	3.1%	3.1%
Total	$86,228	$112,471	$523	$684	0.6%	0.6%	$1,245	$1,627	1.4%	1.4%

Source: 80 FR 78172 standard ex-vessel prices; see RIR section 1.7.2.2 Directed Halibut Fisheries for detail.

6.2.3 GOA Communities Engaged in the Halibut Sport Fishery

Attachment 1 provides two tables that provide quantitative information on communities that were engaged in the GOA sport halibut fishery, beyond what was included in Section 4.2. These include tables that show community engagement in the fishery through local holdings of GOA halibut sport charter permits and GOA halibut sport harvest by region.

- Table 90 provides a count of unique resident GOA halibut sport charter permit holders and the number of permits held, by IPHC management area, by community, for 2016.
    - A total of 58 Alaska communities participated in the sport charter GOA halibut fishery in 2016 through the holding of sport charter permits.
    - As shown, among the 9 Alaska communities profiled as having the greatest involvement in the GOA trawl fishery, through either GOA trawl catcher vessel resident ownership and/or local shore-based processors accepting GOA trawl-caught deliveries, 4 of those communities ranked in the top 10 communities participating in the GOA halibut sport charter fishery as measured by number of GOA halibut sport charter holders and number of GOA halibut sport charter permits held (Kodiak, Anchorage, Homer, and Seward) and a 5th (Petersburg) ranked 13th. Of the 4 GOA trawl communities profiled that were not in the top 20 of GOA halibut sport charter permit holders, all 4 (Sand Point, King Cove, Akutan, and Unalaska/Dutch Harbor) were located in IPHC areas not subject to sport charter regulations.
- Table 91 provides a listing of GOA halibut sport harvest by region (both charter/guided and unguided). It does not provide information on the individual community level.

Table 31 and Table 32 in Section 4.2 provide more detail on charter and non-charter sport halibut harvest over the 2003-2014 period by IPHC management area, but similar information at the community level is not readily available.

As noted in the previous section (Section 6.2.2), substantive beneficial impacts to the directed GOA halibut fisheries would be unlikely under GOA halibut PSC limit reduction options of less than 20 percent, and potential beneficial increases in catch limits accruing to the charter sector would be limited to area 3A only. As shown in Table 78:

- Under the proposed 20 percent GOA halibut PSC limit reduction option, sport charter catch limits would increase by roughly 0.6 percent.
- Under the proposed 25 percent GOA halibut PSC limit reduction option, sport charter catch limits would increase by roughly 1.4 percent.

Additionally, as noted in the RIR to which this SIA document is appended, while quantification of an increase in revenues to sport charter businesses from an increase in catch limits is less than straightforward, a small increase in halibut available to the charter sector in 3A could, depending

multiple factors, impact the GOA halibut sport charter harvest limitations for that year, with those restrictions, in turn, influencing demand for charter services. As noted in that same section, however, determining exactly how the limitations will vary in the future is not possible with the information currently available.

6.2.4 GOA Communities Engaged in the Subsistence Halibut Fishery

As noted in Section 4.2, subsistence halibut fishing is practiced in many communities outside of those communities engaged in the GOA trawl fishery. Table 33 in that section notes that over the 2003-2014 period, an annual average of approximately 5,200 subsistence fishermen harvested approximately 46,600 fish weighing roughly 932,500 pounds.

Subsistence harvest of halibut would not be directly affected by the proposed GOA halibut PSC limit reduction options under Alternative 2. Unlike the commercial halibut fishery, the subsistence halibut fishery would not benefit from potential reallocations between the GOA trawl and the GOA directed halibut fisheries if GOA halibut PSC limits were reduced under Alternative 2. As noted elsewhere, the IPHC accounts for incidental halibut removals in the groundfish fisheries, recreational and subsistence catches, and other sources of halibut mortality before setting commercial halibut catch limits each year. Each year, the IPHC estimates subsistence harvest by using the actual harvest level from the previous year as a base, and then adjusts the estimate by taking into account how accurate the previous year's harvest estimate was compared to actual harvest for that year. While subsistence removals are accounted for in setting the commercial halibut catch limits, subsistence halibut harvests are not constrained by this process.

Subsistence halibut harvests (and harvesters) could indirectly benefit from the implementation of the Alternative 2 options that would reduce GOA halibut PSC limits if reducing GOA halibut PSC limits were to ultimately result in changes to the spatial distribution of halibut spawning masses, an overall improvement in availability of halibut for subsistence harvest, and/or an accompanying decrease in effort and expense in harvesting halibut for subsistence use. Beyond direct use of halibut as a subsistence resource, GOA halibut PSC limit reduction options could have impacts on other subsistence pursuits. These types of impacts fall into two main categories:

- **Impacts to other subsistence pursuits as a result of loss of income from the GOA trawl fishery under the action alternatives (or the GOA halibut fishery under the no-action alternative).** This income could be used to purchase fuel, vehicles, or other subsistence-related gear, or otherwise offset expenses required to engage in a range of subsistence pursuits. These types of impacts could be experienced by anyone engaged in the potentially affected fisheries who uses income derived from the fishery to help capitalize subsistence pursuits, regardless of the community of residence of the individual involved or the location of those subsistence pursuits. These types of impacts, then, could occur in areas far removed from the location of the management action itself.

- **Impacts to other subsistence pursuits as a result of the loss of opportunity to use commercial fishing gear and vessels for subsistence pursuits.** This would result from vessels not being ready to go as a result of being prepared for commercial fishing or from the simultaneous harvest of fish and game resources during commercial fishing forays where these assets are used in such a manner that commercial and subsistence catches are jointly produced, based on shared use of fixed and variable inputs.

These two types of indirect impacts to subsistence pursuits are discussed in more detail in Attachment 6. In terms of distribution of subsistence halibut fishing across communities, locally important subsistence halibut fishing takes place in many GOA communities not directly engaged in the relevant GOA trawl (or, in a number of cases, even the commercial GOA halibut fisheries); in a few cases, however, the communities most heavily engaged in the GOA trawl fisheries are also relatively highly engaged in the subsistence halibut fishery.

Further, subsistence harvest levels are influenced by myriad factors in addition to stock abundance but, at the highest level of generalization, it is assumed that if the GOA halibut PSC limit revisions being considered would ultimately result in beneficial impacts to the biological status of the halibut stock itself, then they could potentially result in beneficial impacts over the long run to communities engaged in the subsistence halibut fisheries in the GOA and eventually other regions throughout their range, but the magnitude of those beneficial impacts is unknown.

6.3 Potential Distribution of Community-Level Impacts to GOA Chinook Salmon Fishery Dependent Communities

6.3.1 Overview

The assumptions utilized in the overview section of potential distribution of community-level impacts to GOA halibut fishery dependent communities (Section 6.2.1) also apply to the potential distribution of community-level impacts to GOA Chinook salmon fishery-dependent communities, with the caveat that the "targeted" GOA Chinook salmon fishery is quite different from the GOA halibut fishery. As noted in an earlier section, in broad terms, anyone with a Commercial Fisheries Entry Commission salmon permit may fish for Chinook salmon (unless otherwise prohibited); however, in most management areas of the state, salmon fishermen are not targeting Chinook salmon, but encounter them while targeting other salmon species. Management actions intended to promote Chinook escapements and/or minimize Chinook harvests are common throughout the state and include gear restrictions, season closures, and area closures. In other words, some of the commercial Chinook salmon statistics presented in this section, at least for some areas at some times, do not represent people "fishing for Chinook" but, instead, harvests of Chinook while in the pursuit of other species.

6.3.2 GOA Communities Engaged in the Commercial Chinook Salmon Fishery

Attachment 2 provides a series of tables that provides quantitative information on communities that were engaged in the GOA commercial Chinook salmon fishery over the 2003-2014 period, beyond what was included in Section 4.3. These include tables that show engagement in the fishery through local resident ownership of GOA Chinook salmon catcher vessels, and locally operating shore-based processors that accepted GOA Chinook salmon deliveries.

- Table 92 provides a count, by community and year (2003-2014), of resident-owned GOA Chinook salmon catcher vessels for all Alaska communities; Newport and other Oregon communities as a group; the Seattle MSA and other Washington communities as a group; and all states other than Alaska, Oregon, and Washington combined. Also provided are annual averages by number of resident-owned catcher vessels and percentage of all catcher vessels participating in the commercial GOA Chinook salmon fishery, along with the number of unique resident-owned catcher vessels that participated in the fishery over this period.
    - A total of 94 Alaska communities participated in the commercial GOA Chinook salmon fishery over the 2003-2014 period through resident ownership of GOA Chinook salmon catcher vessels.
    - Of the 10 Alaska communities with the greatest involvement in the GOA Chinook salmon fishery as measured by the annual average number of catcher vessels

participating in the fishery include 5 of the 6 communities profiled as having the greatest involvement in the GOA trawl fishery as measured by the annual average number of catcher vessels participating in that fishery over the same period (Homer, Kodiak, Anchorage, Sand Point, and Petersburg), with the 6th community (King Cove) ranking 15th.

- Of the 6 communities profiled as having the greatest involvement in the GOA trawl fishery as measured through shore-based processing, 2 (Kodiak and Sand Point) are in the 10 Alaska communities with the greatest involvement in the GOA halibut fishery as measured by the annual average number of catcher vessels participating in the fishery, another 1 is in the top 20 (King Cove), 1 is ranked 22nd (Seward), and 1 is ranked 51st (Unalaska/Dutch Harbor), with the 6th community (Akutan) not appearing in the data.

- Table 93 provides a listing of GOA Chinook salmon ex-vessel gross revenues, by community and year (2003-2014), for all Alaska communities with the minimum number of participants that would allow data disclosure, other Alaska communities as a group; Oregon communities as a group; the Seattle MSA and other Washington communities as a group; and all states other than Alaska, Oregon, and Washington combined. Also provided are annual averages by dollars and percentage of all ex-vessel gross revenues generated by the fishery over this period.
    - Of the 23 Alaska communities for which GOA Chinook salmon ex-vessel gross revenues can be disclosed, 7 of the 9 communities that are profiled as having the greatest involvement in the GOA trawl fishery as measured by either the annual average number of catcher vessels participating in that fishery or local shore-based processing over the same period (Petersburg, Homer, Anchorage, Kodiak, Seward, Sand Point, and King Cove), are included in the list (i.e. all but Akutan and Unalaska/Dutch Harbor).
    - Table 94 provides GOA Chinook salmon vessel ex-vessel gross revenue diversification for the communities listed in Table 93. As shown, among the 7 listed communities profiled as having the greatest involvement in the GOA trawl fishery as measured by either the annual average number of catcher vessels participating in that fishery or local shore-based processing over the same period, GOA halibut accounted for between 0.1 percent (King Cove) and 2.3 percent (Seward) of all ex-vessel gross revenues for the local GOA Chinook salmon fleet.
    - Table 95 provides parallel information for all local resident-owned commercial fishing vessels (all fisheries, all gear types, all areas) for these same communities. As shown, among the 7 listed communities profiled as having the greatest involvement in the GOA trawl fishery as measured by either the annual average number of catcher vessels participating in that fishery or local shore-based processing over the same period, GOA Chinook salmon accounted for between 0.1 percent (Kodiak and King Cove) and 0.5 percent (Seward) of all ex-vessel gross revenues for the entire local resident owned commercial fishing fleet.

- Table 96 provides a count, by community and year (2003-2014), of locally operating shore-based processors that accepted GOA Chinook salmon deliveries over this period for all Alaska communities, for all Washington communities as a group, and for all other geographies as a group. Also provided are annual averages by number of locally operating shore-based processors and percentage of all shore-based processors participating in the commercial GOA Chinook salmon fishery, along with the number of unique locally operating shore-based processors that participated in the fishery over this period.
    - A total of 62 Alaska communities participated in the commercial GOA Chinook salmon fishery over the 2003-2014 period through local operation of a shore-based processor that accepted GOA Chinook salmon deliveries.
    - Of the 10 Alaska communities with the greatest involvement in the GOA Chinook salmon fishery as measured by the annual average number of shore-based processors participating in the fishery include 3 of the 6 communities profiled as having the greatest involvement in the GOA trawl fishery as measured by the annual average number of catcher vessels participating in that fishery over the same period (Kodiak, Petersburg, and Anchorage), with the other 3 communities (Homer, Sand Point, and King Cove) ranking 14th, tied for 20th, and tied for 28th, respectively.
    - Of the 6 communities profiled as having the greatest involvement in the GOA trawl fishery as measured through shore-based processing, 1 (Kodiak) is in the 10 Alaska communities with the greatest involvement in the GOA Chinook salmon fishery as measured by the annual average number of shore-based processors participating in the fishery, 1 is tied for 20th (Sand Point), 1 tied for 22nd (Seward), 1 is tied for 28th (King Cove), and 2 are tied for 55th (Akutan and Unalaska/Dutch Harbor).
- Table 97 provides a listing of GOA Chinook salmon first wholesale gross revenues, by community and year (2003-2014), for all Alaska communities with the minimum number of participants that would allow data disclosure, and all other geographies combined. Also provided are annual averages by dollars and percentage of all first wholesale gross revenues generated by the fishery over this period.
    - First wholesale gross revenues can be disclosed a total of 8 communities, including 2 of the communities profiled as being the most engaged in the GOA trawl fishery as measured by GOA trawl catcher vessel resident ownership and/or local shore-based processors accepting GOA trawl-caught deliveries (Petersburg and Kodiak).
    - Table 98 provides GOA Chinook salmon ex-vessel gross revenue diversification for deliveries at local shore-based processors for the communities listed in Table 97. As shown, GOA Chinook salmon accounted for 0.1 percent and 1.8 percent of all ex-vessel gross revenues of landings at shore-based processors accepting GOA Chinook salmon landings in Kodiak and Petersburg, respectively.
    - Table 99 provides parallel information for all locally operating shore-based processors accepting any commercial fishery landings (all fisheries, all gear types, all areas) for

these same communities. As shown, GOA Chinook salmon accounted for 0.1 percent and 1.8 percent of all ex-vessel gross revenues of landings at shore-based processors accepting any commercial fisheries landings in Kodiak and Petersburg, respectively.

Analysis presented "Chinook Salmon Directed Fisheries" discussion in the RIR to which this SIA document is appended suggests the proposed GOA Chinook salmon PSC limit reduction options would be unlikely to be constraining to the GOA trawl fishery or directly reduce the number of Chinook salmon taken as PSC and thus would not have a direct impact on the amount of Chinook salmon available to directed fishery users; however, negative impacts to the GOA trawl fishery could still occur at lower proposed GOA Chinook salmon PSC limit reduction levels in the form increased costs.

As the discussion in the RIR also notes, any increase in the amount of Chinook salmon needed in the non-pollock fisheries could increase the utilization of Chinook salmon PSC that was initially assigned to the pollock fishery. Additional PSC use impacts directed salmon fisheries and, while the impact on the overall number of Chinook salmon that return to streams in the various regions[79] of the GOA and Pacific Northwest are expected to be small, it is not possible to quantify the expected impact on directed Chinook salmon users at specific locations and small reductions in returns to some river systems could have a noticeable impact for a variety of factors, but little or no impact for others.

6.3.3 GOA Communities Engaged in the Chinook Salmon Sport Fishery

Attachment 2 provides one table that includes quantitative information on the GOA Chinook salmon sport fishery, beyond what was included in Section 4.3.

- Table 100 provides a listing of GOA Chinook salmon sport harvest by region (both charter/guided and unguided). It does not provide information on the individual community level.

More detailed information on a community level, at least for a few communities, may be found in Table 42 in Section 4.3. In general, information on GOA Chinook salmon sport fishing is not readily available. In general, no substantial impacts to GOA Chinook salmon sport fishing would be expected to result from the implementation of either GOA Chinook salmon PSC limit reduction option under Alternative 2, for the same reasons described for anticipated lack of substantial impacts to the directed commercial GOA Chinook salmon fishery in the previous section (Section 6.3.2).

[79] As noted in the RIR, the 2016 report on the 2014 pollock fishery estimated that 99.7% of the GOA trawl Chinook salmon PSC originated from GOA/Pacific coastal regions, with the British Columbia grouping contributing the most (43%), followed by the West Coast US (34%), Coastal Southeast Alaska (16%), and Northwest GOA (5%).

6.3.4 GOA Communities Engaged in the Subsistence and Personal Use Chinook Salmon Fisheries

Attachment 2 provides two tables that include quantitative information on the GOA Chinook salmon subsistence fishery, beyond what was included in Section 4.3.

- Table 101 provides a listing of GOA Chinook salmon subsistence and personal use harvest by region, 2003-2013. It does not provide information at the individual community level.
- Table 102 provides estimated proportion of GOA Chinook salmon harvests compared to all subsistence/personal use harvested salmon for GOA areas, 2003-2013. It does not provide information at the individual community level.

As noted in the previous two sections discussing GOA Chinook salmon commercial and sport fisheries, proposed GOA Chinook salmon PSC limit reduction options under Alternative 2 would be unlikely to be constraining to the GOA trawl fishery or directly reduce the number of Chinook salmon taken as PSC and thus would not have a direct impact on the amount of Chinook salmon available to directed fishery users. No substantive impacts to the GOA Chinook salmon subsistence fisheries are anticipated to result from the implementation of either GOA Chinook salmon PSC limit reduction options under Alternative 2 for the same reasons.

6.4 Potential Cumulative Small/Rural Community and Cultural Context Issues

This community analysis has largely focused on community impacts associated with the implementation of proposed GOA trawl bycatch management measures through the use of quantitative fishery information and through characterizations of a number of Alaskan regions and communities that describe the magnitude of social- and community-level engagement and dependency on the relevant fisheries. This approach provides a relatively comprehensive analysis of anticipated socioeconomic impacts that could occur as a result of proposed GOA trawl bycatch management changes, including GOA halibut PSC and GOA Chinook salmon PSC limit revisions.

It should be noted, however, that fishing regulatory actions can result in a wide range of social and sociocultural impacts in rural fishing communities. For many residents of these communities, fishing is not seen solely as a commercial venture, but rather as an integral part of self-identity. This relationship is compounded for those residents who come from families with multi-generational experience in commercial and/or subsistence fishing, particularly for those Alaska Native residents for whom fishing is part of a larger, integrated traditional subsistence and economic sustenance practice rooted in thousands of years of history. A number of researchers have explored the relationship between contemporary fishery management actions (e.g., IFQ, catch-shares, rationalization, limited entry, etc.) and the sociocultural impacts that can result, including impacts to identity. The following survey of existing literature is not meant to be comprehensive, but is instead included here to indicate the cultural context of fishing, the types of research being conducted within the GOA region or, if relevant, the BSAI region, on commercial fishery management issues and the potentially interactive nature of the present proposed management actions with other management actions that have taken place in recent years.

The cultural importance of halibut (as a species) and halibut fishing (as traditional activity) is well documented in the anthropological literature for Alaska Native tribal groups throughout Alaska, including the Yup'ik, Aleut, Alutiiq, and Tlingit. In addition to being a primary subsistence resource for many coastal groups, halibut feature prominently in legends and parables. In one example, Raven, a prominent "trickster" figure in Tlingit traditional folktales, goes on a fishing trip with Cormorant and Bear during which Raven identifies a rich halibut fishing ground and catches a large number of fish (Swanton 1909). In another example, one Tlingit legend tells a story of one Haida fisherman in Haida Gwaii (formerly known as the Queen Charlotte Islands, which are located off the coast of British Columbia) who caught a small halibut that began to grow exponentially upon reaching the shore. The halibut ultimately grew so large that its struggles on the beach destroyed the village and broke apart Haida Gwaii into multiple islands, distributing the Haida people across the islands (Swanton 1909). It is not uncommon to see halibut iconography in carvings, paintings, and textile handicrafts throughout the region, suggesting its traditional cultural importance.

The academic literature regarding commercial fisheries in Alaska and rural community impacts has focused in recent years on the halibut and sablefish IFQ programs, the western Alaska CDQ program, the BSAI crab rationalization program, and other management actions in Alaska. Some of the most recent literature has examined issues surrounding groundfish bycatch management, community

protection measures associated with new fishery management regimes, and societal changes in rural Alaskan communities that may be influenced by changes in commercial fishing. In most cases, the academic literature focuses on the intersection between local community members and the challenges faced by common impacts of rationalization, catch share, or other fisheries privatization programs. For example, a recent article provided a summary of research on fisheries management issues around the world and noted that management actions should be, "flexible, broad, and inclusive, providing potential tools and frameworks to aid in management projects" particularly given the complexity of place and "diverse relationships between people, places and their fish and fisheries" (Lyons et al. 2016)

Courtney Carothers, PhD, is one primary author who has focused regularly on marine resource conservation and management in Alaska in her academic work. In "Fishing Rights and Small Communities: Alaska Halibut IFQ Transfer Patterns" (Carothers, Lew, and Sepez 2010), the authors discuss quota share emigration and how halibut IFQ has resulted in small rural fishing communities (especially those with populations of 1,500 or less) having disproportionately lost fishing rights and how Alaska Native communities are more likely to sell than buy quota. Since quotas have an attached monetary value, many small community residents tend to sell their quotas in tough financial times. The authors also discuss how the quota share market behavior is linked to these small rural fishing communities through the redistribution process of the community selling their quota shares to larger communities, or collectives. The authors describe how, in order to make the program more equitable, the NPFMC started the "Community Purchase Program" for 42 communities of 1,500 people or less.

In her article in *Marine Policy* entitled, "A survey of US halibut IFQ holders: Market participation, attitudes, and impacts" (Carothers 2013), Dr. Carothers attempts to quantify perceptions of halibut IFQ holders and presents the results of a recent survey. She states that there are clear relationships in how the halibut IFQ program is perceived based on income, residency, and ethnicity. She found that older individuals, individuals who make less money, and indigenous fishermen are less likely to buy quota from other fishermen. Additionally, residents of small fishing communities are least likely to support IFQ management policies. On the whole, survey respondents stated that negative impacts of IFQ programs included limits on access, job loss, inequities experienced by rural fishermen and crew, the creation of a "privileged class" of fishermen, and negative environmental impacts (Carothers 2013). Continued research on the topic of catch share programs in rural Alaskan communities by Carothers (Carothers 2015) suggests that community residents have found that these kinds of programs have had divisive, negative impacts in the community and that crew members and younger fishermen have been disproportionately affected. She suggests that some of the core values in fishing, including an appreciation for "hard work" as a key factor in commercial fishing success, have eroded and that access to financial capital is necessary to become an entrant or maintain a commercial fishing career (Carothers 2015).

Focusing specifically on Aleut and Alaska Native fisheries, Katherine Reedy, PhD, discusses similar issues. She recently published an ethnographic view of Alaska Native fisheries and the attitudes and beliefs of those that fish the fishery (Reedy-Maschner 2010). Dr. Reedy suggests that Alaska Native fishermen's views on marine resources and management can be at odds with environmentalists and conservation/management programs because their use of the marine environment differs from that of at least some other commercial fishermen. She finds that a number of programs more broadly targeted at commercial fishermen in general do not take into account the particular context and operational

realities of a substantial portion of Alaska Native fishing operations and suggests that some programs serve to undercut the ability of Alaska Native fishermen to follow traditional cultural patterns of marine resource utilization. As previously noted, in a recent study for the AEB (Reedy 2015) Dr. Reedy developed these points in the specific context of the proposed GOA trawl bycatch management alternatives.

Emilie Springer's thesis, *Through a Cod's Eye: Exploring the Social Context of Alaska's Bering Sea Groundfish Industry*, is another example of the kind of research being done that looks at broader social issues and effects of marine resource management (Springer 2007). Springer discusses how fishermen of groundfish in the Bering Sea (specifically cod), describe their participation in commercial fishing. Springer presents Bering Sea cod fishermen as a representative sample of individuals in other groundfish fisheries, as well as Bering Sea crab fisheries and Alaska state water fisheries. With the exception of vessels using pot gear, Springer notes that, during the 1990s, fishermen in the Bering Sea cod fleet experienced a number of changes, including those resulting from the CDQ program, the License Limitation Program, and Stellar sea lion protection measures. Springer suggests that, as a result of those changes, the fleet matured and opportunities for new, young fishermen were reduced as the fleet was able to fish on a more consistent schedule.

Other recent academic articles have been largely critical of fishery management regimes in Alaska and how they have disproportionately affected Alaska Native communities. Richmond noted that data show that only a handful of communities have been able to purchase halibut IFQ due to the high cost of shares, the limited availability of shares on the open market, and the lack of viable financing opportunities to purchase them (Richmond 2013). Additionally, the requirement that individuals be residents in a community to be eligible to lease quota prevents wider participation in the program by affiliated kin who may not retain eligible-community residency due to a range of factors. Loring presented similar conclusions in a recent article in *Conservation Biology*, positing that fishery management in Alaska does not adequately take into consideration the sociocultural systems that surround the resource and thus "assumes the necessity of trade-offs between biological and social goals" (Loring 2012).

Other research projects in the Bering Sea are also informative to potential changes seen in the GOA. For example, a meta-analysis of ecosystem studies in the Bering Sea have suggested that community residents, including commercial and subsistence fishermen, are able to respond to ecosystem-level change by diversifying their activities across time, space, and species. These ecosystem-wide changes could include changing ocean temperatures, demographic changes, and shifts in commercial fishing management, suggesting a certain amount of resilience in some communities to large changes to commercial and subsistence resources (Haynie and Huntington 2016). The intersection of fishery management and subsistence resource use has also been a topic of recent research in the Bering Sea. For example, Fall and others documented subsistence activities in the Bering Sea communities of Akutan, St. Paul, Togiak, Emmonak, and Savoonga. They found that survey respondents provided a range of personal, economic, and environmental explanations for recent changes in their subsistence harvesting activities. One trend seen in the data suggested that participation in subsistence fishing relied on involvement in commercial fishing, as earnings from commercial fishing helped pay for subsistence activities and commercial vessels were commonly used for subsistence activities (Fall et al. 2013). Reedy-Maschner and Maschner have also found that fishermen who participate in commercial fishing

are often the most important providers in subsistence networks in their local community. As involvement in commercial fishing changes in small, rural Alaskan communities through the implementation of various management regimes, the level of access to subsistence resources can change (Reedy-Maschner and Maschner 2012). Reedy and Maschner found that households that have recently lost direct access to subsistence resources due to policy changes, permit loss, or increased expenses, have created complex adaptive networks of distribution to maintain access. As they state, referencing crab as an example subsistence species, "The social, emotional, and monetary value of crab is still high, but the legal and physical ability to acquire it and share it has changed for [Aleut] men," forcing households to purchase traditional subsistence species from local shore-based processors or via other means (Reedy and Maschner 2014). Reedy and Maschner's social network analysis for the subsistence cod fishery suggests that the loss of important key nodes heavily involved in the distribution of cod to local households would substantially alter access in the region and that the network itself is extremely vulnerable to perturbations (Reedy and Maschner 2014).

Since commercial GOA groundfish bycatch management has been a topic of discussion by the NPFMC since 2012 (in its current incarnation), this timeframe has provided academic researchers to examine aspects of the proposed program during its development. As discussed elsewhere, Reedy (2015) has already developed a social impact assessment for communities in the western GOA. Additionally, Rachel Donkersloot (2016) has examined how community protection measures are considered and challenged by stakeholders in the GOA groundfish fishery. She outlines the ways CFAs have been discussed in official forums, noting the resistance to the establishment of CFAs by many industry stakeholders. She argues that the Council process and the discussion of CFAs is underscored by shifting power dynamics between those who stand to realize monetary benefits from a rationalized fishery (e.g., vessel owners and processors) and those stakeholders who have historically been adversely affected by these kinds of programs (e.g., hired skippers and crew). A more generalized examination of the proposed GOA groundfish bycatch management system compared to other catch share programs in the country was recently submitted by Christopher Oliver. In his thesis, Oliver suggests that catch share programs should effectively limit bycatch and overexploitation issues; however, catch share programs are consistently troubled with negotiating and effectively managing community protection measures because, "the fundamental nature of catch share programs as market-based mechanisms is not conducive to the ideas of equitability or equality except as a negotiated outcome," and any gains in the system may need to be balanced against efficiency losses for the maintenance of community protections (Oliver 2015).

While sustained participation of fishing communities in the GOA trawl, GOA halibut, or GOA Chinook salmon fisheries would not appear to be directly at risk from implementation of the proposed action or alternatives, the literature reviewed in this section, along with recent NPFMC analyses, including the recently completed GOA halibut PSC limit revisions community analysis (AECOM 2013), underlines the fact that the proposed action is not taking place in isolation. For example, Donkersloot and Carothers (Donkersloot and Carothers 2016) have noted that the number of Alaska residents under the age of 40 holding fishing permits has fallen from 38 percent in 1980, to 17 percent in 2013, suggesting that commercial fishermen are getting older as a population (i.e., a "graying of the fleet" in the literature) and that demographic changes in the commercial fishery have been exacerbated by the establishment of catch share programs that have had the effect of limiting the number of local new entrants: "There is a growing concern that the majority of these rights will not wind up in the hands of local, and

especially young, residents of Alaska's rural fishing communities." They suggest that the financial challenge of entering the commercial fishery has resulted in a substantial amount of out-migration by communities' young adults, resulting in widespread changes to local economies and social systems (Donkersloot and Carothers 2016). Other researchers have also found that when Alaska communities see reductions in direct commercial fishing participation through the establishment of catch share programs, the loss of various types of other community capital will follow. In some cases, communities can diversify their local economies; however, in other cases, out-migration exacerbates change and adversely impacts larger socio-ecological systems (Himes-Cornell and Hoelting 2015).

Existing trends suggest that sustained participation in a range of commercial fisheries by residents of small communities in the region has become more challenging in recent years, with less inherent flexibility to adjust to both short- and long-term fluctuations in resource availability (as well as to changing markets for seafood products). This flexibility is widely perceived in the communities as a key element in an overall adaptive strategy practiced in subsistence and economic contexts in the region for generations. This strategy involves piecing together individual livings (and often local economies) with an employment and income plurality approach.[80] This plurality approach is particularly important given that the availability of non-fishing alternatives for income and employment are limited and, like the natural resources (and market factors) that underpin commercial fishing opportunities, tend to be subject to both short- and long-term fluctuations. This ongoing fluctuation in non-fishing opportunities further reinforces the importance of flexibility in the pursuit of a range of commercial fishing opportunities to enable individuals and communities the ability to successfully combine fishing and non-fishing as well as commercial and subsistence pursuits considered critical to long-term socioeconomic and sociocultural survival if not stability. To the extent that the proposed alternatives (including the no-action alternative) would serve to further restrain that flexibility, overall sustained participation in a range of local fisheries by residents of the smaller communities in particular would be made all the more challenging.

[80] Few data are available on the relative importance of fishing and non-fishing income to fishery participants from various employment and income opportunities. While some limited point-in-time information has been collected, such as for the AFSC GOA trawl fishery social survey, little in the way of time-series/historic information is available for GOA trawl, GOA halibut, and/or GOA Chinook salmon vessel owners, skippers, or crew.

7 References Cited

AECOM. 2008. "Comprehensive Baseline Commercial Fishing Community Profiles: Sand Point, Adak, St. Paul, and St. George, Alaska – Final Report." RPRT. Anchorage: North Pacific Fishery Management Council; North Pacific Research Board.

———. 2010. "Five-Year Review of the Crab Rationalization Management Program for Bering Sea and Aleutian Islands Crab Fisheries - Appendix A: Social Impact Assessment." Anchorage: North Pacific Fishery Management Council. http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Crab/5YearRev1210_AppxA.pdf .

———. 2013. "Final Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis to Reduce Gulf of Alaska Halibut Prohibited Species Catch Limits, Amendment 85 to the Fishery Management Plan for Groundfish of the Gulf of Alaska: Appendix 7 ." Anchorage: North Pacific Fishery Management Council. https://alaskafisheries.noaa.gov/analyses/amd95/goa95earir.pdf.

———. 2016. "Appendix C: Community Analysis, Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis for Amendment 111 to the Fishery Management Plan for Groundfish of the Bering Sea/Aleutian Islands Management Area." Anchorage. https://alaskafisheries.noaa.gov/sites/default/files/analyses/finalbsai111earirirfa0116.pdf.

AKFIN. 2016a. "Alaska Region Catch Accounting System, Data Compiled by AKFIN in Comprehensive_BLEND_CA." Anchorage.

———. 2016b. "AKFIN Summaries of Fish Ticket Data." Anchorage.

Alaska Department of Fish and Game. 2013a. "Alaska Subsistence and Personal Use Salmon Fisheries 2010 Annual Report." Technical Paper No. 381. Anchorage: Alaska Department of Fish and Game, Division of Subsistence.

———. 2013b. "Alaska Subsistence and Personal Use Salmon Fisheries 2011 Annual Report." Technical Paper No. 387. Anchorage: Alaska Department of Fish and Game, Division of Subsistence.

———. 2014. "Alaska Subsistence and Personal Use Salmon Fisheries 2012 Annual Report." Technical Paper No. 406. Anchorage: Alaska Department of Fish and Game, Division of Subsistence.

———. 2015. "Alaska Subsistence and Personal Use Salmon Fisheries 2013 Annual Report." Technical Paper No. 413. Anchorage.

———. 2016a. "CSIS Harvest Information by Community." Anchorage: Alaska Department of Fish and Game. http://www.adfg.alaska.gov/sb/CSIS/ index.cfm?ADFG=harvInfo.harvestCommSelComm.

———. 2016b. "Kodiak City, Larsen Bay and Old Harbor: An Ethnographic Study of Traditional Subsistence Salmon Harvests and Uses." Technical Paper No. 418. Anchorage.

———. 2016c. "Regional Species Summary, King Salmon, 2003-2014, All Watertypes, Harvest." *Sport Fishing Survey v2.3*. http://www.adfg.alaska.gov/sf/sportfishingsurvey/index.cfm?ADFG=region.home.

———. 2016d. "Sport Halibut Fishing in Alaska." *ADF&G Charter and Non-Charter Halibut Harvest Estimates 2011-2014*. https://alaskafisheries.noaa.gov/fisheries/sport-halibut.

———. 2016e. "Subsistence Harvests of Pacific Halibut in Alaska, 2014." Technical Paper No. 414.

Anchorage.

Alaska Department of Labor and Workforce Development. 2016. "Research and Analysis, Alaska Local and Regional Information." http://live.laborstats.alaska.gov/alari/index.cfm?r=6&b=1&p=157&goplace=go.

Carothers, Courtney. 2013. "A Survey of U.S. Halibut IFQ Holders: Market Participation, Attitudes, and Impacts." *Marine Policy* 38: 515–22.

———. 2015. "Fisheries Privatization, Social Transitions, and Well-Being in Kodiak, Alaska." *Marine Policy* 61. Elsevier: 313–22. doi:10.1016/j.marpol.2014.11.019.

Carothers, Courtney, Daniel K. Lew, and Jennifer Sepez. 2010. "Fishing Rights and Small Communities: Alaska Halibut IFQ Transfer Patterns." *Ocean and Coastal Management* 53 (9).

Commercial Fisheries Entry Commission. 2016. "CFEC Public Search Application." https://www.cfec.state.ak.us/plook/#downloads.

Council on Environmental Quality. 1997. "Environmental Justice Guidance Under the National Environmental Policy Act." Washington, D.C.: Council on Environmental Quality. http://www.energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-EJGuidance.pdf.

Dillman, Terry. 2013. "Oregon Ports Stimulate Coastal, State Economy." *Fisherman's News*, May 1. http://www.fishermensnews.com/story/2013/05/01/features/oregon-ports-stimulate-coastal-state-economy/171.html.

Donkersloot, Rachel. 2016. "Considering Community Allocations: Power and the Politics of Enclosure in the Gulf of Alaska." *Marine Policy*. Elsevier, 1–9. doi:10.1016/j.marpol.2016.04.029.

Donkersloot, Rachel, and Courtney Carothers. 2016. "The Graying of the Alaskan Fishing Fleet." *Environment: Science and Policy for Sustainable Development* 58 (3): 30–42. doi:10.1080/00139157.2016.1162011.

Economic Development Alliance. 2016. "Largest Employers in Lincoln County." http://www.coastbusiness.info/largest_employers.htm.

Economic Development Council. 2016. "King County Economy." http://www.edc-seaking.org/service/economic-data/economic-basics.

EDAW. 2005. "Comprehensive Baseline Commercial Fishing Community Profiles: Unalaska, Akutan, King Cove and Kodiak, Alaska Final Report." Anchorage. http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/AKCommunityProfilesVol1.pdf.

Fall, James A., Nicole S. Braem, Caroline L. Brown, Lisa B. Hutchinson-Scarbrough, David S. Koster, and Theodore M. Krieg. 2013. "Continuity and Change in Subsistence Harvests in Five Bering Sea Communities: Akutan, Emmonak, Savoonga, St. Paul, and Togiak." *Deep-Sea Research II* 94: 274–91.

Hartill, Trent. 2016. "Personal Communication." Email. Alaska Department of Fish and Game. 7/18/16.

Haynie, Alan C, and Henry P Huntington. 2016. "Strong Connections, Loose Coupling: The Influence of the Bering Sea Ecosystem on Commercial Fisheries and Subsistence Harvests in Alaska." *Ecology and Society* 21 (4).

Himes-Cornell, Amber, and Kristin Hoelting. 2015. "Resilience Strategies in the Face of Short- and Long-Term Change: Out-Migration and Fisheries Regulation in Alaskan Fishing Communities."

Ecology and Society 20 (2). doi:10.5751/ES-07074-200209.

Loring, Phillip A. 2012. "Alternative Perspectives on the Sustainability of Alaska's Commercial Fisheries." *Conservation Biology* 27 (1): 55–63.

Lyons, Courtney, Benjamin Blount, Courtney Carothers, Meredith Marchioni, Reade Davis, and Philip Loring. 2016. "Considering Communities in Fisheries Management." *Marine Policy*. Elsevier, 1–4. doi:10.1016/j.marpol.2016.05.006.

McDowell Group. 2016. "Economic Impact of the Seafood Industry on the Kodiak Island Borough." Kodiak: Kodiak Island Borough; City of Kodiak.

National Marine Fisheries Service. 2001. "Steller Sea Lion Protection Measures Final Supplemental Environmental Impact Statement." Anchorage.

———. 2016a. "Annual Shoreside Processor EDR." Anchorage: National Marine Fisheries Service.

———. 2016b. "Annual Trawl Catcher-Vessel EDR." Anchorage: National Marine Fisheries Service.

———. 2016c. "RAM Groundfish LLP License Database." Anchorage.

National Oceanic and Atmospheric Administration. 2005. "Community Profiles for North Pacific Fisheries – Alaska." Technical Memorandum NMFS-AFSC-160. Seattle: Alaska Fisheries Science Center.

———. 2007. "Community Profiles for West Coast and North Pacific Fisheries – Washington, Oregon, California, and Other U.S. States." Technical Memorandum NMFS-NWFSC-85. Seattle: Northwest Fisheries Science Center.

———. 2013. "Community Profiles for North Pacific Fisheries – Alaska." Technical Memorandum NMFS-AFSC-259. Seattle: Alaska Fisheries Science Center.

———. 2015. "Gulf of Alaska Groundfish Trawl Fishery Social Survey." Seattle.

———. 2016a. "Current Quota Share with Holders and QS Units, 2003-2016." https://alaskafisheries.noaa.gov/permits-licenses?field_fishery_pm_value=Individual+Fishing+Quota+%28IFQ%29+Halibut%2FSablefish+and+CDQ+Halibut+IFQ.

———. 2016b. "Eligible Communities." Seattle: Alaska Fisheries Science Center. https://alaskafisheries.noaa.gov/sites/default/files/tabl21.pdf.

———. 2016c. "Fishery Area Map." Seattle: Alaska Fisheries Science Center. https://alaskafisheries.noaa.gov/sites/default/files/fig3.pdf.

———. 2016d. "Permits and Licenses, Charter Halibut Permits List, Current Year." https://alaskafisheries.noaa.gov/permits-licenses?field_fishery_pm_value=Charter+Halibut.

Northern Economics. 2016. "Ten-Year Review of the Crab Rationalization Management Program for Bering Sea and Aleutian Islands Crab Fisheries – Appendix A: Social Impact Assessment." RPRT. Anchorage: North Pacific Fishery Management Council.

Northwest Seaport Alliance. 2016. "Facilities Guide: North and South Harbors, Seattle-Tacoma, USA." Northwest Seaport Alliance. https://www.nwseaportalliance.com/sites/default/files/nwsa_mapbrochure_5-2016_web.pdf.

Oliver, Chris. 2015. "Bycatch, Community Protection, and Catch Shares in a Regional Multispecies Fishery - Addressing the Gulf of Alaska." University of Washington. doi:10.1017/CBO9781107415324.004.

Petersburg Chamber of Commerce. 2011. "Chamber of Commerce Index." GEN. http://www.petersburg.org/businesses/index.html.

Port of Newport. 2016. "Commercial Marina." http://portofnewport.com/commercial-marina/index.php.

Port of Seattle. 2016. "Commercial Fishing and Workboats, Services." https://www.portseattle.org/Commercial-Marine/Fishermens-Terminal/Pages/Commercial-Fishing-and-Work-Boats.aspx.

Reedy, Katherine. 2015. "Social Impact Assessment of the Western Gulf of Alaska Trawl Bycatch Management Plan." Anchorage.

Reedy, Katherine, and H Maschner. 2014. "Traditional Foods, Corporate Controls: Networks of Household Access to Key Marine Species in Southern Bering Sea Villages." *Polar Record* 50: 364–78.

Reedy-Maschner, Katherine L. 2009. "Entangled Livelihoods: Economic Integration and Diversity in the Western Arctic." *Alaska Journal of Anthropology* 7: 135–46.

———. 2010. *Aleut Identities: Tradition and Modernity in an Indigenous Fishery*. Montreal: McGill-Queen's University Press.

Reedy-Maschner, Katherine L., and Herbert Maschner. 2012. "Subsistence Study for the North Aleutian Basin." Anchorage.

Richmond, Laurie. 2013. "Incorporating Indigenous Rights and Environmental Justice into Fishery Management: Comparing Policy Challengest and Potentials from Alaska and Hawaii." *Environmental Management* 52: 1071–84.

Springer, Emilie. 2007. "Through a Cod's Eye: Exploring the Social Context of Alaska's Bering Sea Groundfish Industry." University of Washington.

Swanton, John R. 1909. *Tlingit Myths and Texts*. Bureau of. Washington, D.C.: U.S. Government Printing Office.

U.S. Bureau of Labor Statistics. 2016a. "Local Area Unemployment Statistics, County Data." http://www.bls.gov/web/metro/laucntycur14.txt.

———. 2016b. "Local Area Unemployment Statistics." GEN. http://www.bls.gov/lau/.

U.S. Census Bureau. 2011. "Summary File 2010 100% Data." http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t.

———. 2016. "ACS 2014 5-Year, DP03." https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_DP03&prodType=table.

Wolfe, Robert J., C.L. Scott, W.E. Simeone, C.J. Utermohle, and M.C. Pete. 2010. "The 'super-Household' in Alaska Native Subsistence Economies." National Science Foundation, Washington, D.C.

Wolfe, Robert J., and R.J. Walker. 1987. "Subsistence Economies in Alaska: Productivity, Geography, and Development Impacts." *Arctic Anthropology* 24 (2): 56–81.

8 List of Persons Consulted

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Attachment 1: Detailed GOA Halibut Community Data Tables

GOA Halibut Commercial Fishery Catcher Vessel by Community Tables

Vessel Count Tables

Table 80. Individual GOA Commercial Halibut Catcher Vessels by Community of Vessel Owner, 2003-2014 (number of vessels)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
Sitka	146	142	141	145	135	125	104	113	108	98	96	104	121.4	15.6%	296
Kodiak	120	122	115	121	123	113	102	104	110	104	88	82	108.7	14.0%	218
Homer	98	101	94	89	83	80	84	85	85	83	75	71	85.7	11.0%	182
Petersburg	39	45	39	42	42	40	39	39	35	30	31	31	37.7	4.8%	100
Juneau	52	48	43	40	36	39	33	34	29	26	23	25	35.7	4.6%	68
Sand Point	29	25	26	23	24	26	23	21	23	21	17	21	23.3	3.0%	56
Yakutat	15	14	18	18	28	22	18	17	18	13	18	17	18.0	2.3%	55
Cordova	24	20	21	17	21	15	21	17	14	10	10	14	17.0	2.2%	42
Anchorage	23	17	20	19	14	13	13	13	16	14	12	13	15.6	2.0%	49
Craig	18	18	23	18	13	17	14	12	11	10	10	11	14.6	1.9%	44
Ketchikan	19	21	18	20	19	14	11	11	6	6	6	4	12.9	1.7%	34
Seward	11	13	11	8	9	12	10	12	12	11	9	7	10.4	1.3%	32
Ouzinkie	11	10	10	10	10	11	7	7	8	7	5	4	8.3	1.1%	23
Kenai	11	10	10	10	8	5	9	7	6	9	7	4	8.0	1.0%	25
Wrangell	7	8	9	8	8	6	6	7	6	6	6	7	7.0	0.9%	22
Unalaska	10	11	6	5	5	7	7	8	6	6	5	6	6.8	0.9%	21
Haines	8	7	8	7	10	6	8	6	5	6	4	5	6.7	0.9%	19
Anchor Point	12	10	11	4	8	9	7	6	5	2	1	3	6.5	0.8%	14
Seldovia	9	8	6	6	5	6	5	6	5	6	6	5	6.1	0.8%	25
King Cove	5	5	5	6	7	7	8	6	7	6	4	4	5.8	0.8%	16
Wasilla	6	5	2	6	5	6	6	5	5	6	7	7	5.5	0.7%	12
Pelican	10	10	5	6	6	5	3	3	4	3	4	4	5.3	0.7%	19
Soldotna	7	7	10	6	5	3	4	4	4	4	3	6	5.3	0.7%	14
Delta Junction	2	4	5	5	6	5	6	5	6	5	5	5	4.9	0.6%	6

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
Port Alexander	6	6	5	4	5	4	5	3	2	2	1	1	3.7	0.5%	14
Kasilof	8	6	4	6	3	3	2	3	1	2	1	3	3.5	0.5%	11
Gustavus	5	7	6	7	4	4	1	1	1	1	1	3	3.4	0.4%	10
Palmer	5	6	4	4	3	2	3	3	3	2	3	3	3.4	0.4%	13
Nikolaevsk	4	4	3	4	3	2	2	3	4	4	4	2	3.3	0.4%	11
Old Harbor	1	1	3	2	4	6	6	6	4	4	1	1	3.3	0.4%	9
Hoonah	4	3	4	4	5	3	3	2	3	2	3	2	3.2	0.4%	10
Port Lions	2	3	2	6	5	5	2	5	5	3	0	0	3.2	0.4%	8
Chignik Lagoon	4	4	4	4	4	3	3	2	2	2	1	2	2.9	0.4%	12
Akutan	2	1	3	2	3	2	3	3	3	5	3	3	2.8	0.4%	6
Willow	3	3	3	4	3	4	2	3	3	3	2	0	2.8	0.4%	4
Fritz Creek	2	3	2	1	2	3	1	1	2	3	4	5	2.4	0.3%	6
Halibut Cove	4	3	3	3	2	2	2	2	2	1	2	2	2.3	0.3%	8
Ninilchik	4	3	3	3	2	1	3	2	2	3	1	1	2.3	0.3%	5
Sterling	2	2	2	2	2	1	1	0	1	3	3	5	2.0	0.3%	6
Chignik	2	2	3	3	2	3	2	1	1	1	1	0	1.8	0.2%	6
Elfin Cove	2	1	2	1	1	2	2	1	3	2	2	1	1.7	0.2%	3
Perryville	2	2	1	2	2	2	2	2	2	2	0	1	1.7	0.2%	3
Clam Gulch	2	2	2	2	2	2	2	2	1	1	1	0	1.6	0.2%	2
False Pass	2	2	2	1	1	2	1	1	1	1	1	1	1.3	0.2%	4
Nikiski	3	2	2	2	2	1	1	0	0	0	0	0	1.1	0.1%	7
Fairbanks	1	1	0	0	1	0	2	0	1	1	2	1	0.8	0.1%	3
Adak	0	0	1	1	1	1	1	1	1	1	1	0	0.8	0.1%	2
Central	1	1	1	1	1	1	1	1	1	0	0	0	0.8	0.1%	1
Klawock	1	1	0	0	0	1	1	1	1	1	0	0	0.6	0.1%	4
Tenakee	2	1	1	1	1	0	0	0	0	0	0	0	0.5	0.1%	2
Ambler	1	1	1	1	1	0	0	0	0	0	0	0	0.4	0.1%	2
Angoon	2	2	1	0	0	0	0	0	0	0	0	0	0.4	0.1%	2

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
Meyers Chuck	2	1	1	0	1	0	0	0	0	0	0	0	0.4	0.1%	2
Thorne Bay	1	1	0	1	1	1	0	0	0	0	0	0	0.4	0.1%	1
Ward Cove	1	0	2	1	1	0	0	0	0	0	0	0	0.4	0.1%	1
Chiniak	0	0	0	0	0	0	0	0	1	1	1	1	0.3	0.0%	1
Point Baker	1	1	0	1	0	0	0	0	0	0	0	0	0.3	0.0%	2
Port Graham	0	1	1	1	0	0	0	0	0	0	0	0	0.3	0.0%	2
Cold Bay	0	0	0	0	1	1	0	0	0	0	0	0	0.2	0.0%	2
Edna Bay	0	0	1	0	0	0	0	0	1	0	0	0	0.2	0.0%	1
Hydaburg	0	0	0	1	1	0	0	0	0	0	0	0	0.2	0.0%	2
Kake	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.0%	1
King Salmon	0	0	0	0	0	0	1	1	0	0	0	0	0.2	0.0%	1
Mountain Village	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.0%	1
Nelson Lagoon	1	0	1	0	0	0	0	0	0	0	0	0	0.2	0.0%	1
Nondalton	0	0	1	1	0	0	0	0	0	0	0	0	0.2	0.0%	1
Trapper Creek	0	0	0	0	0	0	0	0	1	0	0	1	0.2	0.0%	1
Chitina	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.0%	1
Coffman Cove	0	0	0	0	0	0	0	1	0	0	0	0	0.1	0.0%	1
Dillingham	0	0	0	0	0	1	0	0	0	0	0	0	0.1	0.0%	1
Ivanof Bay	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.0%	1
Saint Paul Island	0	0	0	0	0	0	0	0	0	0	1	0	0.1	0.0%	1
Skagway	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.0%	1
Valdez	0	0	0	0	0	1	0	0	0	0	0	0	0.1	0.0%	1
Alaska Total	777	760	733	717	700	656	603	599	587	543	492	499	638.8	82.3%	1,429
Newport	7	5	4	3	2	2	1	1	1	1	1	0	2.3	0.3%	7
All Other OR	35	33	31	27	25	22	20	18	19	17	18	16	23.4	3.0%	57
Oregon Total	42	38	35	30	27	24	21	19	20	18	19	16	25.8	3.3%	60
Seattle MSA	50	51	48	52	52	48	49	46	45	45	44	42	47.7	6.1%	80

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
All Other WA	62	54	56	62	55	55	48	45	45	37	29	32	48.3	6.2%	103
Washington Total	112	105	104	114	107	103	97	91	90	82	73	74	96.0	12.4%	178
All Other States	18	18	22	15	16	14	16	15	16	16	16	11	16.1	2.1%	57
Grand Total	949	921	894	876	850	797	737	724	713	659	600	600	776.7	100.0%	1,632

Source: AKFIN 2016a

Vessel Gross Revenue Tables

Table 81. GOA Commercial Halibut Catcher Vessel Ex-Vessel Gross Revenues by Community of Vessel Owner, 2003-2014 (adjusted 2015 dollars)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
Geography	$ (millions)													
Kodiak	42.71	40.69	35.26	40.23	42.70	41.13	28.05	37.37	34.93	22.98	16.32	13.02	32.95	19.8%
Homer	20.78	21.70	19.34	22.33	24.95	23.66	17.96	26.30	23.64	15.32	11.50	9.28	19.73	11.8%
Petersburg	11.52	13.38	13.29	15.16	16.26	13.88	8.86	11.74	10.19	7.40	6.26	5.11	11.09	6.7%
Sitka	13.51	14.73	14.45	15.89	15.84	12.32	7.97	11.10	8.02	6.16	4.75	5.76	10.87	6.5%
Juneau	4.00	5.02	4.80	5.52	5.31	4.59	3.07	4.08	3.62	2.74	2.57	2.30	3.97	2.4%
Cordova	4.26	4.29	3.64	4.00	5.22	4.70	3.19	3.82	3.33	2.48	1.87	1.72	3.54	2.1%
Seward	3.85	4.10	3.04	3.74	4.44	4.35	3.01	3.71	3.21	2.78	1.91	1.24	3.28	2.0%
Anchorage	3.65	3.21	3.23	3.40	3.54	3.51	2.81	3.34	3.41	2.32	1.61	1.62	2.97	1.8%
Sand Point	3.44	2.73	2.37	2.24	2.11	3.03	1.57	2.35	2.09	1.39	0.64	0.65	2.05	1.2%
Ketchikan	2.31	3.11	2.82	2.61	2.86	1.62	1.12	1.36	1.03	0.63	0.61	0.36	1.70	1.0%
King Cove	1.39	1.33	1.10	1.03	0.96	1.07	0.77	0.81	1.11	0.77	0.48	0.33	0.93	0.6%
Yakutat	0.26	0.50	0.61	0.76	1.02	1.06	0.70	0.99	1.09	0.99	1.24	1.26	0.87	0.5%
Craig	0.75	0.81	0.95	0.87	0.68	1.18	0.60	0.67	0.33	0.35	0.40	0.45	0.67	0.4%
All Other Alaska	21.62	20.40	18.08	19.52	22.42	20.60	13.50	18.90	17.57	13.40	9.86	7.58	16.95	10.2%
Alaska Total	134.05	136.00	122.98	137.30	148.32	136.70	93.19	126.52	113.58	79.70	60.03	50.68	111.59	67.0%
Oregon Total	16.39	14.58	13.23	13.34	15.46	12.34	7.31	8.71	7.79	5.49	4.19	3.04	10.16	6.1%
Seattle MSA	31.08	31.90	26.64	30.92	34.20	31.58	20.55	27.33	26.76	18.14	14.42	11.44	25.41	15.3%
All Other WA	19.00	17.54	17.81	18.61	19.87	17.30	10.80	16.23	13.03	8.76	6.36	5.52	14.24	8.5%
Washington Total	50.08	49.44	44.45	49.53	54.07	48.88	31.36	43.55	39.80	26.90	20.78	16.97	39.65	23.8%
All Other States	7.46	6.10	5.78	5.59	5.75	6.50	4.15	5.62	5.54	4.26	3.66	2.01	5.20	3.1%
Grand Total	207.98	206.12	186.44	205.76	223.60	204.43	136.00	184.41	166.70	116.35	88.66	72.70	166.60	100.0%

Source: AKFIN 2016a

Table 82. GOA Halibut Catcher Vessels Ex-Vessel Gross Revenue Diversification by Community of Vessel Owner, All Communities with 10 or More Vessels Participating on an Annual Average Basis, All Communities, 2003-2014

Geography	Annual Average Number of GOA Halibut CVs 2003-2014	GOA Halibut CVs Annual Average Ex-Vessel Gross Revenues from GOA Halibut Only 2003-2014 ($ millions)	GOA Halibut CVs Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries 2003-2014 ($ millions)	GOA Halibut CVs GOA Halibut Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average 2003-2014
Sitka	121.4	10.9	35.5	30.6%
Kodiak	108.7	32.9	74.3	44.3%
Homer	85.7	19.7	36.6	53.9%
Petersburg	37.7	11.1	38.8	28.5%
Juneau	35.7	4.0	13.3	29.9%
Sand Point	23.3	2.1	10.5	19.5%
Yakutat	18.0	0.9	1.2	73.6%
Cordova	17.0	3.5	7.5	47.5%
Anchorage	15.6	3.0	5.6	53.0%
Craig	14.6	0.7	3.0	22.5%
Ketchikan	12.9	1.7	7.0	24.2%
Seward	10.4	3.3	8.7	37.6%
King Cove*	5.8	0.9	2.5	37.5%
All Other AK	132.2	17.0	40.3	42.1%
Alaska Total	638.8	111.6	284.8	39.2%
Oregon Total	25.8	10.2	28.2	36.0%
Seattle MSA	47.7	25.4	64.7	39.3%
All Other WA	48.3	14.2	39.6	36.0%
Washington Total	96.0	39.6	104.2	38.0%
All Other States Total	16.1	5.2	17.0	30.6%
Grand Total	776.7	166.6	434.2	38.4%

* Note: King Cove added as a GOA trawl community, despite not averaging 10 vessels participating in the fishery per year.
Source: AKFIN 2016b

Table 83. GOA Halibut Catcher Vessel and All Catcher Vessel Ex-Vessel Gross Revenue Diversification by Community of Vessel Owner, All Communities with 10 or More Vessels Participating on an Annual Average Basis, 2003-2014

Geography	Annual Average Number of GOA Halibut CVs 2003-2014	Annual Average Number of All Commercial Fishing CVs 2003-2014	All Commercial Fishing CVs Annual Average Ex-Vessel Gross Revenues from GOA Halibut Only 2003-2014 ($ millions)	All Commercial Fishing CVs Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries 2003-2014 ($ millions)	All Commercial Fishing CVs Halibut Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average 2003-2014
Sitka	121.4	389.3	10.9	51.9	21.0
Kodiak	108.7	265.0	32.9	137.9	23.9
Homer	85.7	323.8	19.7	78.7	25.1
Petersburg	37.7	322.2	11.1	73.4	15.1
Juneau	35.7	232.0	4.0	29.7	13.3
Sand Point	23.3	76.0	2.1	18.1	11.3
Yakutat	18.0	68.0	0.9	2.1	41.4
Cordova	17.0	325.7	3.5	42.8	8.3
Anchorage	15.6	239.0	3.0	53.9	5.5
Craig	14.6	98.3	0.7	9.2	7.3
Ketchikan	12.9	168.8	1.7	21.5	7.9
Seward	10.4	31.6	3.3	11.4	28.7
King Cove*	5.8	32.3	0.9	9.2	10.2
All Other AK	132.2	1,753.1	17.0	146.8	11.5
Alaska Total	638.8	4,324.9	111.6	686.8	16.2
Oregon Total	25.8	212.3	10.2	115.9	8.8
Seattle MSA	47.7	538.3	25.4	504.2	5.0
All Other WA	48.3	640.8	14.2	157.3	9.1
Washington Total	96.0	1,179.0	39.6	661.5	6.0
All Other States Total	16.1	423.7	5.2	78.6	6.6
Grand Total	776.7	6,139.9	166.6	1542.7	10.8

* Note: King Cove added as a GOA trawl community, despite not averaging 10 vessels participating in the fishery per year.
Source: AKFIN 2016b

GOA Halibut Commercial Fishery Shore-Based Processor by Community Tables

Table 84. Shore-Based Processors Accepting GOA Halibut Deliveries by Community, 2003-2014 (number)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique SBPRs 2003-2014 (number)
Kodiak	10	9	11	11	12	10	9	9	8	7	8	7	9.3	17.4%	22
Homer	4	4	4	4	4	4	4	4	5	4	4	4	4.1	7.7%	6
Cordova	4	5	3	5	4	4	4	4	4	4	4	3	4.0	7.5%	9
Sitka	4	4	6	4	4	4	3	4	2	2	2	2	3.4	6.4%	9
Seward	2	3	3	4	3	3	2	3	3	3	3	4	3.0	5.7%	6
Kenai	3	3	3	3	4	4	4	3	2	2	2	2	2.9	5.5%	4
Unalaska	6	5	4	4	3	2	2	2	2	2	2	1	2.9	5.5%	7
Juneau	3	3	4	3	3	3	3	2	2	2	3	2	2.8	5.2%	5
Yakutat	3	4	4	3	3	1	1	1	1	1	3	3	2.3	4.4%	11
Anchorage	1	1	4	3	2	2	2	2	3	3	2	2	2.3	4.2%	5
Ketchikan	2	2	2	2	2	2	2	2	3	3	2	2	2.2	4.1%	5
Petersburg	2	2	2	2	2	2	2	2	3	2	2	2	2.1	3.9%	4
Craig	1	2	3	2	1	1	1	1	1	1	1	2	1.4	2.7%	3
Hoonah	1	1	1	1	1	1	2	1	1	2	1	1	1.2	2.2%	3
Wrangell	2	1	1	1	1	1	1	1	1	1	1	1	1.1	2.0%	2
Akutan	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.9%	1
King Cove	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.9%	1
Sand Point	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.9%	1
Valdez	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.9%	1
False Pass	0	0	0	0	0	1	1	1	1	1	1	1	0.6	1.1%	1
Ninilchik	1	1	1	1	1	0	0	0	1	1	0	0	0.6	1.1%	3

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique SBPRs 2003-2014 (number)
Chignik	1	1	1	1	1	1	0	0	0	0	0	0	0.5	0.9%	2
Whittier	1	1	1	1	1	0	0	0	0	0	0	0	0.4	0.8%	1
Adak	0	0	0	1	1	0	0	0	0	1	0	1	0.3	0.6%	2
Pelican	1	0	0	1	1	1	0	0	0	0	0	0	0.3	0.6%	2
Gustavus	0	0	0	1	0	0	0	0	1	0	0	0	0.2	0.3%	1
St Paul	0	0	0	0	0	0	0	0	0	0	1	1	0.2	0.3%	1
Haines	0	0	0	0	0	0	1	0	0	0	0	0	0.1	0.2%	1
Kake	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2%	1
Kasilof	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2%	1
Larsen Bay	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.2%	1
Metlakatla	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.2%	1
Nikiski	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2%	1
Alaska Total	59	57	63	62	58	51	48	46	48	46	46	45	52.4	98.7%	124
Washington Total	4	1	0	0	0	0	0	0	1	0	0	1	0.6	1.1%	6
Other/Unknown	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2%	1
Grand Total	64	58	63	62	58	51	48	46	49	46	46	46	53.1	100.0%	131

Source: AKFIN 2016b

Table 85. First Wholesale Gross Revenues from GOA Halibut Deliveries to Shore-Based Processors by Community, 2003-2014 (adjusted 2015 dollars)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (dollars)	Average 2003-2014 (percent)
Geography	$ (millions)													
Kodiak	38.0	39.3	36.9	44.9	48.5	48.0	29.9	37.9	42.5	32.0	18.1	16.5	36.0	21.6%
Homer	35.5	34.9	29.4	31.2	43.7	37.0	33.1	37.0	21.5	15.7	14.1	11.2	28.7	17.2%
All Other Geographies	133.0	131.7	120.1	130.4	130.0	119.7	77.5	109.6	102.7	69.8	56.9	45.3	102.2	61.2%
Total	206.5	205.9	186.4	206.4	222.2	204.6	140.5	184.6	166.7	117.5	89.1	73.0	166.9	100.0%

Source: AKFIN 2016b

Table 86. Shore-Based Processors in Alaska Accepting GOA Halibut Deliveries Ex-Vessel Gross Revenues Diversity by Community 2003-2014

Geography	Annual Average Number of Processors Processing GOA Halibut 2003-2014	GOA Halibut Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ millions)	Total (All Areas and Species) Ex-vessel Gross Revenues Annual Average 2003-2014 ($ millions)	GOA Halibut Ex-Vessel Gross Revenues as a Percentage of Total Ex-Vessel Gross Revenues Annual Average 2003-2014
Kodiak	9.3	36.0	147.1	24.5%
Homer	4.1	28.7	33.7	85.1%
All Other Geographies	39.8	102.2	765.3	13.4%
Total	53.1	166.9	946.1	17.6%

Source: AKFIN 2016b

Table 87. All Areas and Species Ex-Vessel Gross Revenues Diversity by Community for All Shore-Based Processors (for Alaska communities with at least one shore-based processor accepting GOA halibut deliveries) 2003-2014

Geography	Annual Average Number of Processors Processing GOA Halibut 2003-2014	Annual Average Number of Total Processors 2003-2014	GOA Halibut Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ millions)	Total (All Areas and Species) Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ millions)	GOA Halibut Ex-Vessel Gross Revenues as a Percentage of Total Ex-Vessel Gross Revenues Annual Average 2003-2014
Kodiak	12.6	36.0	161.4	22.3%	12.6
Homer	4.8	28.7	33.7	85.1%	4.8
All Other Geographies	102.6	102.2	986.6	10.4%	102.6
Total	119.9	166.9	1,181.7	14.1%	119.9

Source: AKFIN 2016b

GOA Halibut Commercial Fishery IFQ Holder and Quota Shares Held by Community Tables

Unique IFQ Holder Tables

Table 88. Number of Unique Commercial Halibut IFQ Program Quota Share Holders, by Alaskan Community, 2016

	Number of Halibut Quota Share Holders Held by Area						
Community	2C	3A	3B	Subtotal 2C, 3A, and 3B	4A	4B	Subtotal 4A and 4B
Sitka	179	64	8	199	4	3	5
Petersburg	183	48	3	198	2	1	2
Kodiak	2	163	92	179	24	16	33
Homer	4	137	63	160	22	3	24
Juneau	118	43	4	133	4	1	4
Anchorage	6	86	22	104	7	4	8
Ketchikan	61	5	0	63	0	0	0
Cordova	3	55	4	59	6	1	6
Wrangell	54	4	0	55	0	0	0
Haines	34	8	0	36	0	1	1
Craig	34	0	0	34	0	0	0
Yakutat	1	33	0	34	0	0	0
Kenai	0	33	1	33	0	0	0
Sand Point	0	0	29	29	0	0	0
Soldotna	1	26	1	27	1	0	1
Seward	1	24	6	26	0	0	0
Wasilla	2	21	6	24	4	0	4
Hoonah	18	2	0	18	0	0	0
Elfin Cove	13	3	0	13	0	0	0
King Cove	0	0	13	13	0	0	0
Seldovia	0	13	4	13	1	0	1
Ward Cove	11	0	0	11	0	0	0
Anchor Point	1	10	2	10	0	0	0
Clam Gulch	0	10	0	10	0	0	0
Kasilof	1	10	1	10	0	0	0
Nikolaevsk	0	10	4	10	2	0	2
Valdez	0	9	1	10	0	0	0
Fairbanks	3	7	1	9	2	1	2
Gustavus	8	1	1	9	0	0	0
Kake	9	0	0	9	0	0	0
Sterling	0	9	4	9	0	0	0

	Number of Halibut Quota Share Holders Held by Area						
Community	2C	3A	3B	Subtotal 2C, 3A, and 3B	4A	4B	Subtotal 4A and 4B
Delta Junction	0	7	4	8	0	0	0
Pelican	8	6	0	8	0	0	0
Old Harbor	0	6	4	7	0	0	0
Ouzinkie	0	7	0	7	0	0	0
Palmer	0	5	2	7	0	0	0
Angoon	6	0	0	6	0	0	0
Port Alexander	5	1	0	6	0	0	0
Port Lions	0	6	0	6	1	0	1
Fritz Creek	0	5	1	5	0	0	0
Klawock	3	2	0	5	0	0	0
Metlakatla	5	1	0	5	0	0	0
Ninilchik	0	5	0	5	0	0	0
Point Baker	5	0	0	5	0	0	0
Tenakee Springs	2	2	0	4	0	0	0
Thorne Bay	4	0	0	4	0	0	0
Chignik Lagoon	0	1	3	3	0	0	0
Edna Bay	3	0	0	3	0	0	0
False Pass	0	0	3	3	0	0	0
Halibut Cove	0	3	1	3	0	0	0
Hydaburg	3	0	0	3	0	0	0
Nikiski	0	3	0	3	0	0	0
Saint Paul Island	1	1	2	3	5	0	5
Unalaska	0	1	2	3	19	3	21
Willow	0	3	0	3	0	0	0
Anderson	0	2	0	2	0	0	0
Chignik	0	0	2	2	0	0	0
Chiniak	0	2	0	2	0	0	0
Dillingham	1	1	2	2	1	1	2
Naknek	2	1	1	2	2	0	2
North Pole	0	2	0	2	0	0	0
Perryville	0	0	2	2	0	0	0
Port Graham	0	2	0	2	0	0	0
Togiak	2	0	0	2	2	0	2
Central	0	1	1	1	1	0	1
Chignik Lake	0	0	1	1	0	0	0
Coffman Cove	1	0	0	1	0	0	0
Hyder	1	0	0	1	0	0	0
Indian	0	1	0	1	0	0	0
King Salmon	0	0	1	1	1	0	1
Kotzebue	1	1	0	1	0	0	0
Larsen Bay	0	1	0	1	0	0	0
Mekoryuk	0	1	0	1	0	0	0

	Number of Halibut Quota Share Holders Held by Area						
Community	2C	3A	3B	Subtotal 2C, 3A, and 3B	4A	4B	Subtotal 4A and 4B
Meyers Chuck	1	0	0	1	0	0	0
Moose Pass	0	1	0	1	0	0	0
Nome	0	1	1	1	0	0	0
Pilot Point	1	0	0	1	1	0	1
Saint George Island	1	1	1	1	1	0	1
Skagway	1	0	0	1	0	0	0
Twin Hills	1	1	1	1	1	0	1
Wrangell	1	1	0	1	0	0	0
Adak	0	0	0	0	0	2	2
Akutan	0	0	0	0	9	0	9
Atka	0	0	0	0	0	9	9

Source: National Oceanic and Atmospheric Administration 2016d

Quota Shares Held Tables

Table 89. Number of Commercial Halibut IFQ Program Quota Share Units Held, by Alaskan Community, 2016

	Number of Halibut Quota Share Units Held by Area						
Community	2C	3A	3B	Subtotal 2C, 3A, and 3B	4A	4B	Subtotal 4A and 4B
Kodiak	1,969	28,802,639	10,561,213	39,365,821	2,549,242	1,588,001	4,137,243
Petersburg	17,051,160	12,745,635	295,491	30,092,286	152,338	2	152,340
Homer	34,554	13,421,128	4,731,995	18,187,677	1,388,732	197,148	1,585,880
Sitka	9,690,991	6,349,267	689,985	16,730,243	229,291	272,771	502,062
Juneau	6,884,455	5,095,982	601,926	12,582,363	42,869	2,368	45,237
Anchorage	175,114	8,333,059	2,502,239	11,010,412	402,881	532,419	935,300
Cordova	19,284	7,056,746	531,123	7,607,153	650,061	173,556	823,617
Wrangell	4,205,051	425,861	0	4,630,912	0	0	0
Seward	1,215	3,786,829	812,233	4,600,277	0	0	0
Ketchikan	2,859,744	771,286	0	3,631,030	0	0	0
Yakutat	1,086	2,978,574	0	2,979,660	0	0	0
Kenai	0	2,652,701	44,152	2,696,853	0	0	0
Seldovia	0	2,085,799	520,955	2,606,754	12,238	0	12,238
Wasilla	73,184	2,033,402	307,374	2,413,960	101,473	0	101,473
Soldotna	910	2,208,506	63,434	2,272,850	13,986	0	13,986
Sand Point	0	0	2,257,825	2,257,825	0	0	0
Haines	1,688,825	451,670	0	2,140,495	0	7,293	7,293
Craig	1,746,951	0	0	1,746,951	0	0	0
Pelican	683,302	782,211	0	1,465,513	0	0	0
King Cove	0	0	1,233,907	1,233,907	0	0	0
Anchor Point	96,937	930,334	201,607	1,228,878	0	0	0
Elfin Cove	857,022	251,399	0	1,108,421	0	0	0
Delta Junction	0	921,604	135,513	1,057,117	0	0	0

	Number of Halibut Quota Share Units Held by Area						
Community	2C	3A	3B	Subtotal 2C, 3A, and 3B	4A	4B	Subtotal 4A and 4B
Dillingham	91	709,914	304,885	1,014,890	22	370,314	370,336
Hoonah	707,339	242,267	0	949,606	0	0	0
Nikolaevsk	0	736,468	143,757	880,225	115,538	0	115,538
Palmer	0	536,431	174,942	711,373	0	0	0
Sterling	0	455,622	222,832	678,454	0	0	0
Kasilof	2,394	559,994	78,742	641,130	0	0	0
Ninilchik	0	585,377	0	585,377	0	0	0
Kake	564,939	0	0	564,939	0	0	0
Wrangell	524,543	12,400	0	536,943	0	0	0
Fritz Creek	0	481,689	55,041	536,730	0	0	0
Clam Gulch	0	500,885	0	500,885	0	0	0
Valdez	0	433,439	4,401	437,840	0	0	0
False Pass	0	0	386,123	386,123	0	0	0
Halibut Cove	0	373,002	8,010	381,012	0	0	0
Fairbanks	92,283	192,391	81,942	366,616	120,159	22,392	142,551
Chignik Lagoon	0	319	365,147	365,466	0	0	0
Mekoryuk	0	361,887	0	361,887	0	0	0
Gustavus	298,837	59,371	3,546	361,754	0	0	0
Old Harbor	0	192,685	164,489	357,174	0	0	0
Metlakatla	262,799	82,675	0	345,474	0	0	0
Kotzebue	56,858	286,198	0	343,056	0	0	0
Ward Cove	323,562	0	0	323,562	0	0	0
Ouzinkie	0	249,865	0	249,865	0	0	0
Nikiski	0	245,553	0	245,553	0	0	0
Tenakee Springs	463	238,723	0	239,186	0	0	0
Nome	0	174,731	63,291	238,022	0	0	0
Port Alexander	227,749	78	0	227,827	0	0	0
Chiniak	0	211,566	0	211,566	0	0	0

	Number of Halibut Quota Share Units Held by Area						
Community	2C	3A	3B	Subtotal 2C, 3A, and 3B	4A	4B	Subtotal 4A and 4B
Angoon	191,130	0	0	191,130	0	0	0
North Pole	0	182,809	0	182,809	0	0	0
Saint Paul Island	15,836	39,991	114,192	170,019	127,972	0	127,972
Edna Bay	163,377	0	0	163,377	0	0	0
Thorne Bay	143,735	0	0	143,735	0	0	0
Point Baker	137,335	0	0	137,335	0	0	0
Chignik	0	0	128,220	128,220	0	0	0
Klawock	10,981	114,830	0	125,811	0	0	0
Unalaska	0	9,891	108,152	118,043	1,505,642	235,447	1,741,089
Port Lions	0	77,810	0	77,810	52,906	0	52,906
Central	0	28,495	38,224	66,719	56,596	0	56,596
Port Graham	0	65,599	0	65,599	0	0	0
Willow	0	58,672	0	58,672	0	0	0
Perryville	0	0	37,903	37,903	0	0	0
Hydaburg	34,913	0	0	34,913	0	0	0
Hyder	28,778	0	0	28,778	0	0	0
Skagway	27,892	0	0	27,892	0	0	0
Coffman Cove	13,845	0	0	13,845	0	0	0
Meyers Chuck	11,906	0	0	11,906	0	0	0
Larsen Bay	0	6,408	0	6,408	0	0	0
Indian	0	4,703	0	4,703	0	0	0
Naknek	642	1,318	385	2,345	153	0	153
Chignik Lake	0	0	1,866	1,866	0	0	0
Anderson	0	986	0	986	0	0	0
Moose Pass	0	374	0	374	0	0	0
King Salmon	0	0	325	325	86	0	86
Pilot Point	305	0	0	305	73	0	73
Saint George Island	59	183	54	296	14	0	14

	Number of Halibut Quota Share Units Held by Area						
Community	2C	3A	3B	Subtotal 2C, 3A, and 3B	4A	4B	Subtotal 4A and 4B
Togiak	249	0	0	249	60	0	60
Twin Hills	43	132	39	214	10	0	10
Adak	0	0	0	0	0	702,575	702,575
Akutan	0	0	0	0	236,932	0	236,932
Atka	0	0	0	0	0	352,180	352,180

Source: National Oceanic and Atmospheric Administration 2016d

GOA Halibut Sport Charter Permits by Community Tables

Table 90. Number of Sport Charter Halibut Fishing Permits Held, by Alaskan Community, 2016

Community	Unique Permit Holders	Permits by Area		Total Permits Held
		2C	3A	
Sitka	64	132	1	133
Ketchikan	37	131	0	131
Kodiak	37	0	64	64
Anchorage	40	1	61	62
Homer	49	0	61	61
Seward	24	0	53	53
Craig	19	46	0	46
Soldotna	25	3	42	45
Juneau	25	38	1	39
Ninilchik	20	0	26	26
Elfin Cove	10	15	8	23
Anchor Point	11	0	16	16
Petersburg	13	16	0	16
Angoon	6	14	0	14
Klawock	8	14	0	14
Pelican	6	10	3	13
Port Lions	5	0	12	12
Yakutat	8	0	12	12
Old Harbor	4	0	10	10
Ward Cove	8	9	0	9
Hoonah	5	8	0	8
Larsen Bay	2	0	8	8
Port Alexander	4	8	0	8
Seldovia	2	0	8	8
Thorne Bay	5	8	0	8
Wasilla	6	0	8	8
Coffman Cove	4	7	0	7
Halibut Cove	1	0	7	7
Kenai	6	0	7	7
Nanwalek	1	0	7	7
Port Graham	1	0	7	7
Valdez	6	0	7	7
Tenakee Springs	2	6	0	6
Whittier	5	0	6	6
Wrangell	5	5	0	5
Cordova	2	0	4	4
Edna Bay	1	4	0	4

Community	Unique Permit Holders	Permits by Area		Total Permits Held
		2C	3A	
Gustavus	3	4	0	4
Hydaburg	1	4	0	4
Kasilof	4	0	4	4
North Pole	3	0	4	4
Palmer	4	1	3	4
Point Baker	1	4	0	4
Whale Pass	1	4	0	4
Eielson AFB	1	1	1	2
Fritz Creek	2	1	1	2
Haines	2	2	0	2
Sterling	2	0	2	2
Anderson	1	0	1	1
Aniak	1	0	1	1
Big Lake	1	0	1	1
Clam Gulch	1	0	1	1
Fairbanks	1	0	1	1
Fort Greely	1	0	1	1
Moose Pass	1	0	1	1
Naukati Bay	1	1	0	1
Ouzinkie	1	0	1	1
Pedro Bay	1	0	1	1
Salcha	1	0	1	1

Source: National Oceanic and Atmospheric Administration 2016d

GOA Halibut Sport Harvest by Region Tables

Table 91. Halibut Sport Harvest by Region, Number of Fish, 2003-2014

Region	Sub-region	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
Southeast	Southeast Subtotal	124,857	151,913	167,806	145,218	183,603	174,227	124,226	100,578	83,934	102,605	137,865	130,528	135,613	30.0%
	Kodiak	18,480	22,885	24,122	25,219	35,337	33,999	31,590	23,063	21,156	23,145	26,591	25,386	25,914	5.7%
	Alaska Peninsula/Aleutian Islands	1,631	2,927	3,329	2,862	3,960	3,719	3,300	2,352	2,034	3,625	2,025	1,063	2,736	0.6%
	All Other Southcentral	257,813	304,797	304,663	289,556	361,864	304,535	281,139	272,005	286,447	258,323	287,113	250,965	288,268	63.7%
Southcentral	Southcentral Subtotal	277,924	330,609	332,114	317,637	401,161	342,253	316,029	297,420	309,637	285,093	315,729	277,414	316,918	70.0%
Arctic-Yukon-Kuskokwim	Arctic-Yukon-Kuskokwim Subtotal	81	28	128	0	0	0	0	0	0	15	0	33	24	0.0%
Alaska	Grand Total	402,862	482,550	500,048	462,855	584,764	516,480	440,255	397,998	393,571	387,713	453,594	407,975	452,555	100.0%

Source: Alaska Department of Fish and Game 2016c

Attachment 2: Detailed GOA Chinook Salmon Community Data Tables

GOA Chinook Salmon Commercial Fishery Catcher Vessel by Community Tables

Vessel Count Tables

Table 92. Individual GOA Commercial Chinook Salmon Catcher Vessels by Community of Vessel Owner, 2003-2014 (number of vessels)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
Sitka	208	233	235	244	239	252	267	255	264	279	245	289	250.8	13.5%	592
Cordova	256	255	247	248	253	256	242	245	241	237	244	246	247.5	13.3%	468
Homer	124	120	150	142	118	113	122	121	130	123	161	145	130.8	7.0%	405
Kodiak	75	74	76	72	70	64	73	71	88	84	95	86	77.3	4.2%	188
Anchorage	72	81	76	67	64	55	61	66	67	61	66	77	67.8	3.6%	232
Juneau	51	73	69	70	70	67	61	65	59	72	62	77	66.3	3.6%	201
Craig	43	54	51	60	54	50	52	51	55	66	56	68	55.0	3.0%	143
Yakutat	42	56	60	61	57	62	58	58	50	49	50	47	54.2	2.9%	132
Sand Point	47	49	50	49	47	41	51	48	57	50	56	41	48.8	2.6%	98
Petersburg	32	34	32	45	56	32	40	41	20	47	30	61	39.2	2.1%	138
Wasilla	16	19	18	25	33	30	30	29	29	32	37	40	28.2	1.5%	97
Kenai	43	38	39	34	27	17	37	27	22	12	27	13	28.0	1.5%	94
Ketchikan	21	23	25	28	26	23	24	19	18	23	28	33	24.3	1.3%	103
Soldotna	40	33	32	27	33	9	18	20	17	10	18	20	23.1	1.2%	74
King Cove	18	21	20	22	24	19	23	26	24	23	20	24	22.0	1.2%	46
Hoonah	17	20	20	21	25	22	22	19	23	23	14	16	20.2	1.1%	71
Wrangell	18	22	18	26	23	18	21	17	13	22	14	27	19.9	1.1%	56
Kasilof	23	22	26	24	21	15	21	18	17	7	18	13	18.8	1.0%	61
Pelican	13	17	18	21	24	23	23	21	16	15	10	12	17.8	1.0%	48
Chignik Lagoon	13	13	13	10	14	18	17	18	19	15	17	15	15.2	0.8%	45
Haines	11	10	14	14	13	16	17	20	19	16	12	19	15.1	0.8%	28
Seward	8	9	10	11	13	12	13	17	16	17	21	18	13.8	0.7%	43

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
Elfin Cove	9	15	11	9	9	8	9	10	12	13	14	17	11.3	0.6%	42
Klawock	4	9	7	12	11	11	9	9	10	11	10	12	9.6	0.5%	29
Gustavus	4	5	6	7	9	11	13	11	7	11	13	14	9.3	0.5%	30
Port Alexander	8	11	13	13	12	6	5	5	6	8	5	5	8.1	0.4%	26
Anchor Point	8	9	9	10	8	7	7	6	7	5	2	8	7.2	0.4%	34
Delta Junction	5	7	8	8	7	7	5	8	11	9	5	5	7.1	0.4%	22
Sterling	7	8	9	6	7	5	7	7	5	5	6	11	6.9	0.4%	21
Palmer	7	9	7	7	5	5	6	5	7	6	6	6	6.3	0.3%	27
Old Harbor	6	5	6	6	5	4	6	7	7	7	7	7	6.1	0.3%	30
Port Lions	6	7	7	5	5	5	6	7	7	7	6	4	6.0	0.3%	25
Nikiski	10	8	10	6	10	4	7	3	4	1	4	3	5.8	0.3%	15
Valdez	11	11	8	5	5	5	5	2	5	5	7	1	5.8	0.3%	12
Hydaburg	5	6	6	5	6	2	6	6	6	8	5	5	5.5	0.3%	17
Perryville	7	5	5	5	6	5	6	5	5	5	6	3	5.3	0.3%	17
Chignik	5	4	3	3	3	5	4	7	8	6	5	6	4.9	0.3%	18
Willow	5	5	3	4	3	3	5	6	8	6	5	6	4.9	0.3%	20
Ward Cove	3	3	6	4	4	4	3	5	6	8	6	5	4.8	0.3%	12
Ninilchik	8	10	10	8	4	2	1	2	2	1	5	1	4.5	0.2%	8
Nikolaevsk	4	4	5	4	5	1	4	2	5	3	5	5	3.9	0.2%	12
Seldovia	2	4	5	5	4	5	5	4	3	2	2	4	3.8	0.2%	12
False Pass	4	4	5	3	2	4	4	2	4	4	4	4	3.7	0.2%	16
Fairbanks	6	4	3	4	5	7	4	2	1	2	2	1	3.4	0.2%	13
Ouzinkie	3	4	4	3	3	3	3	3	5	4	3	3	3.4	0.2%	8
Fritz Creek	3	2	4	3	4	3	5	4	1	2	4	4	3.3	0.2%	7
Tenakee	3	3	4	5	3	2	2	2	4	2	3	5	3.2	0.2%	9
Chignik Lake	3	3	4	3	3	3	4	4	4	2	2	2	3.1	0.2%	6
Meyers Chuck	2	3	2	4	4	2	1	3	2	3	3	2	2.6	0.1%	6

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
Thorne Bay	1	2	1	3	5	1	2	1	0	4	3	5	2.3	0.1%	9
Unalaska	0	1	4	2	2	2	3	3	3	2	2	2	2.2	0.1%	8
Kake	2	2	1	1	2	2	1	4	1	2	3	4	2.1	0.1%	6
Clam Gulch	2	2	1	1	2	2	4	4	1	1	2	1	1.9	0.1%	8
Nelson Lagoon	2	3	2	2	2	1	2	2	1	4	1	1	1.9	0.1%	5
Circle City	1	2	2	2	2	2	2	2	2	2	2	1	1.8	0.1%	2
Angoon	1	2	2	4	2	2	1	1	1	1	1	1	1.6	0.1%	4
Tatitlek	3	3	3	2	2	2	2	1	1	0	0	0	1.6	0.1%	4
Halibut Cove	2	2	2	1	1	1	1	2	1	1	2	2	1.5	0.1%	6
Copper Center	2	2	2	2	1	1	1	1	1	1	1	1	1.3	0.1%	6
Point Baker	0	0	0	2	0	3	1	2	1	3	3	1	1.3	0.1%	3
Whittier	0	0	0	0	1	2	2	3	2	2	2	2	1.3	0.1%	4
Larsen Bay	2	1	2	0	1	1	0	0	2	2	3	1	1.3	0.1%	2
Sutton	0	0	0	0	1	1	1	1	2	2	3	2	1.1	0.1%	4
Akhiok	1	2	1	1	0	0	1	1	1	1	1	2	1.0	0.1%	3
North Pole	1	1	3	3	1	1	0	0	0	0	0	0	0.8	0.0%	5
Big Lake	0	0	1	2	2	1	1	1	0	1	0	0	0.8	0.0%	5
Edna Bay	0	1	0	0	3	0	1	1	0	2	0	1	0.8	0.0%	4
Moose Pass	0	0	0	0	0	0	0	0	2	2	2	3	0.8	0.0%	3
Port Graham	3	2	1	0	0	0	0	0	0	0	1	2	0.8	0.0%	4
Chitina	1	1	3	3	0	0	0	0	0	0	0	0	0.7	0.0%	4
Coffman Cove	2	2	1	0	0	0	0	0	0	0	0	0	0.4	0.0%	3
Indian	0	1	1	1	1	1	0	0	0	0	0	0	0.4	0.0%	1
Chiniak	0	0	0	0	0	0	0	0	1	1	1	1	0.3	0.0%	2
Kotzebue	0	0	0	0	1	1	1	1	0	0	0	0	0.3	0.0%	2
Naknek	0	0	0	0	0	0	0	0	1	1	1	1	0.3	0.0%	1
Port Moller	0	0	0	0	0	0	0	0	0	1	1	2	0.3	0.0%	1

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
Skagway	0	0	0	0	0	1	1	1	1	0	0	0	0.3	0.0%	2
Barrow	0	0	0	0	1	0	1	0	0	0	1	0	0.3	0.0%	1
Metlakatla	0	0	1	1	0	0	0	0	0	0	0	1	0.3	0.0%	1
Adak	0	1	1	0	0	0	0	0	0	0	0	0	0.2	0.0%	2
Bethel	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.0%	2
Bird Creek	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.0%	1
Chenega Bay	0	1	1	0	0	0	0	0	0	0	0	0	0.2	0.0%	1
Chignik Bay	0	0	0	0	0	0	0	1	1	0	0	0	0.2	0.0%	1
Cold Bay	0	0	0	0	0	0	1	0	0	0	0	1	0.2	0.0%	1
Funter Bay	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.0%	1
Iliamna	0	0	0	0	1	0	1	0	0	0	0	0	0.2	0.0%	1
Naukati Bay	0	0	0	0	0	0	0	1	0	1	0	0	0.2	0.0%	1
Togiak	0	0	1	1	0	0	0	0	0	0	0	0	0.2	0.0%	1
Houston	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.0%	1
Ivanof Bay	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.0%	1
Mekoryuk	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.0%	1
Nome	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.0%	1
Tok	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.0%	1
Alaska Total	1,369	1,481	1,508	1,514	1,490	1,371	1,466	1,443	1,442	1,466	1,482	1,574	1,467.2	79.0%	3,246
Newport	0	0	0	0	0	0	0	1	1	0	0	0	0.2	0.0%	1
All Other OR	60	54	63	58	57	53	55	49	45	44	37	43	51.5	2.8%	166
Oregon Total	60	54	63	58	57	53	55	50	46	44	37	43	51.7	2.8%	167
Seattle MSA	85	82	88	94	86	76	96	73	98	84	82	86	85.8	4.6%	246
All Other WA	168	176	201	176	184	164	180	146	169	142	128	150	165.3	8.9%	456
Washington Total	253	258	289	270	270	240	276	219	267	226	210	236	251.2	13.5%	676
All Other States	68	63	84	82	91	94	111	81	87	83	93	99	86.3	4.7%	347

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique CVs 2003-2014 (number)
Grand Total	1,750	1,856	1,944	1,924	1,908	1,758	1,908	1,793	1,842	1,819	1,822	1,952	1,856.3	100.0 %	3,962

Source: AKFIN 2016b

Vessel Gross Revenue Tables

Table 93. GOA Commercial Chinook Salmon Catcher Vessel Ex-Vessel Gross Revenues by Community of Vessel Owner, 2003-2014 (adjusted 2015 dollars)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
Geography	$ (thousands)													
Sitka	2,633	4,500	3,270	3,639	3,294	3,563	2,149	2,461	2,423	2,656	2,237	4,089	3,076	23.2%
Cordova	3,741	3,978	3,271	2,528	3,453	1,270	833	813	1,546	1,092	776	740	2,003	15.1%
Craig	901	1,497	1,184	1,449	926	773	351	1,041	1,039	1,078	675	1,112	1,002	7.6%
Juneau	850	1,439	883	1,311	1,018	840	692	746	680	667	450	988	880	6.6%
Yakutat	321	582	461	534	487	720	358	671	478	528	750	458	529	4.0%
Haines	157	236	266	369	476	303	308	318	298	250	185	460	302	2.3%
Petersburg	307	480	250	504	382	220	212	214	170	321	166	363	299	2.3%
Wrangell	254	357	207	491	341	154	115	247	169	339	158	350	265	2.0%
Homer	357	287	354	350	324	88	117	146	291	262	124	238	245	1.8%
Anchorage	415	489	353	282	277	122	106	115	163	162	109	203	233	1.8%
Pelican	135	344	234	378	316	349	233	190	176	208	67	141	231	1.7%
Ketchikan	135	328	135	323	171	101	108	116	171	152	257	476	206	1.6%

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
Geography	$ (thousands)													
Hoonah	70	295	121	286	359	272	170	181	221	123	75	224	200	1.5%
Elfin Cove	103	314	103	217	161	100	97	136	149	278	152	269	173	1.3%
Wasilla	131	105	72	116	235	85	59	48	82	112	44	52	95	0.7%
Kodiak	74	122	100	149	124	94	43	57	61	45	68	18	79	0.6%
Seward	91	63	45	43	64	53	52	47	65	83	54	62	60	0.5%
Sand Point	14	38	22	40	57	38	64	47	47	43	51	46	42	0.3%
Kenai	28	36	21	32	60	24	8	11	3	15	14	9	22	0.2%
Soldotna	13	36	33	19	23	8	4	3	11	26	11	32	18	0.1%
Chignik Lagoon	12	16	20	16	12	6	17	31	28	17	9	19	17	0.1%
Kasilof	17	29	12	26	4	4	3	3	4	2	4	3	9	0.1%
King Cove	1	1	2	5	6	7	10	9	8	20	10	11	8	0.1%
All Other Alaska	981	1,498	795	1,167	943	705	514	643	757	787	494	872	846	6.4%
Alaska Total	11,740	17,070	12,214	14,272	13,513	9,896	6,622	8,293	9,042	9,268	6,940	11,236	10,842	81.7%
Oregon Total	315	322	298	299	307	208	178	103	132	157	73	149	212	1.6%
Seattle MSA	457	590	511	845	605	314	364	308	345	276	156	278	421	3.2%
All Other WA	1,282	1,936	1,522	2,113	1,796	1,285	907	1,150	1,042	885	487	1,517	1,327	10.0%
Washington Total	1,740	2,527	2,033	2,957	2,401	1,599	1,271	1,457	1,387	1,161	643	1,794	1,748	13.2%
All Other States	305	384	341	456	507	597	391	245	409	506	638	818	466	3.5%
Grand Total	14,099	20,303	14,887	17,984	16,728	12,301	8,463	10,098	10,970	11,092	8,293	13,997	13,268	100.0%

Source: AKFIN 2016b

Table 94. GOA Chinook Salmon Catcher Vessels Ex-Vessel Gross Revenue Diversification by Community of Vessel Owner, All Communities with 10 or More Vessels Participating on an Annual Average Basis, 2003-2014

Geography	Annual Average Number of GOA Chinook Salmon CVs 2003-2014	GOA Chinook Salmon CVs Annual Average Ex-Vessel Gross Revenues from GOA Chinook Salmon Only 2003-2014 ($ millions)	GOA Chinook Salmon CVs Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries 2003-2014 ($ millions)	GOA Chinook Salmon CVs GOA Chinook Salmon Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average 2003-2014
Sitka	250.8	3,076.2	33,887.6	9.1%
Cordova	247.5	2,003.4	23,777.2	8.4%
Homer	130.8	244.9	25,800.4	0.9%
Kodiak	77.3	79.4	28,459.6	0.3%
Anchorage	67.8	232.9	10,136.6	2.3%
Juneau	66.3	880.4	9,048.5	9.7%
Craig	55.0	1,002.2	6,853.9	14.6%
Yakutat	54.2	528.9	1,646.8	32.1%
Sand Point	48.8	42.2	15,018.2	0.3%
Petersburg	39.2	299.1	17,882.8	1.7%
Wasilla	28.2	95.2	4,144.8	2.3%
Kenai	28.0	21.9	1,965.8	1.1%
Ketchikan	24.3	205.9	5,830.3	3.5%
Soldotna	23.1	18.4	1,718.0	1.1%
King Cove	22.0	7.6	6,479.8	0.1%
Hoonah	20.2	199.7	1,492.4	13.4%
Wrangell	19.9	265.2	2,966.4	8.9%
Kasilof	18.8	9.2	1,291.6	0.7%
Pelican	17.8	230.8	1,035.5	22.3%
Chignik Lagoon	15.2	16.8	5,547.0	0.3%
Haines	15.1	302.2	2,327.7	13.0%
Seward	13.8	60.1	2,563.0	2.3%
Elfin Cove	11.3	173.1	1,020.8	17.0%
All Other Alaska	172.1	846.4	26,186.4	3.2%
Alaska Total	1,467.2	10,842.2	237,081.0	4.6%
Oregon Total	51.7	211.7	7,326.1	2.9%
Seattle MSA	85.8	420.7	23,102.3	1.8%
All Other Washington	165.3	1,326.8	31,435.8	4.2%
Washington Total	251.2	1,747.5	54,538.1	3.2%
All Other States Total	86.3	466.4	26,475.1	1.8%
Total	1,856.3	13,267.9	325,420.3	4.1%

Source: AKFIN 2016b

Table 95. GOA Chinook Salmon Catcher Vessel and All Catcher Vessel Ex-Vessel Gross Revenue Diversification by Community of Vessel Owner, All Communities with 10 or More Vessels Participating on an Annual Average Basis, 2003-2014

Geography	Annual Average Number of GOA Chinook Salmon CVs 2003-2014	Annual Average Number of All Commercial Fishing CVs 2003-2014	All Commercial Fishing CVs Annual Average Ex-Vessel Gross Revenues from GOA Chinook Salmon Only 2003-2014 ($ millions)	All Commercial Fishing CVs Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries 2003-2014 ($ millions)	All Commercial Fishing CVs GOA Chinook Salmon Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average 2003-2014
Sitka	250.8	389.3	3,076.2	51,866.6	5.9%
Cordova	247.5	325.7	2,003.4	42,831.6	4.7%
Homer	130.8	323.8	244.9	78,680.6	0.3%
Kodiak	77.3	265.0	79.4	137,910.6	0.1%
Anchorage	67.8	239.0	232.9	53,918.0	0.4%
Juneau	66.3	232.0	880.4	29,739.3	3.0%
Craig	55.0	98.3	1,002.2	9,242.8	10.8%
Yakutat	54.2	68.0	528.9	2,111.6	25.0%
Sand Point	48.8	76.0	42.2	18,106.2	0.2%
Petersburg	39.2	322.2	299.1	73,365.1	0.4%
Wasilla	28.2	66.3	95.2	9,358.6	1.0%
Kenai	28.0	67.3	21.9	5,247.8	0.4%
Ketchikan	24.3	168.8	205.9	21,540.3	1.0%
Soldotna	23.1	49.5	18.4	3,659.9	0.5%
King Cove	22.0	32.3	7.6	9,152.8	0.1%
Hoonah	20.2	51.6	199.7	2,995.4	6.7%
Wrangell	19.9	148.3	265.2	13,443.4	2.0%
Kasilof	18.8	39.6	9.2	3,479.5	0.3%
Pelican	17.8	22.8	230.8	2,005.6	11.5%
Chignik Lagoon	15.2	18.9	16.8	6,595.4	0.3%
Haines	15.1	74.0	302.2	7,041.2	4.3%
Seward	13.8	31.6	60.1	11,440.3	0.5%
Elfin Cove	11.3	17.2	173.1	1,324.9	13.1%
All Other Alaska	172.1	1,197.7	846.4	91,694.3	0.9%
Alaska Total	1,467.2	4,324.9	10,842.2	686,751.7	1.6%
Oregon Total	51.7	212.3	211.7	115,904.6	0.2%
Seattle MSA	85.8	538.3	420.7	504,201.6	0.1%
All Other Washington	165.3	640.8	1,326.8	157,295.3	0.8%
Washington Total	251.2	1,179.0	1,747.5	661,496.9	0.3%
All Other States Total	86.3	423.7	466.4	78,588.9	0.6%
Total	1,856.3	6,139.9	13,267.9	1,542,742.1	0.9%

Source: AKFIN 2016b

Table 96. Shore-Based Processors Accepting GOA Chinook Salmon by Community, 2003-2014 (number)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique SBPRs 2003-2014 (number)
Juneau	11	12	10	11	11	11	9	9	8	10	9	9	10.0	8.0%	21
Kodiak	7	8	9	9	10	8	9	8	9	9	8	7	8.4	6.8%	20
Naknek	7	8	8	7	8	8	8	7	8	8	8	9	7.8	6.3%	21
Petersburg	9	7	8	7	7	8	7	7	7	7	7	7	7.3	5.9%	15
Kenai	5	6	6	8	8	9	7	7	7	8	8	8	7.3	5.8%	13
Cordova	7	8	7	7	6	6	7	6	8	7	7	7	6.9	5.6%	20
Sitka	5	7	7	7	8	7	6	6	6	6	6	7	6.5	5.2%	17
Ketchikan	4	7	6	5	6	6	5	5	5	5	6	6	5.5	4.4%	14
Yakutat	5	7	6	5	6	5	5	4	4	4	4	4	4.9	3.9%	16
Anchorage	6	7	8	8	6	5	3	2	3	3	3	4	4.8	3.9%	14
Dillingham	3	4	4	5	3	4	3	2	2	2	2	3	3.1	2.5%	15
Haines	2	3	3	3	3	4	4	4	3	3	3	2	3.1	2.5%	5
Craig	3	3	3	2	2	2	3	3	3	3	4	4	2.9	2.3%	7
Homer	2	2	2	4	2	4	2	3	3	3	3	4	2.8	2.3%	8
Wrangell	3	4	2	1	2	3	2	2	3	3	2	4	2.6	2.1%	10
King Salmon	0	3	2	2	2	3	0	3	3	4	3	4	2.4	1.9%	7
Soldotna	2	2	2	2	2	2	2	2	2	2	2	2	2.0	1.6%	3
Whittier	1	1	2	2	2	1	2	2	2	2	2	2	1.8	1.4%	2
Valdez	2	2	2	1	1	1	2	1	2	2	2	2	1.7	1.3%	5
Kasilof	1	2	1	3	1	3	2	2	1	1	1	1	1.6	1.3%	6
Sand Point	1	2	2	2	2	2	1	2	1	1	1	2	1.6	1.3%	2
Hoonah	1	1	1	1	1	2	2	2	2	3	1	1	1.5	1.2%	4
Seward	3	2	1	1	3	1	1	2	1	1	1	1	1.5	1.2%	5
Pelican	2	0	0	2	2	2	1	1	1	1	0	2	1.2	0.9%	7
Chignik	2	1	1	1	1	1	1	1	1	1	1	1	1.1	0.9%	2

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique SBPRs 2003-2014 (number)
Elfin Cove	1	1	1	1	1	1	1	1	2	2	1	0	1.1	0.9%	2
Emmonak	1	2	2	2	2	1	1	1	1	0	0	0	1.1	0.9%	2
Cold Bay	1	1	1	1	1	1	1	1	1	1	1	1	1.0	0.8%	1
Gustavus	1	1	1	1	1	1	1	1	1	1	1	1	1.0	0.8%	1
King Cove	1	1	1	1	1	1	1	1	1	1	1	1	1.0	0.8%	1
Klawock	2	1	1	1	1	1	1	1	2	0	0	1	1.0	0.8%	5
Larsen Bay	1	1	1	1	1	1	1	1	1	1	1	1	1.0	0.8%	3
Togiak	1	1	1	1	1	1	1	1	1	1	1	1	1.0	0.8%	2
Metlakatla	1	1	1	1	1	1	1	1	1	1	1	0	0.9	0.7%	1
Egegik	1	1	2	0	1	2	1	1	0	0	0	1	0.8	0.7%	4
Big Lake	1	1	2	1	1	1	1	0	0	0	0	0	0.7	0.5%	3
Nikiski	1	1	1	1	1	1	1	1	0	0	0	0	0.7	0.5%	2
Ninilchik	1	1	1	2	1	0	1	0	0	0	1	0	0.7	0.5%	5
Unalakleet	1	0	1	1	1	1	0	1	1	0	0	1	0.7	0.5%	2
False Pass	0	0	0	0	0	1	1	1	1	1	1	1	0.6	0.5%	1
Quinhagak	1	1	1	1	1	1	1	0	0	0	0	0	0.6	0.5%	1
Kake	1	0	0	1	0	1	0	0	0	1	1	1	0.5	0.4%	3
Platinum	0	0	0	0	0	0	1	1	1	1	1	1	0.5	0.4%	1
Marshall	1	1	1	1	1	0	0	0	0	0	0	0	0.4	0.3%	1
Old Harbor	0	0	0	0	0	0	1	1	1	0	1	1	0.4	0.3%	1
St Mary's	0	0	1	1	1	1	1	0	0	0	0	0	0.4	0.3%	1
Hyder	0	0	1	0	1	0	0	0	0	1	0	1	0.3	0.3%	2
North Pole	0	0	1	1	1	0	0	0	0	0	0	0	0.3	0.2%	1
Ward Cove	0	0	0	0	0	0	0	0	0	1	1	1	0.3	0.2%	2
Wasilla	0	0	0	1	0	1	1	0	0	0	0	0	0.3	0.2%	2
Ekuk	0	1	0	0	0	1	0	0	0	0	0	0	0.2	0.1%	2
Fairbanks	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.1%	1
Kotzebue	0	1	1	0	0	0	0	0	0	0	0	0	0.2	0.1%	2

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)	Unique SBPRs 2003-2014 (number)
Toksook Bay	0	1	0	0	0	0	1	0	0	0	0	0	0.2	0.1%	1
Akiachak	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.1%	1
Akutan	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.1%	1
Circle	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1%	1
Halibut Cove	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1%	1
Indian	0	0	1	0	0	0	0	0	0	0	0	0	0.1	0.1%	1
Nome	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.1%	1
Tyonek	0	0	0	0	0	0	0	0	1	0	0	0	0.1	0.1%	1
Unalaska	0	0	0	0	0	1	0	0	0	0	0	0	0.1	0.1%	1
Alaska Total	115	129	128	127	125	129	114	108	111	112	107	119	118.7	95.3%	323
Washington Total	5	0	0	0	2	3	2	2	2	1	2	3	1.8	1.5%	13
All Other Geographies	7	6	4	5	5	4	3	3	3	3	3	3	4.1	3.3%	13
Total	127	135	132	132	132	136	119	113	116	116	112	125	124.6	100.0%	349

Source: AKFIN 2016b

Table 97. First Wholesale Gross Revenues from GOA Chinook Salmon Deliveries to Shore-Based Processors by Community, 2003-2014 (adjusted 2015 dollars)

Geography	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (dollars)	Average 2003-2014 (percent)
	$ (thousands)													
Sitka	6,119.5	12,337.2	12,628.0	13,071.8	12,334.3	12,803.7	7,077.9	8,541.4	10,038.2	8,890.0	7,802.8	12,683.6	10,360.7	42.4%
Cordova	3,621.4	4,802.7	3,788.6	3,474.5	4,482.4	1,551.8	1,136.6	1,057.5	2,124.9	1,575.1	955.9	996.3	2,464.0	10.1%
Ketchikan	757.6	1,689.5	1,399.5	1,681.6	1,964.8	2,225.2	1,587.7	1,984.6	2,429.0	1,612.4	2,458.6	2,217.7	1,834.0	7.5%
Petersburg	818.4	1,512.0	1,216.9	1,503.7	1,322.4	1,348.9	796.0	1,003.5	1,180.3	991.6	706.7	889.2	1,107.5	4.5%
Juneau	488.2	1,101.8	2,224.3	1,436.7	910.0	1,280.1	1,197.2	963.6	641.2	816.8	627.6	833.6	1,043.4	4.3%
Yakutat	355.9	666.1	506.5	679.9	580.8	787.4	422.7	722.2	575.9	649.7	830.3	563.2	611.7	2.5%
Kenai	391.6	685.1	576.9	311.6	356.1	447.0	205.4	199.1	341.7	175.4	207.8	181.0	339.9	1.4%
Kodiak	102.1	222.7	162.1	314.5	198.3	179.4	72.5	157.3	177.0	93.4	135.2	42.6	154.8	0.6%
All Other Geographies	5,893.5	11,165.5	8,603.7	13,729.6	10,081.8	5,160.7	3,113.3	4,907.2	4,792.7	3,618.4	3,155.3	3,896.8	6,509.9	26.7%
Total	18,548.3	34,182.6	31,106.5	36,203.8	32,230.8	25,784.1	15,609.3	19,536.5	22,300.8	18,422.9	16,880.2	22,304.0	24,425.8	100.0%

Source: AKFIN 2016b

Table 98. Shore-Based Processors in Alaska Accepting GOA Chinook Salmon Deliveries Ex-Vessel Gross Revenues Diversity by Community 2003-2014

Geography	Annual Average Number of Processors Processing GOA Chinook Salmon 2003-2014	GOA Chinook Salmon Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ thousands)	Total (All Areas and Species) Ex-vessel Gross Revenues Annual Average 2003-2014 ($ thousands)	GOA Chinook Salmon Ex-Vessel Gross Revenues as a Percentage of Total Ex-Vessel Gross Revenues Annual Average 2003-2014
Cordova	6.9	2,464.0	71,921.5	3.4%
Juneau	10.0	1,043.4	41,871.3	2.5%
Kenai	7.3	339.9	33,827.0	1.0%
Ketchikan	5.5	1,834.0	48,909.8	3.7%
Kodiak	8.4	154.8	137,070.2	0.1%
Petersburg	7.3	1,107.5	60,765.4	1.8%
Sitka	6.5	10,360.7	82,231.9	12.6%
Yakutat	4.9	611.7	12,686.6	4.8%
All Other Geographies	67.8	6,509.9	433,057.7	1.5%
Total	124.6	24,425.8	922,341.5	2.6%

Source: AKFIN 2016b

Table 99. All Areas and Species Ex-Vessel Gross Revenues Diversity by Community for All Shore-Based Processors (for Alaska communities with at least one shore-based processor accepting GOA Chinook salmon deliveries) 2003-2014

Geography	Annual Average Number of Processors Processing GOA Chinook Salmon 2003-2014	Annual Average Number of Total Processors 2003-2014	GOA Chinook Salmon Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ thousands)	Total (All Areas and Species) Ex-Vessel Gross Revenues Annual Average 2003-2014 ($ thousands)	GOA Chinook Salmon Ex-Vessel Gross Revenues as a Percentage of Total Ex-Vessel Gross Revenues Annual Average 2003-2014
Cordova	6.9	8.7	2,464.0	76,364.2	3.2%
Juneau	10.0	13.3	1,043.4	47,809.6	2.2%
Kenai	7.3	7.4	339.9	33,827.3	1.0%
Ketchikan	5.5	7.9	1,834.0	49,544.4	3.7%
Kodiak	8.4	12.6	154.8	161,393.5	0.1%
Petersburg	7.3	9.2	1,107.5	61,462.6	1.8%
Sitka	6.5	9.0	10,360.7	82,742.7	12.5%
Yakutat	4.9	5.0	611.7	12,686.7	4.8%
All Other Geographies	67.8	86.0	6,509.9	497,657.8	1.3%
Total	124.6	159.0	24,425.8	1,023,488.8	2.4%

Source: AKFIN 2016b

GOA Chinook Salmon Sport Harvest by Region Tables

Table 100. Chinook Salmon Sport Harvest by Region, Number of Fish, 2003-2014

Region	Sub-region	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2003-2014 (number)	Average 2003-2014 (percent)
Southeast	Southeast Subtotal	69,370	80,572	86,575	85,794	82,848	49,265	69,565	58,503	66,575	46,495	56,392	86,942	69,908	46.8%
	Kodiak	9,031	11,263	9,298	11,821	11,251	9,466	8,854	6,440	7,926	7,558	9,333	8,854	9,258	6.2%
	Alaska Peninsula/Aleutian Islands	3,105	4,263	3,215	3,682	2,538	2,134	2,826	2,329	2,923	2,687	1,966	1,609	2,773	1.9%
	All Other Southcentral	86,151	90,263	99,151	93,552	87,270	65,734	48,175	46,522	46,662	23,103	32,792	32,657	62,669	41.9%
Southcentral	Southcentral Subtotal	98,287	105,789	111,664	109,055	101,059	77,334	59,855	55,291	57,511	33,348	44,091	43,120	74,700	50.0%
Arctic-Yukon-Kuskokwim	Arctic-Yukon-Kuskokwim Subtotal	9,435	6,680	6,229	5,894	8,909	5,658	3,908	3,850	4,021	1,512	602	931	4,802	3.2%
Alaska	Grand Total	177,092	193,041	204,468	200,743	192,816	132,257	133,328	117,644	128,107	81,355	101,085	130,993	149,411	100.0%

Source: Alaska Department of Fish and Game 2016c

GOA Chinook Salmon Subsistence and Personal Use Harvests by Area Tables

Table 101. Estimated Subsistence and Personal Use Chinook Salmon Harvests for GOA Areas, 2003-2013 (number)

Geography		Measurement	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average 2003-2013 (number, available years)	Average 2003-2013 (percent, available years)
Cook Inlet	Port Graham and Koyuktolik (subsistence)	Returned Households/ Permits	52	80	68	53	24*	48	44	35*	53	8	14	44	0.1%
		Chinook Harvest	465	312	292	275	92	124	44	30	53	24	17	157	0.1%
		All Salmon Harvest	9,109	6,953	5,399	6,461	761	8,875	5,123	4,470	10,389	1,912	8,897	6,214	0.4%
	Seldovia (subsistence)	Returned Households/ Permits	15	12	16	11	15	9	17	12	4	7	8	11	0.0%
		Chinook Harvest	117	102	53	23	24	4	15	3	0	8	3	32	0.0%
		All Salmon Harvest	496	258	251	66	239	177	242	312	114	141	234	230	0.0%
	Tyonek (subsistence)	Returned Households/ Permits	74	75	66	55	67	77	69	77	63	69	48	67	0.2%
		Chinook Harvest	1,183	1,345	982	943	1,281	1,178	636	843	595	840	813	967	0.7%
		All Salmon Harvest	1,355	1,568	1,184	978	1,609	1,515	1,081	1,226	789	1,160	1,185	1,241	0.1%
	Upper Yentna River (subsistence and personal)	Returned Households/ Permits	15	19	17	22	22	16	17	32	25	21	19	20	0.0%
		Chinook Harvest	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
		All Salmon Harvest	630	625	268	583	468	397	273	749	1,046	343	412	527	0.0%

Geography	Measurement	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average 2003-2013 (number, available years)	Average 2003-2013 (percent, available years)
Kenai and Kasilof Rivers (subsistence)	Returned Households/ Permits	--	--	--	--	131	151	138	151	123	121	138	136	0.3%
	Chinook Harvest	--	--	--	--	0	2	0	0	0	0	0	0	0.0%
	All Salmon Harvest	--	--	--	--	747	1,730	1,113	943	1,090	1,438	1,519	1,226	0.1%
Upper Cook Inlet** (personal)	Returned Households/ Permits	15,726	17,748	19,081	16,532	20,312	20,259	25,029	25,222	27,193	27,080	26,772	21,905	52.6%
	Chinook Harvest	1,711	1,098	1,132	1,405	1,924	1,601	1,384	1,059	1,453	167	84	1,183	0.8%
	All Salmon Harvest	305,245	358,160	377,271	234,391	364,334	336,040	470,655	531,291	644,497	640,757	464,995	429,785	29.5%
Kasilof River Setnet (personal)	Returned Households/ Permits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Chinook Harvest	400	163	87	287	343	151	127	136	167	103	46	183	0.1%
	All Salmon Harvest	16,226	25,644	27,039	29,591	15,356	23,706	26,963	22,107	27,020	15,970	14,622	22,204	1.5%
Kasilof River Dipnet (personal)	Returned Households/ Permits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Chinook Harvest	57	44	16	55	35	46	34	31	24	16	18	34	0.0%
	All Salmon Harvest	44,835	49,513	44,465	58,353	44,334	55,536	75,957	73,826	51,563	75,648	88,234	60,206	4.1%
Kenai River Dipnet (personal)	Returned Households/ Permits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Chinook Harvest	1,016	792	997	1,034	1,509	1,362	1,189	865	1,243	40	11	914	0.6%
	All Salmon Harvest	227,824	268,774	301,132	142,577	297,301	249,215	349,350	397,450	548,582	535,235	354,728	333,833	22.9%

Geography		Measurement	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average 2003-2013 (number, available years)	Average 2003-2013 (percent, available years)
	Fish Creek Dipnet (personal)	Returned Households/ Permits	--	--	--	--	--	--	NA	NA	NA	--	--	NA	NA
		Chinook Harvest	--	--	--	--	--	--	10	12	2	--	--	8	0.0%
		All Salmon Harvest	--	--	--	--	--	--	10,060	29,304	6,370	--	--	15,245	1.0%
	Unknown Cook Inlet (personal)	Returned Households/ Permits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Chinook Harvest	238	99	32	29	37	41	25	15	17	8	9	50	0.0%
		All Salmon Harvest	16,360	14,227	4,635	3,870	6,861	7,467	8,327	8,604	10,962	13,904	7,411	9,330	0.6%
	Beluga River Dipnet (senior personal)	Returned Households/ Permits	--	--	--	--	--	20	11	14	12	7	8	12	0.0%
		Chinook Harvest	--	--	--	--	--	0	0	0	0	0	0	0	0.0%
		All Salmon Harvest	--	--	--	--	--	66	225	53	159	16	88	101	0.0%
	Kachemak Bay Setnet (subsistence and personal)	Returned Households/ Permits	96	83	96	82	133	142	142	122	112	95	118	111	0.3%
		Chinook Harvest	17	7	8	15	10	2	9	14	15	5	9	10	0.0%
		All Salmon Harvest	1,324	1,805	1,207	1,577	2,229	2,639	1,033	1,306	1,194	1,894	2,001	1,655	0.1%
Prince William Sound	Glennallen (subsistence)	Returned Households/ Permits	1,101	1,032	1,070	1,100	1,277	1,269	1,138	1,331	1,328	1,557	1,400	1,237	3.0%
		Chinook Harvest	3,344	4,503	2,785	3,233	4,125	3,417	3,341	2,653	3,649	2,649	2,663	3,306	2.3%
		All Salmon Harvest	68,612	87,557	94,752	81,743	91,110	63,404	71,515	95,706	85,996	98,110	99,390	85,263	5.9%

Geography	Measurement	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average 2003-2013 (number, available years)	Average 2003-2013 (percent, available years)
Chitina (subsistence and personal)	Returned Households/ Permits	5,438	6,855	6,768	6,762	7,187	6,861	6,908	7,757	7,566	8,030	8,482	7,147	17.1%
	Chinook Harvest	1,962	2,521	2,155	2,598	2,782	1,991	229	700	1,118	613	762	1,585	1.1%
	All Salmon Harvest	89,332	116,476	133,546	133,410	135,990	87,699	95,662	142,680	141,073	138,465	187,614	127,450	8.7%
Federal Chitina (subsistence)	Returned Households/ Permits	71	83	64	62	86	65	34	38	42	80	85	65	0.2%
	Chinook Harvest	33	9	27	16	29	26	15	36	21	5	20	22	0.0%
	All Salmon Harvest	1,500	1,668	1,526	1,723	1,165	1,062	1,560	5,476	3,125	996	2,428	2,021	0.1%
Batzulnetas (subsistence)	Returned Households/ Permits	1	1	0	0	0	0	0	3	3	3	3	1	0.0%
	Chinook Harvest	0	0	0	0	0	0	0	0	0	1	5	1	0.0%
	All Salmon Harvest	164	182	0	0	0	0	0	106	101	137	867	142	0.0%
Copper River (subsistence)	Returned Households/ Permits	367	487	224	399	445	482	293	320	263	359	497	376	0.9%
	Chinook Harvest	730	1,163	260	779	1,211	495	232	281	220	248	916	594	0.4%
	All Salmon Harvest	2,439	3,129	1,106	5,135	7,694	4,732	2,173	2,365	2,096	4,767	7,010	3,877	0.3%
Prince William Sound Eastern (subsistence)	Returned Households/ Permits	8	12	3	1	0	1	4	5	4	8	11	5	0.0%
	Chinook Harvest	0	2	0	0	--	0	0	0	0	15	0	2	0.0%
	All Salmon Harvest	298	998	600	81	--	60	301	367	1,480	1,052	1,019	626	0.0%

Geography		Measurement	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average 2003-2013 (number, available years)	Average 2003-2013 (percent, available years)
	Prince William Sound South-western (subsistence)	Returned Households/ Permits	7	5	8	6	3	3	4	5	6	14	4	6	0.0%
		Chinook Harvest	6	3	10	0	2	4	2	0	2	0	0	3	0.0%
		All Salmon Harvest	677	722	907	299	381	276	285	148	272	700	82	432	0.0%
	Prince William Sound General	Returned Households/ Permits	11	7	13	9	3	10	1	1	4	12	8	7	0.0%
		Chinook Harvest	0	0	0	0	0	1	0	0	29	0	0	3	0.0%
		All Salmon Harvest	51	17	4	50	30	34	0	0	85	99	36	37	0.0%
South-east	Southeast (subsistence and personal)	Returned Households/ Permits	2,924	3,235	2,772	2,809	1,622	2,820	3,097	1,829	2,918	2,983	3,170	2,744	6.6%
		Chinook Harvest	1,543	1,583	887	1,356	1,199	1,052	1,208	1,828	916	816	983	1,216	0.9%
		All Salmon Harvest	79,434	71,763	49,655	63,425	49,737	49,472	59,627	62,571	52,350	59,938	59,343	59,756	4.1%
	Stikine Federal (subsistence)	Issued Households/ Permits***	--	40	35	48	44	50	80	107	129	130	124	79	0.2%
		Chinook Harvest	--	12	15	37	36	25	31	61	66	53	101	44	0.0%
		All Salmon Harvest	--	288	411	491	373	525	887	1,946	2,110	1,546	2,185	1,076	0.1%
All Areas	Alaska Total	Returned Households/ Permits	34,918	38,754	37,690	35,172	38,296	39,183	44,407	44,961	47,420	48,505	49,090	41,672	100.0%
		Chinook Harvest	168,321	177,521	156,798	144,078	159,747	177,761	142,956	135,078	131,318	75,211	84,617	141,219	100.0%

Geography	Measurement	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average 2003-2013 (number, available years)	Average 2003-2013 (percent, available years)
	All Salmon Harvest	1,310,489	1,426,657	1,431,042	1,293,419	1,373,171	1,394,654	1,351,098	1,517,424	1,633,650	1,728,815	1,569,044	1,457,224	100.0%

* Harvest reports are incomplete.
** Does not include the Beluga River dipnet fishery.
*** Only issued permits were tabulated for Stikine River.
Source: Alaska Department of Fish and Game 2015

Table 102. Estimated Proportion of Chinook Salmon Subsistence/Personal Use Harvests Compared to All Subsistence/Personal Use Harvested Salmon for GOA Areas, 2003-2013 (percentage)

Geography		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average 2003-2013 (available years)
								%					
Cook Inlet	Port Graham and Koyuktolik (subsistence)	5.1	4.5	5.4	4.3	12.1	1.4	0.9	0.7	0.5	1.3	0.2	2.5
	Seldovia (subsistence)	23.6	39.5	21.1	34.8	10.0	2.3	6.2	1.0	0.0	5.7	1.3	13.9
	Tyonek (subsistence)	87.3	85.8	82.9	96.4	79.6	77.8	58.8	68.8	75.4	72.4	68.6	77.9
	Upper Yentna River (subsistence and personal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Kenai and Kasilof Rivers (subsistence)	--	--	--	--	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Upper Cook Inlet* (personal)	0.6	0.3	0.3	0.6	0.5	0.5	0.3	0.2	0.2	0.0	0.0	0.3
	Kasilof River Setnet (personal)	2.5	0.6	0.3	1.0	2.2	0.6	0.5	0.6	0.6	0.6	0.3	0.8
	Kasilof River Dipnet (personal)	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1
	Kenai River Dipnet (personal)	0.4	0.3	0.3	0.7	0.5	0.5	0.3	0.2	0.2	0.0	0.0	0.3
	Fish Creek Dipnet (personal)	--	--	--	--	--	--	0.1	0.0	0.0	--	--	0.1
	Unknown Cook Inlet (personal)	1.5	0.7	0.7	0.7	0.5	0.5	0.3	0.2	0.2	0.1	0.1	0.5
	Beluga River Dipnet (senior personal)	--	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Kachemak Bay Setnet (subsistence and personal)	1.3	0.4	0.7	1.0	0.4	0.1	0.9	1.1	1.3	0.3	0.4	0.6
Prince William Sound	Glennallen (subsistence)	4.9	5.1	2.9	4.0	4.5	5.4	4.7	2.8	4.2	2.7	2.7	3.9
	Chitina (subsistence and personal)	2.2	2.2	1.6	1.9	2.0	2.3	0.2	0.5	0.8	0.4	0.4	1.2
	Federal Chitina (subsistence)	2.2	0.5	1.8	0.9	2.5	2.4	1.0	0.7	0.7	0.5	0.8	1.1
	Batzulnetas (subsistence)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	0.4
	Copper River (subsistence)	29.9	37.2	23.5	15.2	15.7	10.5	10.7	11.9	10.5	5.2	13.1	15.3
	Prince William Sound Eastern (subsistence)	0.0	0.2	0.0	0.0	--	0.0	0.0	0.0	0.0	1.4	0.0	0.3
	Prince William Sound Southwestern (subsistence)	0.9	0.4	1.1	0.0	0.5	1.4	0.7	0.0	0.7	0.0	0.0	0.6
	Prince William Sound General	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	34.1	0.0	0.0	7.4
Southeast	Southeast (subsistence and personal)	1.9	2.2	1.8	2.1	2.4	2.1	2.0	2.9	1.7	1.4	1.7	2.0
	Stikine Federal (subsistence)	--	4.2	3.6	7.5	9.7	4.8	3.5	3.1	3.1	3.4	4.6	4.1
All Areas	Alaska Total	12.8	12.4	11.0	11.1	11.6	12.7	10.6	8.9	8.0	4.4	5.4	9.7

* Does not include the Beluga River dip net fishery.
Source: National Oceanic and Atmospheric Administration 2016d

Attachment 3: Selected GOA Trawl Catcher Vessel and Catcher Processor Crew EDR Data, 2015

Table 103. Number of Unique GOA Trawl Catcher Vessel Crew Members, by Community of Residence, 2015

Community	Number of CFEC Gear Operator Permit Holders	Number of ADFG Crew License Holders	Total
Alaska			
Anchor Point	1	1	2
Anchorage (incl. Girdwood)	3	5	8
Cantwell	0	1	1
Chiniak	0	1	1
Gustavus	0	1	1
Juneau	1	0	1
King Cove	4	5	9
Kodiak	31	45	76
Old Harbor	0	1	1
Palmer	0	4	4
Petersburg	2	2	4
Salcha	0	1	1
Sand Point	18	22	40
Soldotna	0	1	1
Unalakleet	0	1	1
Wasilla	0	1	1
Alaska Subtotal	60	92	152
Washington			
Adna	1	0	1
Anacortes	0	1	1
Arlington*	0	1	1
Belfair	0	1	1
Bellingham	2	9	11
Bothell*	2	0	2
Camas	1	0	1
Castle Rock	0	1	1
Chehalis	0	2	2
Chelan	0	1	1
Edmonds*	0	1	1
Everett*	0	1	1

Community	Number of CFEC Gear Operator Permit Holders	Number of ADFG Crew License Holders	Total
Everson	0	1	1
Ferndale	1	0	1
Friday Harbor	0	2	2
Gig Harbor*	2	0	2
Kennewick	0	1	1
Lake Forest Park*	0	1	1
Long Beach	1	0	1
Lynnwood*	1	0	1
Maple Valley*	0	1	1
Mount Vernon	0	1	1
Old Harbor	0	1	1
Olympia	0	2	2
Oroville	1	0	1
Puyallup*	1	1	2
Rosberg	0	2	2
Seattle*	2	8	10
Sedro Woolley	0	2	2
Sequim	0	1	1
South Bend	2	0	2
Wenatchee	0	1	1
Westport	0	1	1
Washington Subtotal	17	44	61
Oregon			
Beaverton	1	0	1
Bend	0	2	2
Brookings	1	1	2
Coos Bay	0	3	3
Dallas	0	1	1
Eddyville	0	2	2
Eugene	0	1	1
Grant's Pass	1	0	1
Lebanon	0	1	1
Newport	7	15	22
North Bend	0	2	2
Oregon City	0	2	2
Port Orford	0	1	1
Portland	1	2	3
Redmond	1	1	2
Salem	0	1	1

Community	Number of CFEC Gear Operator Permit Holders	Number of ADFG Crew License Holders	Total
Siletz	4	4	8
South Beach	1	2	3
Sweet Home	1	0	1
Toledo	4	10	14
Waldport	0	1	1
Warrenton	0	1	1
West Linn	0	1	1
Oregon Subtotal	22	54	76
Other States			
AZ - Lake Havasu City	0	1	1
CA - Bishop	0	1	1
CA - Calexico	0	1	1
CA - Clovis	0	1	1
CA - Heber	0	1	1
CA - National City	0	1	1
CA - San Diego	0	1	1
CA - Simi Valley	0	1	1
CA - Temecula	0	1	1
FL - Palatka	0	1	1
IL - Bolingbrook	1	0	1
MA - Fairhaven	0	1	1
MI - Lake Odessa	0	1	1
MT - Bigfork	1	0	1
MT - Corvallis	0	1	1
NV - Las Vegas	0	1	1
OH - Cincinnati	0	1	1
OH - St. Louisville	1	0	1
TX - Georgetown	0	1	1
UT - Murray	0	1	1
WI - Downing	0	1	1
Other States Subtotal	3	18	21
Unknown			
Unknown Subtotal	1	54	55
GRAND TOTAL	103	262	365

* Denotes communities within the Seattle MSA

Source: National Marine Fisheries Service 2016b

Table 104. Number of GOA Trawl Catcher Vessel Crew Positions, by Community of Residence Vessel Owner and Community of Residence of Crew Member, 2015

Community of Catcher Vessel Owner Residence	State of Crew Member Residence	Community of Crew Member Residence	Number of CFEC Gear Operator Permit Holders	Number of ADFG Crew License Holders	Total Crew Positions
Alaska					
Kodiak	Alaska	Anchor Point	1	1	2
	Alaska	Anchorage	1	2	3
	Alaska	Chiniak	0	2	2
	Alaska	Gustavus	0	1	1
	Alaska	Juneau	1	0	1
	Alaska	Kodiak	23	24	47
	Alaska	Old Harbor	0	1	1
	Alaska	Palmer	0	1	1
	Washington	Chehalis	0	1	1
	Washington	Ferndale	1	0	1
	Washington	Puyallup*	0	1	1
	Washington	Sedro Woolley	0	1	1
	Washington	Sequim	0	2	2
	Oregon	Beaverton	1	0	1
	Oregon	Lebanon	0	1	1
	Oregon	Newport	1	0	1
	Oregon	Port Orford	0	1	1
	Oregon	Redmond	0	2	2
	Oregon	Siletz	0	1	1
	Oregon	Sweet Home	1	0	1
	Oregon	Waldport	0	1	1
	California	Heber	0	1	1
	Illinois	Bolingbrook	1	0	1
	Massachusetts	Fairhaven	0	1	1
	Texas	Georgetown	0	1	1
	Unknown	Unknown	0	9	9
	Kodiak Subtotal		*31*	*55*	*86*
Sand Point	Alaska	Anchorage	1	1	2
	Alaska	King Cove	0	1	1
	Alaska	Sand Point	18	16	34
	Unknown	Unknown	0	11	11
	Sand Point Subtotal		*19*	*29*	*48*
King Cove	Alaska	King Cove	4	4	8
	Alaska	Sand Point	0	1	1

Community of Catcher Vessel Owner Residence	State of Crew Member Residence	Community of Crew Member Residence	Number of CFEC Gear Operator Permit Holders	Number of ADFG Crew License Holders	Total Crew Positions
	Washington	Everson	0	1	1
	Unknown	Unknown	0	3	3
	King Cove Subtotal		*4*	*9*	*13*
Anchorage	Ohio	St. Louisville	1	0	1
	Unknown	Unknown	0	8	8
	Anchorage Subtotal		*1*	*8*	*9*
Petersburg	Alaska	Petersburg	2	1	3
	Washington	Castle Rock	0	1	1
	Washington	Rosburg	0	2	2
	Arizona	Lake Havasu City	0	1	1
	Ohio	Cincinnati	0	1	1
	Petersburg Subtotal		*2*	*6*	*8*
Alaska Subtotal			57	107	164
Washington					
Bellingham	Alaska	Anchorage	0	1	1
	Washington	Bellingham	2	6	8
	Washington	Edmonds*	0	1	1
	Washington	Friday Harbor	0	2	2
	Unknown	Unknown	0	1	1
	Bellingham Subtotal		*2*	*11*	*13*
Camas	Alaska	Kodiak	1	6	7
	Washington	Camas	1	0	1
	Washington	Sedro Woolley	0	1	1
	Oregon	Coos Bay	0	1	1
	Oregon	South Beach	0	1	1
	Unknown	Unknown	0	3	3
	Camas Subtotal		*2*	*12*	*14*
East Wenatchee	Alaska	Kodiak	1	2	3
	Unknown	Unknown	0	2	2
	East Wenatchee Subtotal		*1*	*4*	*5*
*Gig Harbor**	Washington	Gig Harbor*	2	0	2
	Unknown	Unknown	0	2	2
	Gig Harbor Subtotal		*2*	*2*	*4*
*Issaquah**	Alaska	Anchorage	1	0	1
	Alaska	Sand Point	0	3	3
	Alaska	Unalakleet	0	1	1
	Issaquah Subtotal		*1*	*4*	*5*

Community of Catcher Vessel Owner Residence	State of Crew Member Residence	Community of Crew Member Residence	Number of CFEC Gear Operator Permit Holders	Number of ADFG Crew License Holders	Total Crew Positions
*Mercer Island**	Alaska	Petersburg	0	1	1
	Washington	Bellingham	0	1	1
	Unknown	Unknown	0	2	2
	Mercer Island Subtotal		*0*	*4*	*4*
*Renton**	Alaska	Cantwell	0	1	1
	Alaska	Salcha	0	1	1
	Alaska	Sand Point	1	0	1
	Washington	Bothell*	1	0	1
	Renton Subtotal		*2*	*2*	*4*
*Seattle**	Alaska	Kodiak	5	8	13
	Alaska	Palmer	0	1	1
	Alaska	Sand Point	1	2	3
	Alaska	Soldotna	0	1	1
	Washington	Adna	1	0	1
	Washington	Anacortes	0	1	1
	Washington	Arlington*	0	1	1
	Washington	Belfair	0	1	1
	Washington	Bellingham	0	2	2
	Washington	Bothell*	1	0	1
	Washington	Chehalis	0	1	1
	Washington	Chelan	0	1	1
	Washington	Everett*	0	1	1
	Washington	Kennewick	0	1	1
	Washington	Lake Forest Park*	0	1	1
	Washington	Long Beach	1	0	1
	Washington	Lynnwood*	1	0	1
	Washington	Maple Valley*	0	1	1
	Washington	Mount Vernon	0	1	1
	Washington	Oak Harbor	0	1	1
	Washington	Olympia	0	2	2
	Washington	Oroville	1	0	1
	Washington	Puyallup*	1	0	1
	Washington	Seattle*	2	8	10
	Washington	Sedro Woolley	0	1	1
	Washington	Wenatchee	0	1	1
	Washington	Westport	0	1	1
	Oregon	Bend	0	2	2

Community of Catcher Vessel Owner Residence	State of Crew Member Residence	Community of Crew Member Residence	Number of CFEC Gear Operator Permit Holders	Number of ADFG Crew License Holders	Total Crew Positions
	Oregon	Grant's Pass	1	0	1
	Oregon	Newport	2	2	4
	Oregon	North Bend	0	1	1
	Oregon	Oregon City	0	2	2
	Oregon	Portland	0	2	2
	Oregon	Redmond	1	0	1
	Oregon	Salem	0	1	1
	Oregon	Siletz	1	1	2
	Oregon	Toledo	3	6	9
	Oregon	Warrenton	0	1	1
	Oregon	West Linn	0	2	2
	California	Bishop	0	1	1
	California	Clovis	0	1	1
	California	National City	0	1	1
	California	San Diego	0	1	1
	California	Simi Valley	0	1	1
	California	Temecula	0	1	1
	Florida	Palatka	0	1	1
	Montana	Bigfork	1	0	1
	Montana	Corvallis	0	1	1
	Nevada	Las Vegas	0	1	1
	Utah	Murray	0	1	1
	Wisconsin	Downing	0	1	1
	Unknown	Unknown	1	6	7
	Seattle Subtotal		*24*	*75*	*99*
South Bend	Washington	South Bend	2	0	2
	South Bend Subtotal		*2*	*0*	*2*
Vashon	Alaska	Sand Point	0	1	1
	Alaska	Wasilla	0	1	1
	California	Calexico	0	1	1
	Unknown	Unknown	0	1	1
	Vashon Subtotal		*0*	*4*	*4*
Washington Subtotal			36	118	154
Oregon					
Brookings	Oregon	Brookings	1	1	2
	Oregon	Coos Bay	0	1	1
	Oregon	North Bend	0	1	1
	Brookings Subtotal		*1*	*3*	*4*

Community of Catcher Vessel Owner Residence	State of Crew Member Residence	Community of Crew Member Residence	Number of CFEC Gear Operator Permit Holders	Number of ADFG Crew License Holders	Total Crew Positions
Independence	Alaska	Anchorage	0	1	1
	Alaska	Kodiak	2	0	2
	Alaska	Palmer	0	1	1
	Oregon	Newport	1	3	4
	Michigan	Lake Odessa	0	1	1
	Independence Subtotal		*3*	*6*	*9*
Newport	Alaska	Kodiak	4	7	11
	Alaska	Palmer	0	1	1
	Oregon	Dallas	0	1	1
	Oregon	Eugene	0	1	1
	Oregon	Newport	1	4	5
	Oregon	Siletz	1	1	2
	Oregon	South Beach	1	0	1
	Oregon	Toledo	0	2	2
	Unknown	Unknown	0	5	5
	Newport Subtotal		*7*	*22*	*29*
Siletz	Alaska	Kodiak	0	1	1
	Oregon	Coos Bay	0	1	1
	Oregon	Eddyville	0	2	2
	Oregon	Newport	2	7	9
	Oregon	Portland	1	0	1
	Oregon	Siletz	4	2	6
	Oregon	South Beach	0	2	2
	Oregon	Toledo	1	2	3
	Unknown	Unknown	0	1	1
	Siletz Subtotal		*8*	*18*	*26*
Oregon Subtotal			19	49	68
Other States					
Kailua Kona, HI	Unknown	Unknown	0	1	1
	Kailua Kona, HI Subtotal		*0*	*1*	*1*
Other States Subtotal			0	1	1
GRAND TOTAL			112	275	387

* Denotes communities within the Seattle MSA

Source: National Marine Fisheries Service 2016b

Table 105. GOA Trawl Catcher Vessels, Annual Payments to Captains and Crew, by Community of Catcher Vessel Ownership, 2015

Community	Number of Catcher Vessels	Combined Number of Captains and Crew	Total Captain Labor Payments	Total Crew Labor Payments	Total Captain and Crew Labor Payments	Percent of Grand Total
Kodiak	14	85	$2,442,728	$3,654,293	$6,097,021	26.7%
Sand Point	8	45	$807,459	$1,457,183	$2,264,642	9.9%
Other Alaska*	7	27	$450,900	$514,735	$965,635	4.2%
Alaska Subtotal	29	157	$3,701,087	$5,626,211	$9,327,298	40.9%
Newport	4	31	$929,965	$1,431,822	$2,361,787	10.4%
Other Oregon	5	33	1123595	1642214	$2,765,809	12.1%
Oregon Subtotal	9	64	$2,053,560	$3,074,036	$5,127,596	22.5%
Seattle MSA	23	118	$2,155,512	$3,494,024	$5,649,536	24.8%
Other WA and Other States	7	47	$1,016,096	$1,683,921	$2,700,017	11.8%
Grand Total	68	386	$8,926,255	$13,878,192	$22,804,447	100.0%

* Other Alaska included: King Cove (3 CVs/12 crew); Anchorage (2 CVs/9 crew); Petersburg (2 CVs/6 crew)

Source: National Marine Fisheries Service 2016b

Table 106. Catcher Processor Crew Community of Residence from EDR Data for Catcher Processors that Participated in the GOA Trawl Fishery, 2015

Number of States and Territories	Number of Unique Communities	Number of Communities by State	Name of State or Territory and Community
1			Washington
	1	1	ANACORTES
	2	2	AUBURN
	3	3	BELLEVUE
	4	4	BELLINGHAM
	5	5	BLAINE
	6	6	BOTHELL
	7	7	BREMERTON
	8	8	BRUSH PRAIRIE
	9	9	BUCKLEY
	10	10	BURIEN
	11	11	CASHMERE
	12	12	CENTRALIA
	13	13	CHELAN
	14	14	CLINTON
	15	15	COLVILLE
	16	16	COUPEVILLE
	17	17	DES MOINES
	18	18	EAST WENATCHEE
	19	19	EDMONDS
	20	20	ELLENSBURG
	21	21	EVERETT
	22	22	FEDERAL WAY
	23	23	FIRCREST
	24	24	FREELAND
	25	25	GIG HARBOR
	26	26	KENT
	27	27	KIRKLAND
	28	28	LACEY
	29	29	LAKE STEVENS
	30	30	LAKEWOOD
	31	31	LEAVENWORTH
	32	32	LONGVIEW
	33	33	LYNDEN
	34	34	LYNNWOOD
	35	35	MALAGA
	36	36	MARYSVILLE

Number of States and Territories	Number of Unique Communities	Number of Communities by State	Name of State or Territory and Community
	37	37	MONROE
	38	38	MOUNT VERNON
	39	39	MUKILTEO
	40	40	OAK HARBOR
	41	41	OLYMPIA
	42	42	PACIFIC
	43	43	PASCO
	44	44	PORT ORCHARD
	45	45	PUYALLUP
	46	46	RICHLAND
	47	47	SEATAC
	48	48	SEATTLE
	49	49	SHELTON
	50	50	SILVERDALE
	51	51	SNOHOMISH
	52	52	SOUTH BEND
	53	53	SPANAWAY
	54	54	SPOKANE
	55	55	SPOKANE VALLEY
	56	56	TACOMA
	57	57	TOPPENISH
	58	58	TUKWILA
	59	59	UNIVERSITY PLACE
	60	60	VANCOUVER
	61	61	WOODLAND
	62	62	YAKIMA
2			California
	63	1	ANTIOCH
	64	2	ARCATA
	65	3	AUBURN
	66	4	EUREKA
	67	5	FONTANA
	68	6	GARDENA
	69	7	GLENDALE
	70	8	IMPERIAL BEACH
	71	9	LONG BEACH
	72	10	LYNWOOD
	73	11	MIALTO
	74	12	MODESTO

Number of States and Territories	Number of Unique Communities	Number of Communities by State	Name of State or Territory and Community
	75	13	REDDING
	76	14	SACRAMENTO
	77	15	SAN BERNARDINO
	78	16	SAN DIEGO
	79	17	SANTA ANA
	80	18	STANTON
	81	19	STOCKTON
	82	20	SYLMAR
	83	21	TABA CITY
	84	22	UKIAH
	85	23	WILMINGTON
3			Oregon
	86	1	BEAVERTON
	87	2	BEND
	88	3	COOS BAY
	89	4	CRAWFORDSVILLE
	90	5	GRANTS PASS
	91	6	MCMINNVILLE
	92	7	MEDFORD
	93	8	NORTH PLAINS
	94	9	PORTLAND
	95	10	REDMOND
	96	11	SALEM
	97	12	TIGARD
	98	13	TUALATIN
	99	14	TURNER
	100	15	WOODBURN
4			Maine
	101	1	BIDDEFORD
	102	2	BOOTHBAY
	103	3	CAMDEN
	104	4	FALMOUTH
	105	5	GREENVILLE
	106	6	HOPE
	107	7	NORWAY
	108	8	ROCKLAND
	109	9	SOUTH BRISTOL
	110	10	SOUTH PORTLAND
	111	11	STARKS

Number of States and Territories	Number of Unique Communities	Number of Communities by State	Name of State or Territory and Community
	112	12	TENANTS HARBOR
5			Alaska
	113	1	ANCHORAGE
	114	2	DILLINGHAM
	115	3	KENAI
	116	4	KETCHIKAN
	117	5	KODIAK
	118	6	SELDOVIA
	119	7	UNALASKA/DUTCH HARBOR
	120	8	WASILLA
6			North Carolina
	121	1	ASHEVILLE
	122	2	GARNER
	123	3	HOPE MILLS
	124	4	LELAND
	125	5	RALEIGH
7			Arizona
	126	1	GOODYEAR
	127	2	LAKE HAVASU CITY
	128	3	PHOENIX
	129	4	VAIL
8			Idaho
	130	1	BOISE
	131	2	EMMETT
	132	3	HAYDEN
	133	4	MOYIE SPRINGS
9			Illinois
	134	1	CHICAGO
	135	2	CICERO
	136	3	FRANKLIN PARK
	137	4	LOVINGTON
10			Hawaii
	138	1	EWA BEACH
	139	2	HONOLULU
	140	3	KAPOLEI
11			Nevada
	141	1	LAS VEGAS
	142	2	NORTH LAS VEGAS
	143	3	RENO

Number of States and Territories	Number of Unique Communities	Number of Communities by State	Name of State or Territory and Community
12			American Samoa
	144	1	MALAELAO
	145	2	PAGO PAGO
13			Massachusetts
	146	1	GARDNER
	147	2	HARVARD
14			Missouri
	148	1	SAINT LOUIS
	149	2	VAN BUREN
15			Montana
	150	1	DRUMMOND
	151	2	MISSOULA
16			Alabama
	152	1	CHUNCHULA
17			Florida
	153	1	MIAMI
18			Iowa
	154	1	WEST DES MOINES
19			Michigan
	155	1	MUSKEGON
20			Mississippi
	156	1	CLINTON
21			Nebraska
	157	1	GRAND ISLAND
22			New York
	158	1	BRONX
23			Ohio
	159	1	CHARDON

Source: National Marine Fisheries Service 2016b

Table 107. Summary Number of Positions and Employees Onboard GOA Trawl Catcher Processors, 2015

Geography	Community	No. of CPs*	Average Number of Positions Onboard				Number of Employees Onboard			
			Fishing (Deck Crew)	Processing	All Other **	Total	Fishing (Deck Crew)	Processing	All Other **	Total
Seattle MSA	Kirkland	2	***	***	***	***	***	***	***	***
Seattle MSA	Renton	1	***	***	***	***	***	***	***	***
Seattle MSA	Seattle	4	***	***	***	***	***	***	***	***
Other WA	South Bend	1	***	***	***	***	***	***	***	***
Grand Total		8	43	167	50	260	122	441	126	689

*Includes only those catcher processors with greater than zero days fishing in the GOA trawl fisheries (i.e., it excludes vessels flagged as actively participating in the GOA trawl fisheries but that reported zero fishing days for the GOA).

**Includes officers, engineers, cooks, etc.

*** Value suppressed due to data confidentiality considerations.

Source: National Marine Fisheries Service 2016b

Table 108. Summary Number of Fishing Days and Labor Expenses for GOA Trawl Catcher Processors, 2015

Geography	Community	No. of CPs*	Number of Days Fishing by Fishery				Labor Expenses****			
			A80 (BSAI)	GOA	Other	Total	Fishing (Deck Crew)	Processing	All Other **	Total
Seattle MSA	Kirkland	2	***	***	***	***	***	***	***	***
Seattle MSA	Renton	1	***	***	***	***	***	***	***	***
Seattle MSA	Seattle	4	***	***	***	***	***	***	***	***
Other WA	South Bend	1	***	***	***	***	***	***	***	***
Grand Total		8	1,262	568	0	1,830	$5,337,441	$14,920,233	$21,499,315	$41,756,989

*Includes only those catcher processors with greater than zero days fishing in the GOA trawl fisheries (i.e., it excludes vessels flagged as actively participating in the GOA trawl fisheries but that reported zero fishing days for the GOA).

**Includes officers, engineers, cooks, etc.

*** Value suppressed due to data confidentiality considerations.

****Includes bonuses and payroll taxes, but excludes benefits and insurance.

Source: National Marine Fisheries Service 2016b

Attachment 4: Responses to Selected Questions, AFSC GOA Trawl Social Survey, 2014

Kodiak, Sand Point, and King Cove GOA Trawl Catcher Vessel Owner and Crew Responses

Table 109. Kodiak Catcher Vessel Owner and Crew Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014

Question	Responses	Number of Responses	Percent of Surveys Taken (n=93)	Percent of Those Who Answered the Question
What is your gender?	Male	91	97.8%	98.9%
	Female	1	1.1%	1.1%
	No Answer	1	1.1%	--
What is your race?	White/Caucasian	79	84.9%	89.8%
	Black/African American	0	0.0%	0.0%
	Asian	0	0.0%	0.0%
	American Indian or Alaska Native	1	1.1%	1.1%
	Native Hawaiian or Other Pacific Islander	3	3.2%	3.4%
	Some Other Race or Two or More Races	5	5.4%	5.7%
	No Answer	5	5.4%	--
Are you Hispanic or Latino	Yes	3	3.2%	3.7%
	No	78	83.9%	96.3%
	No Answer	12	12.9%	--
What percentage of your combined family income comes from your participation in fishing activities?	0-9%	0	0.0%	0.0%
	10-25%	0	0.0%	0.0%
	26-50%	0	0.0%	0.0%
	51-75%	3	3.2%	3.4%
	76-100%	84	90.3%	96.6%
	No Answer	6	6.5%	--

Question	Responses	Number of Responses	Average	Standard Deviation
How old are you?	Age	91	45.3	13.2
	No Answer	2	--	--

Source: National Oceanic and Atmospheric Administration 2015

Table 109. Kodiak Catcher Vessel Owner and Crew Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014 (continued)

Question	Responses	Number of Responses	Percent of Surveys Taken (n=93)	Percent of Those Who Answered the Question
Has your family historically participated in any commercial fishing or processing activities?	Yes	54	58.1%	58.7%
	No	38	40.9%	41.3%
	No Answer	1	1.1%	--
Do you maintain a job outside the commercial fishing or processing industry?	Yes	10	10.8%	11.1%
	No	80	86.0%	88.9%
	No Answer	3	3.2%	--
Rate: Job Satisfaction	Poor	0	0.0%	0.0%
	Fair	6	6.5%	6.7%
	Good	46	49.5%	51.1%
	Excellent	38	40.9%	42.2%
	No Answer	3	3.2%	--
Rate: Amount of Compensation/Pay	Poor	1	1.1%	1.1%
	Fair	14	15.1%	15.6%
	Good	45	48.4%	50.0%
	Excellent	30	32.3%	33.3%
	No Answer	3	3.2%	--
Rate: Method of Compensation/Pay	Poor	3	3.2%	3.3%
	Fair	7	7.5%	7.8%
	Good	40	43.0%	44.4%
	Excellent	40	43.0%	44.4%
	No Answer	3	3.2%	--
Rate: Job Stability	Poor	6	6.5%	6.7%
	Fair	16	17.2%	17.8%
	Good	40	43.0%	44.4%
	Excellent	28	30.1%	31.1%
	No Answer	3	3.2%	--
Rate: Standard of Living	Poor	3	3.2%	3.3%
	Fair	8	8.6%	8.9%
	Good	54	58.1%	60.0%
	Excellent	25	26.9%	27.8%
	No Answer	3	3.2%	--
Rate: Relationship with Co-workers	Poor	0	0.0%	0.0%
	Fair	3	3.2%	3.3%
	Good	50	53.8%	55.6%
	Excellent	37	39.8%	41.1%
	No Answer	3	3.2%	--

Question	Responses	Number of Responses	Average	Standard Deviation
For how many generations has your family participated in any commercial fishing or processing activities?	Number	57	3.5	5.6
	No Answer	36	--	--
How old were you when you started to work in any commercial fishing or processing activities?	Number	88	18.5	7.6
	No Answer	5	--	--
How many total years have you worked in the Gulf of Alaska groundfish trawl fishery?	Number	87	16.5	11.5
	No Answer	6	--	--

Source: National Oceanic and Atmospheric Administration 2015

Table 109. Kodiak Catcher Vessel Owner and Crew Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014 (continued)

Question	Responses	Number of Responses	Percent of Surveys Taken (n=93)	Percent of Those Who Answered the Question
Which fisheries do you participate in on a regular basis?	North Pacific Fisheries - GOA groundfish - trawl	83	89.2%	96.5%
	North Pacific Fisheries - GOA groundfish - fixed gear	8	8.6%	9.3%
	North Pacific Fisheries - CGOA rockfish program	44	47.3%	51.2%
	North Pacific Fisheries - Other GOA rockfish	10	10.8%	11.6%
	North Pacific Fisheries - Sablefish/halibut IFQ	17	18.3%	19.8%
	North Pacific Fisheries - Salmon	13	14.0%	15.1%
	North Pacific Fisheries - GOA Tanner crab	10	10.8%	11.6%
	North Pacific Fisheries - Dungeness crab	6	6.5%	7.0%
	North Pacific Fisheries - BSAI King and Tanner crab	4	4.3%	4.7%
	North Pacific Fisheries - BSAI pollock	35	37.6%	40.7%
	North Pacific Fisheries - BSAI non-pollock Groundfish	21	22.6%	24.4%
	North Pacific Fisheries - Scallop	4	4.3%	4.7%
	North Pacific Fisheries - Other	6	6.5%	7.0%
	Pacific Coast Fisheries - Pacific whiting	25	26.9%	29.1%
	Pacific Coast Fisheries - Non-whiting groundfish - trawl	12	12.9%	14.0%
	Pacific Coast Fisheries - Non-sablefish groundfish - fixed gear	4	4.3%	4.7%
	Pacific Coast Fisheries - Sablefish	7	7.5%	8.1%
	Pacific Coast Fisheries - Salmon	5	5.4%	5.8%
	Pacific Coast Fisheries - Pacific halibut	4	4.3%	4.7%
	Pacific Coast Fisheries - Dungeness crab	7	7.5%	8.1%
	Pacific Coast Fisheries - Shrimp	6	6.5%	7.0%
	Pacific Coast Fisheries - Highly Migratory Species	4	4.3%	4.7%
	Pacific Coast Fisheries - Coastal Pelagic Species	3	3.2%	3.5%
	Pacific Coast Fisheries - Other	0	0.0%	0.0%
	No Answer	7	7.5%	--

Question	Responses	Number of Responses	Percent of Surveys Taken (n=93)	Percent of Those Who Answered the Question
What are the most common species you have commercially fished in the last 5 years?*	Shallow flatfish/Rock sole	75	80.6%	82.4%
	Yellowfin sole	15	16.1%	16.5%
	Arrowtooth flounder	67	72.0%	73.6%
	Kamchatka flounder	1	1.1%	1.1%
	Rex sole	74	79.6%	81.3%
	Flathead sole	71	76.3%	78.0%
	Alaska plaice	9	9.7%	9.9%
	Greenland turbot	3	3.2%	3.3%
	Deep flatfish	51	54.8%	56.0%
	Halibut	15	16.1%	16.5%
	Other flatfish	21	22.6%	23.1%
	Big skates	69	74.2%	75.8%
	Longnose skates	66	71.0%	72.5%
	Other skates	11	11.8%	12.1%
	Spiny dogfish	1	1.1%	1.1%
	Pacific ocean perch	73	78.5%	80.2%
	Dusky rockfish	64	68.8%	70.3%
	Northern rockfish	60	64.5%	65.9%
	Shortraker/rougheye rockfish	35	37.6%	38.5%
	Thornyhead rockfish	45	48.4%	49.5%
	Other rockfish	15	16.1%	16.5%
	King crab	2	2.2%	2.2%
	Snow (opilio) crab	1	1.1%	1.1%
	Tanner (bairdi) crab	13	14.0%	14.3%
	Dungeness crab	9	9.7%	9.9%
	Scallops	1	1.1%	1.1%
	Shrimp	3	3.2%	3.3%
	Squid	5	5.4%	5.5%
	Octopus	5	5.4%	5.5%
	Pollock	91	97.8%	100.0%
	Pacific cod	85	91.4%	93.4%
	Sablefish	61	65.6%	67.0%
	Atka mackerel	5	5.4%	5.5%
	Pacific whiting	21	22.6%	23.1%
	Lingcod	19	20.4%	20.9%
	Tuna	3	3.2%	3.3%
	Pacific coast trawl non-whiting groundfish	5	5.4%	5.5%
	Salmon	15	16.1%	16.5%
	Herring	2	2.2%	2.2%

Question	Responses	Number of Responses	Percent of Surveys Taken (n=93)	Percent of Those Who Answered the Question
	Other	2	2.2%	2.2%
	No Answer	2	2.2%	--
What gear have you fished with in the last 5 years?*	Pelagic trawl	88	94.6%	97.8%
	Non-pelagic trawl	75	80.6%	83.3%
	Longline	23	24.7%	25.6%
	Pot gear	23	24.7%	25.6%
	Diving gear	2	2.2%	2.2%
	Dredge	1	1.1%	1.1%
	Mechanical jig	9	9.7%	10.0%
	Drift gillnet	3	3.2%	3.3%
	Set gillnet	3	3.2%	3.3%
	Hand line/jig/troll	3	3.2%	3.3%
	Beach seine	0	0.0%	0.0%
	Purse seine	9	9.7%	10.0%
	Herring gillnet	1	1.1%	1.1%
	Other	1	1.1%	1.1%
	No Answer	3	3.2%	--

*multiple responses allowed

Source: National Oceanic and Atmospheric Administration 2015

Table 110. Sand Point Catcher Vessel Owner and Crew Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014

Question	Responses	Number of Responses	Percent of Surveys Taken (n=27)	Percent of Those Who Answered the Question
What is your gender?	Male	27	100.0%	100.0%
	Female	0	0.0%	0.0%
	No Answer	0	0.0%	--
What is your race?	White/Caucasian	14	51.9%	51.9%
	Black/African American	0	0.0%	0.0%
	Asian	0	0.0%	0.0%
	American Indian or Alaska Native	12	44.4%	44.4%
	Native Hawaiian or Other Pacific Islander	0	0.0%	0.0%
	Some Other Race or Two or More Races	1	3.7%	3.7%
	No Answer	0	0.0%	--
Are you Hispanic or Latino	Yes	0	0.0%	0.0%
	No	26	96.3%	100.0%
	No Answer	1	3.7%	--
What percentage of your combined family income comes from your participation in fishing activities?	0-9%	0	0.0%	0.0%
	10-25%	1	3.7%	3.8%
	26-50%	1	3.7%	3.8%
	51-75%	3	11.1%	11.5%
	76-100%	21	77.8%	80.8%
	No Answer	1	3.7%	--

Question	Responses	Number of Responses	Average	Standard Deviation
How old are you?	Age	27	47.6	14.9
	No Answer	0	--	--

Source: National Oceanic and Atmospheric Administration 2015

Table 110. Sand Point Catcher Vessel Owner and Crew Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014 (continued)

Question	Responses	Number of Responses	Percent of Surveys Taken (n=27)	Percent of Those Who Answered the Question
Has your family historically participated in any commercial fishing or processing activities?	Yes	17	63.0%	63.0%
	No	10	37.0%	37.0%
	No Answer	0	0.0%	--
Do you maintain a job outside the commercial fishing or processing industry?	Yes	4	14.8%	14.8%
	No	23	85.2%	85.2%
	No Answer	0	0.0%	--
Rate: Job Satisfaction	Poor	0	0.0%	0.0%
	Fair	2	7.4%	7.4%
	Good	14	51.9%	51.9%
	Excellent	11	40.7%	40.7%
	No Answer	0	0.0%	--
Rate: Amount of Compensation/Pay	Poor	2	7.4%	7.7%
	Fair	2	7.4%	7.7%
	Good	9	33.3%	34.6%
	Excellent	13	48.1%	50.0%
	No Answer	1	3.7%	--
Rate: Method of Compensation/Pay	Poor	0	0.0%	0.0%
	Fair	2	7.4%	7.7%
	Good	13	48.1%	50.0%
	Excellent	11	40.7%	42.3%
	No Answer	1	3.7%	--
Rate: Job Stability	Poor	1	3.7%	3.7%
	Fair	8	29.6%	29.6%
	Good	10	37.0%	37.0%
	Excellent	8	29.6%	29.6%
	No Answer	0	0.0%	--
Rate: Standard of Living	Poor	0	0.0%	0.0%
	Fair	1	3.7%	3.7%
	Good	15	55.6%	55.6%
	Excellent	11	40.7%	40.7%
	No Answer	0	0.0%	--
Rate: Relationship with Co-workers	Poor	0	0.0%	0.0%
	Fair	2	7.4%	7.4%
	Good	11	40.7%	40.7%
	Excellent	14	51.9%	51.9%
	No Answer	0	0.0%	--

Question	Responses	Number of Responses	Average	Standard Deviation
For how many generations has your family participated in any commercial fishing or processing activities?	Number	17	3.4	1.1
	No Answer	10	--	--
How old were you when you started to work in any commercial fishing or processing activities?	Number	26	14.2	4.2
	No Answer	1	--	--
How many total years have you worked in the Gulf of Alaska groundfish trawl fishery?	Number	27	16.8	9.1
	No Answer	0	--	--

Source: National Oceanic and Atmospheric Administration 2015

Table 110. Sand Point Catcher Vessel Owner and Crew Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014 (continued)

Question	Responses	Number of Responses	Percent of Surveys Taken (n=27)	Percent of Those Who Answered the Question
Which fisheries do you participate in on a regular basis?	North Pacific Fisheries - GOA groundfish - trawl	25	92.6%	96.2%
	North Pacific Fisheries - GOA groundfish - fixed gear	13	48.1%	50.0%
	North Pacific Fisheries - CGOA rockfish program	1	3.7%	3.8%
	North Pacific Fisheries - Other GOA rockfish	4	14.8%	15.4%
	North Pacific Fisheries - Sablefish/halibut IFQ	10	37.0%	38.5%
	North Pacific Fisheries - Salmon	23	85.2%	88.5%
	North Pacific Fisheries - GOA Tanner crab	13	48.1%	50.0%
	North Pacific Fisheries - Dungeness crab	1	3.7%	3.8%
	North Pacific Fisheries - BSAI King and Tanner crab	0	0.0%	0.0%
	North Pacific Fisheries - BSAI pollock	4	14.8%	15.4%
	North Pacific Fisheries - BSAI non-pollock Groundfish	2	7.4%	7.7%
	North Pacific Fisheries - Scallop	0	0.0%	0.0%
	North Pacific Fisheries - Other	4	14.8%	15.4%
	Pacific Coast Fisheries - Pacific whiting	0	0.0%	0.0%
	Pacific Coast Fisheries - Non-whiting groundfish - trawl	0	0.0%	0.0%
	Pacific Coast Fisheries - Non-sablefish groundfish - fixed gear	0	0.0%	0.0%
	Pacific Coast Fisheries - Sablefish	0	0.0%	0.0%
	Pacific Coast Fisheries - Salmon	3	11.1%	11.5%
	Pacific Coast Fisheries - Pacific halibut	0	0.0%	0.0%
	Pacific Coast Fisheries - Dungeness crab	0	0.0%	0.0%
	Pacific Coast Fisheries - Shrimp	0	0.0%	0.0%
	Pacific Coast Fisheries - Highly Migratory Species	0	0.0%	0.0%
	Pacific Coast Fisheries - Coastal Pelagic Species	4	14.8%	15.4%
	Pacific Coast Fisheries - Other	0	0.0%	0.0%
	No Answer	1	3.7%	--

Question	Responses	Number of Responses	Percent of Surveys Taken (n=27)	Percent of Those Who Answered the Question
What are the most common species you have commercially fished in the last 5 years?*	Shallow flatfish/Rock sole	1	3.7%	3.8%
	Yellowfin sole	0	0.0%	0.0%
	Arrowtooth flounder	0	0.0%	0.0%
	Kamchatka flounder	0	0.0%	0.0%
	Rex sole	0	0.0%	0.0%
	Flathead sole	0	0.0%	0.0%
	Alaska plaice	0	0.0%	0.0%
	Greenland turbot	0	0.0%	0.0%
	Deep flatfish	0	0.0%	0.0%
	Halibut	11	40.7%	42.3%
	Other flatfish	1	3.7%	3.8%
	Big skates	0	0.0%	0.0%
	Longnose skates	0	0.0%	0.0%
	Other skates	0	0.0%	0.0%
	Spiny dogfish	0	0.0%	0.0%
	Pacific ocean perch	1	3.7%	3.8%
	Dusky rockfish	0	0.0%	0.0%
	Northern rockfish	0	0.0%	0.0%
	Shortraker/rougheye rockfish	0	0.0%	0.0%
	Thornyhead rockfish	1	3.7%	3.8%
	Other rockfish	0	0.0%	0.0%
	King crab	3	11.1%	11.5%
	Snow (opilio) crab	1	3.7%	3.8%
	Tanner (bairdi) crab	20	74.1%	76.9%
	Dungeness crab	3	11.1%	11.5%
	Scallops	0	0.0%	0.0%
	Shrimp	0	0.0%	0.0%
	Squid	1	3.7%	3.8%
	Octopus	2	7.4%	7.7%
	Pollock	22	81.5%	84.6%
	Pacific cod	23	85.2%	88.5%
	Sablefish	1	3.7%	3.8%
	Atka mackerel	0	0.0%	0.0%
	Pacific whiting	0	0.0%	0.0%
	Lingcod	0	0.0%	0.0%
	Tuna	0	0.0%	0.0%
	Pacific coast trawl non-whiting groundfish	0	0.0%	0.0%
	Salmon	23	85.2%	88.5%
	Herring	10	37.0%	38.5%

Question	Responses	Number of Responses	Percent of Surveys Taken (n=27)	Percent of Those Who Answered the Question
	Other	6	22.2%	23.1%
	No Answer	1	3.7%	--
What gear have you fished with in the last 5 years?*	Pelagic trawl	24	88.9%	100.0%
	Non-pelagic trawl	22	81.5%	91.7%
	Longline	14	51.9%	58.3%
	Pot gear	20	74.1%	83.3%
	Diving gear	0	0.0%	0.0%
	Dredge	0	0.0%	0.0%
	Mechanical jig	5	18.5%	20.8%
	Drift gillnet	0	0.0%	0.0%
	Set gillnet	11	40.7%	45.8%
	Hand line/jig/troll	2	7.4%	8.3%
	Beach seine	5	18.5%	20.8%
	Purse seine	18	66.7%	75.0%
	Herring gillnet	0	0.0%	0.0%
	Other	1	3.7%	4.2%
	No Answer	3	11.1%	--

*multiple responses allowed

Source: National Oceanic and Atmospheric Administration 2015

Table 111. King Cove Catcher Vessel Owner and Crew Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014

Question	Responses	Number of Responses	Percent of Surveys Taken (n=11)	Percent of Those Who Answered the Question
What is your gender?	Male	11	100.0%	100.0%
	Female	0	0.0%	0.0%
	No Answer	0	0.0%	--
What is your race?	White/Caucasian	5	45.5%	45.5%
	Black/African American	0	0.0%	0.0%
	Asian	0	0.0%	0.0%
	American Indian or Alaska Native	5	45.5%	45.5%
	Native Hawaiian or Other Pacific Islander	0	0.0%	0.0%
	Some Other Race or Two or More Races	1	9.1%	9.1%
	No Answer	0	0.0%	--
Are you Hispanic or Latino	Yes	0	0.0%	0.0%
	No	10	90.9%	100.0%
	No Answer	1	9.1%	--
What percentage of your combined family income comes from your participation in fishing activities?	0-9%	1	9.1%	9.1%
	10-25%	1	9.1%	9.1%
	26-50%	0	0.0%	0.0%
	51-75%	1	9.1%	9.1%
	76-100%	8	72.7%	72.7%
	No Answer	0	0.0%	--

Question	Responses	Number of Responses	Average	Standard Deviation
How old are you?	Age	10	41.2	14.6
	No Answer	1	--	--

Source: National Oceanic and Atmospheric Administration 2015

Table 111. King Cove Catcher Vessel Owner and Crew Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014 (continued)

Question	Responses	Number of Responses	Percent of Surveys Taken (n=11)	Percent of Those Who Answered the Question
Has your family historically participated in any commercial fishing or processing activities?	Yes	8	72.7%	72.7%
	No	3	27.3%	27.3%
	No Answer	0	0.0%	--
Do you maintain a job outside the commercial fishing or processing industry?	Yes	3	27.3%	27.3%
	No	8	72.7%	72.7%
	No Answer	0	0.0%	--
Rate: Job Satisfaction	Poor	1	9.1%	9.1%
	Fair	1	9.1%	9.1%
	Good	6	54.5%	54.5%
	Excellent	6	54.5%	54.5%
	No Answer	0	0.0%	--
Rate: Amount of Compensation/Pay	Poor	2	18.2%	18.2%
	Fair	2	18.2%	18.2%
	Good	4	36.4%	36.4%
	Excellent	3	27.3%	27.3%
	No Answer	0	0.0%	--
Rate: Method of Compensation/Pay	Poor	1	9.1%	9.1%
	Fair	2	18.2%	18.2%
	Good	4	36.4%	36.4%
	Excellent	4	36.4%	36.4%
	No Answer	0	0.0%	--
Rate: Job Stability	Poor	2	18.2%	18.2%
	Fair	3	27.3%	27.3%
	Good	2	18.2%	18.2%
	Excellent	4	36.4%	36.4%
	No Answer	0	0.0%	--
Rate: Standard of Living	Poor	0	0.0%	0.0%
	Fair	2	18.2%	18.2%
	Good	6	54.5%	54.5%
	Excellent	3	27.3%	27.3%
	No Answer	0	0.0%	--
Rate: Relationship with Co-workers	Poor	0	0.0%	0.0%
	Fair	1	9.1%	9.1%
	Good	3	27.3%	27.3%
	Excellent	7	63.6%	63.6%
	No Answer	0	0.0%	--

Question	Responses	Number of Responses	Average	Standard Deviation
For how many generations has your family participated in any commercial fishing or processing activities?	Number	8	2.6	0.9
	No Answer	3	--	--
How old were you when you started to work in any commercial fishing or processing activities?	Number	11	16.2	6.5
	No Answer	0	--	--
How many total years have you worked in the Gulf of Alaska groundfish trawl fishery?	Number	11	13.8	8.3
	No Answer	0	--	--

Source: National Oceanic and Atmospheric Administration 2015

Table 111. King Cove Catcher Vessel Owner and Crew Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014 (continued)

Question	Responses	Number of Responses	Percent of Surveys Taken (n=11)	Percent of Those Who Answered the Question
Which fisheries do you participate in on a regular basis?	North Pacific Fisheries - GOA groundfish - trawl	11	100.0%	100.0%
	North Pacific Fisheries - GOA groundfish - fixed gear	9	81.8%	81.8%
	North Pacific Fisheries - CGOA rockfish program	1	9.1%	9.1%
	North Pacific Fisheries - Other GOA rockfish	0	0.0%	0.0%
	North Pacific Fisheries - Sablefish/halibut IFQ	5	45.5%	45.5%
	North Pacific Fisheries - Salmon	11	100.0%	100.0%
	North Pacific Fisheries - GOA Tanner crab	6	54.5%	54.5%
	North Pacific Fisheries - Dungeness crab	0	0.0%	0.0%
	North Pacific Fisheries - BSAI King and Tanner crab	0	0.0%	0.0%
	North Pacific Fisheries - BSAI pollock	0	0.0%	0.0%
	North Pacific Fisheries - BSAI non-pollock Groundfish	1	9.1%	9.1%
	North Pacific Fisheries - Scallop	0	0.0%	0.0%
	North Pacific Fisheries - Other	0	0.0%	0.0%
	Pacific Coast Fisheries - Pacific whiting	0	0.0%	0.0%
	Pacific Coast Fisheries - Non-whiting groundfish - trawl	0	0.0%	0.0%
	Pacific Coast Fisheries - Non-sablefish groundfish - fixed gear	0	0.0%	0.0%
	Pacific Coast Fisheries - Sablefish	0	0.0%	0.0%
	Pacific Coast Fisheries - Salmon	0	0.0%	0.0%
	Pacific Coast Fisheries - Pacific halibut	0	0.0%	0.0%
	Pacific Coast Fisheries - Dungeness crab	0	0.0%	0.0%
	Pacific Coast Fisheries - Shrimp	0	0.0%	0.0%
	Pacific Coast Fisheries - Highly Migratory Species	0	0.0%	0.0%
	Pacific Coast Fisheries - Coastal Pelagic Species	0	0.0%	0.0%
	Pacific Coast Fisheries - Other	0	0.0%	0.0%
	No Answer	0	0.0%	--
	Shallow flatfish/Rock sole	1	9.1%	9.1%

Question	Responses	Number of Responses	Percent of Surveys Taken (n=11)	Percent of Those Who Answered the Question
What are the most common species you have commercially fished in the last 5 years?*	Yellowfin sole	1	9.1%	9.1%
	Arrowtooth flounder	1	9.1%	9.1%
	Kamchatka flounder	0	0.0%	0.0%
	Rex sole	0	0.0%	0.0%
	Flathead sole	1	9.1%	9.1%
	Alaska plaice	0	0.0%	0.0%
	Greenland turbot	0	0.0%	0.0%
	Deep flatfish	0	0.0%	0.0%
	Halibut	5	45.5%	45.5%
	Other flatfish	1	9.1%	9.1%
	Big skates	0	0.0%	0.0%
	Longnose skates	0	0.0%	0.0%
	Other skates	0	0.0%	0.0%
	Spiny dogfish	0	0.0%	0.0%
	Pacific ocean perch	0	0.0%	0.0%
	Dusky rockfish	0	0.0%	0.0%
	Northern rockfish	0	0.0%	0.0%
	Shortraker/rougheye rockfish	1	9.1%	9.1%
	Thornyhead rockfish	0	0.0%	0.0%
	Other rockfish	0	0.0%	0.0%
	King crab	1	9.1%	9.1%
	Snow (opilio) crab	1	9.1%	9.1%
	Tanner (bairdi) crab	9	81.8%	81.8%
	Dungeness crab	0	0.0%	0.0%
	Scallops	0	0.0%	0.0%
	Shrimp	0	0.0%	0.0%
	Squid	1	9.1%	9.1%
	Octopus	2	18.2%	18.2%
	Pollock	9	81.8%	81.8%
	Pacific cod	11	100.0%	100.0%
	Sablefish	3	27.3%	27.3%
	Atka mackerel	0	0.0%	0.0%
	Pacific whiting	0	0.0%	0.0%
	Lingcod	0	0.0%	0.0%
	Tuna	0	0.0%	0.0%
	Pacific coast trawl non-whiting groundfish	0	0.0%	0.0%
	Salmon	11	100.0%	100.0%
	Herring	0	0.0%	0.0%
	Other	0	0.0%	0.0%

Question	Responses	Number of Responses	Percent of Surveys Taken (n=11)	Percent of Those Who Answered the Question
	No Answer	0	0.0%	--
What gear have you fished with in the last 5 years?*	Pelagic trawl	9	81.8%	81.8%
	Non-pelagic trawl	9	81.8%	81.8%
	Longline	5	45.5%	45.5%
	Pot gear	11	100.0%	100.0%
	Diving gear	0	0.0%	0.0%
	Dredge	0	0.0%	0.0%
	Mechanical jig	1	9.1%	9.1%
	Drift gillnet	3	27.3%	27.3%
	Set gillnet	3	27.3%	27.3%
	Hand line/jig/troll	2	18.2%	18.2%
	Beach seine	3	27.3%	27.3%
	Purse seine	10	90.9%	90.9%
	Herring gillnet	0	0.0%	0.0%
	Other	0	0.0%	0.0%
	No Answer	0	0.0%	--

*multiple responses allowed

Source: National Oceanic and Atmospheric Administration 2015

Kodiak Shore-Based Processor Employee Responses

Table 112. Kodiak Shore-Based Processor Employee Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014

Question	Responses	Number of Responses	Percent of Number of Surveys Taken (n=1169)	Percent of Those Who Answered the Question
What is your gender?	Male	731	62.5%	64.3%
	Female	405	34.6%	35.7%
	No Answer	33	2.8%	--
What is your race?	White/Caucasian	59	5.0%	6.0%
	Black/African American	61	5.2%	6.2%
	Asian	781	66.8%	79.0%
	American Indian or Alaska Native	9	0.8%	0.9%
	Native Hawaiian or Other Pacific Islander	9	0.8%	0.9%
	Some Other Race or Two or More Races	69	5.9%	7.0%
	No Answer	181	15.5%	--
Are you Hispanic or Latino	Yes	178	15.2%	19.1%
	No	754	64.5%	80.9%
	No Answer	237	20.3%	--
What percentage of your combined family income comes from your participation in processing activities?	0-9%	78	6.7%	16.2%
	10-25%	61	5.2%	12.7%
	26-50%	62	5.3%	12.9%
	51-75%	68	5.8%	14.1%
	76-100%	212	18.1%	44.1%
	No Answer	688	58.9%	--

Question	Responses	Number of Responses	Average	Standard Deviation
How old are you?	Age	1,060	46.8	14.0
	No Answer	109	--	--

Source: National Oceanic and Atmospheric Administration 2015

Table 112. Kodiak Shore-Based Processor Employee Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014 (continued)

Question	Responses	Number of Responses	Percent of Number of Surveys Taken (n=1158)	Percent of Those Who Answered the Question
Are you a U.S. citizen?	Yes	444	38.3%	51.6%
	No	382	33.0%	44.4%
	Currently undergoing the naturalization process	35	3.0%	4.1%
	No Answer	297	25.6%	--
Does your immediate family live in the U.S.?	Yes	599	51.7%	74.6%
	No	204	17.6%	25.4%
	No Answer	355	30.7%	--
How did you get your current job as a processing employee?	I saw the job advertised and applied for it.	210	18.1%	26.3%
	I was living in the United States and was recruited by a family member or friend that worked in the processing plant.	377	32.6%	47.3%
	I was recruited by the processing plant.	109	9.4%	13.7%
	I was living in another country and was recruited by my family member that worked in the processing plant.	30	2.6%	3.8%
	Other	71	6.1%	8.9%
	No Answer	361	31.2%	--
How many months a year do you work as a processing employee?	0-3 months	77	6.6%	9.0%
	4-6 months	89	7.7%	10.5%
	7-9 months	254	21.9%	29.8%
	10-12 months	431	37.2%	50.6%
	No Answer	307	26.5%	--
If your processing plant was no longer able to employ you for all of the months you currently work, which of the following options would you consider?*	Seek employment in another processing plant for the months your current job is not available.	275	23.7%	35.9%
	Seek employment at another processing plant permanently.	157	13.6%	20.5%
	Seek employment in another role in the fishing industry.	38	3.3%	5.0%
	Seek employment outside of the fishing industry	82	7.1%	10.7%
	Leave Alaska and return to your home state.	63	5.4%	8.2%
	Leave Alaska and return to your home country.	22	1.9%	2.9%
	Leave Alaska and move to another state in the U.S. where you did not live before.	30	2.6%	3.9%

Question	Responses	Number of Responses	Percent of Number of Surveys Taken (n=1158)	Percent of Those Who Answered the Question
	Move to another city or town in Alaska.	44	3.8%	5.8%
	Retire.	46	4.0%	6.0%
	I would not be affected.	33	2.8%	4.3%
	I do not know.	132	11.4%	17.3%
	Other	40	3.5%	5.2%
	No Answer	393	33.9%	--
What type of work do you do during the months that you are not working at your current processor?*	Unemployed	463	40.0%	56.5%
	Employee at a different processor	152	13.1%	18.5%
	Crew of a fishing vessel	9	0.8%	1.1%
	Skipper of a fishing vessel	3	0.3%	0.4%
	Other	97	8.4%	11.8%
	Not applicable	115	9.9%	14.0%
	No Answer	338	29.2%	--

Question	Responses	Number of Responses	Average	Standard Deviation
How many members of your household work as processing employees?	Number	649	2.7	2.2
	No Answer	509	--	--

*multiple responses allowed

Source: National Oceanic and Atmospheric Administration 2015

Table 112. Kodiak Shore-Based Processor Employee Responses to Selected Questions, AFSC GOA Trawl Fishery Social Survey, 2014 (continued)

Question	Responses	Number of Responses	Percent of Number of Surveys Taken (n=1158)	Percent of Those Who Answered the Question
What percentage of your salary do you send to family members living in the United States?	0%	173	14.9%	26.1%
	1-25%	181	15.6%	27.3%
	26-50%	137	11.8%	20.6%
	51-75%	103	8.9%	15.5%
	76-100%	70	6.0%	10.5%
	No Answer	494	42.7%	--
What percentage of your salary do you send to family members that currently live in another country?	0%	157	13.6%	21.9%
	1-25%	246	21.2%	34.3%
	26-50%	176	15.2%	24.5%
	51-75%	100	8.6%	13.9%
	76-100%	38	3.3%	5.3%
	No Answer	441	38.1%	--

Question	Responses	Number of Responses	Average	Standard Deviation
How many people do you support financially with the money you earn as a processing employee?	Number	786	3.7	2.8
	No Answer	372	--	--

Source: National Oceanic and Atmospheric Administration 2015

Attachment 5: Demographic Information by Job Category for Ten Amendment 80 BSAI Groundfish Trawl Catcher Processors Owned by Four Seattle MSA-Based Firms, 2014

Table 113. Demographic Information by Job Category for Ten Amendment 80 BSAI Groundfish Trawl Catcher Processors Owned by Five Seattle MSA-Based Firms, 2014

Job Categories	Total Employees	Non-Hispanic or Latino Employees (by Race)						Hispanic or Latino Employees (any Race)	Total Minority Employees*	
		White	Black or African American	Native Hawaiian or other Pacific Islander	Asian	American Indian or Alaska Native	Other Race or Two or More Races		Number	Percent
Captains	31	31	0	0	0	0	0	0	0	0.0%
Mates and deck crew/purser	147	71	1	36	13	0	3	23	76	51.7%
Engineers	86	65	2	4	4	1	0	10	21	24.4%
Factory foreman/quality control	94	24	3	29	13	0	4	21	70	74.5%
Processing labor/galley crew/cleaning	776	189	89	153	69	1	16	259	587	75.6%
Cook	50	23	4	5	2	1	0	15	27	54.0%
Total	1,184	403	99	227	101	3	23	328	781	66.0%

*Note: Total minority consists of all individuals except those self-identified as being both White and non-Hispanic or Latino.
Source: Industry-supplied spreadsheet generated from 2014 EEOC data, in AECOM 2016.

Attachment 6: Indirect Impacts on Subsistence Activities Other than Direct Use of Halibut or Chinook Salmon

Overview

As noted in Section 6.2.4, beyond direct use of halibut as a subsistence resource, GOA halibut PSC limit revision options under Alternative 2 could have impacts on other subsistence pursuits (as could GOA Chinook salmon PSC limit revision options under Alternative 2). These types of impacts fall into two main categories:

- Impacts to other subsistence pursuits as a result of loss of income from the commercial groundfish fishery under the proposed action alternatives (and/or the commercial halibut fishery under the no-action alternative). This income could be used to purchase fuel, vehicles, and other subsistence-related gear, or otherwise offset expenses required to engage in a range of subsistence pursuits.

- Impacts to other subsistence pursuits as a result of the loss of opportunity to use commercial fishing gear and vessels for subsistence pursuits. This would result from vessels not being ready to go as a result of being prepared for commercial fishing or from the simultaneous harvest of fish and game resources during commercial fishing forays where these assets are used in such a manner that commercial and subsistence catches are jointly produced, based on shared use of fixed and variable inputs.

These two main categories are discussed in turn below.

Impacts Related to Loss of Income

With regard to the first type of potential impact, loss of income resulting in funds not being available for subsistence pursuits, this is a very complex issue. Among the factors involved:

- The relationship between loss of income to specific subsistence outcomes is not entirely straightforward. Clearly, income is required for contemporary subsistence pursuits and a loss of income could (and would) decrease subsistence efforts if the loss of income were of a sufficient magnitude across the groups that pool resources (e.g., extended families or entire communities in some cases) or solely engage in subsistence harvests or sharing. However, factors that influence participation in subsistence activities are many and complex. An increase of income may result in a decrease in subsistence activity (e.g., if the source of the income requires a time commitment away from subsistence pursuits) or an increase in subsistence activity (e.g., if the income is used to increase the efficiency of subsistence pursuits that are undertaken). A decrease in income may decrease subsistence involvement (e.g., if it is more difficult to afford fuel for vessels used for subsistence) or increase subsistence involvement (e.g., if subsistence represents a more attractive alternate activity to income producing activities). This type of analytic difficulty in assessing the indirect subsistence outcomes of alternatives that may impact income—i.e., there is not a linear relationship between income and subsistence—is further discussed below.

- Previous field experience would indicate that subsistence strategies are, at least in part, flexible in nature and are readily adapted to the level of cash flow available. For example, when cash is relatively plentiful, subsistence activities may take place over a wider geographic area as new areas are explored for what may be marginal returns, but when cash becomes less available, subsistence is pursued with a more economic strategy, with the activity becoming more focused and cash efficient. It is also important to note that if commercial fishing time goes down, it is not unlikely that subsistence activities will increase, because the relative importance of subsistence in the household economy (e.g., supplying food for the table) will increase.

- Income specifically contributed by groundfish, halibut, and Chinook salmon pursuits may be a larger or smaller proportion of the funds used for subsistence by individuals or families.

- Loss of income can impact everyone associated with the relevant fisheries, and people associated with the fisheries live in communities ranging across Alaska and the Pacific Northwest. Of the income that is lost to individuals who live in communities where subsistence is pursued, income may or may not be used for subsistence expenses.

- Income associated with the relevant fisheries can derive from direct participation (e.g., employment), investment (e.g., vessel or processor ownership), and/or control of quota (e.g., lease-related revenues).

Impacts Related to Loss of Joint Production Opportunities

The second type of potential impact, loss of opportunity for joint production, applies to groundfish communities with direct participation in the fishery (i.e., only vessels that currently participate in the commercial fishery can be used for joint production) under the proposed action alternatives and halibut communities under the no-action alternative. Below are some general points about the vessels involved, followed by points about the communities involved.

- Not all vessels in either relevant commercial fishery are used for subsistence in addition to commercial fishing.

- Depending on the community involved, a greater or lesser proportion of the locally active fleet engaged in the commercial groundfish fishery, the commercial halibut fishery, and/or the commercial Chinook salmon fishery is a non-resident fleet.

- Joint production can occur in at least two fundamentally different ways: subsistence fish can be retained during what are otherwise commercial trips, or separate trips may be taken that focus on subsistence.
- As a general rule, trips specifically dedicated to subsistence are uneconomic for the larger catcher vessels engaged in the GOA trawl fishery. Larger vessels also tend to fish farther away from the community of residence of owner, skipper, and crew; therefore, subsistence use is not practical even during what could otherwise be combined commercial/subsistence trips. For the largest catcher vessels participating in the fishery, there is no indication of any subsistence utilization in any form. (For the large vessels that are based in communities were subsistence does take place, dedicated

subsistence trips for fishing may be unusual, but it is known from field interviews that sometimes larger vessels are used to facilitate shore-based hunting trips with several persons going at once.)

- Smaller vessels are most likely to be involved in joint production.

- The proportion of the total subsistence production for individual communities that results from joint production from vessels during the GOA trawl fishery is unknown, but as a general rule, the smaller vessel classes are less likely to be narrowly specialized than the larger vessels. All of the smaller class vessels that engage in the GOA trawl fishery, particularly in the western GOA, are also involved in some combination of (or all of) the salmon, halibut, sablefish, and herring fisheries. Joint production opportunities would presumably still exist during pursuit of fisheries other than those potentially altered or reduced by the proposed alternatives or options. This is true both for the vessels engaged in the GOA trawl fishery, as well as for other vessels in the community that are not engaged in the GOA trawl fishery. As most, if not all, vessels are going to be directly engaged in at least one commercial fishery, the vessel will have had its annual maintenance (fixed costs) taken care of regardless. Variable costs of subsistence may increase if vessels have to make more dedicated subsistence trips to achieve desired catch levels.

- For those small vessels engaging in other fisheries in addition to the GOA trawl fishery, the time of the year that the vessel would be available for joint production may decrease if the reduction of the commercial GOA trawl fishery were of a sufficient magnitude. For example, if a vessel owner decided not to prepare the vessel for pursuit of Pacific early in the year, but rather waited to get the boat ready for salmon in May, there may be subsistence opportunities forgone in the period the vessel was not available. Similarly, some vessel owners may put their vessels to bed for the winter sooner than they otherwise would have, such that other joint production subsistence opportunities are forgone at the end of the year.

- In practical terms, joint production opportunities vary by gear type as well as vessel size. Although quantitative data are slim, knowledge of the industry would suggest that less subsistence takes place using trawl vessels compared to vessels of other gear types, particularly in the central GOA.

- Previous field observations and discussions would indicate that almost all commercial vessel owners resident in communities where subsistence takes place also own at least one skiff from which they can engage in subsistence pursuits, so even if the larger commercial vessel is not available for any number of reasons, it will not mean the complete discontinuation of subsistence efforts. Even if a commercial vessel owner does not individually own a skiff, it is a truism of village life that there will almost always be other vessels owned by sons, fathers, brothers, other kin, or neighbors than can be borrowed. Previous field observations would indicate that different individuals look at the balance between commercial and subsistence catches during times of scarcity or forced decision making in very different ways. From one point of view, if the fishing is poor, the vessel owner should direct effort to the greatest extent possible toward the commercial catch to get at least some economic return out of a scarce resource for the family or household economy. From the other point of view, if conditions are bad, subsistence fishing should be accomplished first, because subsistence takes care of the basic need to put food on the table in the most direct way

possible. Clearly both points of view are held, both strategies are pursued by different individuals, and both strategies can be pursued by the same individual at different times, which is illustrative of another dimension of the complex relationship between commercial and subsistence pursuits.

- As noted earlier, factors involved in whether individuals engage in subsistence pursuits are multiple and complex, and this applies to vessels as well. Some data from ADFG suggest that, in at least some instances, level of engagement in subsistence activities declines when individuals are engaged in commercial pursuits. Therefore, it may be the case for at least some individuals that if their commercial GOA trawl activity declines, their direct participation in subsistence activities may increase. Field interviews and other studies (Wolfe et al. 2010; see also Wolfe & Walker 1987) suggest that, in other cases, households that are the most economically successful in a given community are considered "super-households" and are often among the highest subsistence producers, sharing their subsistence resources with other households.[81] This likely results from these individuals having access to more income to purchase better or more efficient equipment (and to be able to afford to engage in activities that require cash outlay for longer periods of time), and the flexibility of schedule that often comes with higher paying employment, among other individual or personal factors. In sum, the factors leading to subsistence participation are many and even appear to be contradictory in some cases.

In summary, the indirect impact of the alternatives on subsistence is difficult to assess for the reasons discussed in this attachment. In general, however, a loss of income that would have been otherwise used to underwrite subsistence pursuits may influence subsistence activities in a wider range of communities, while joint production impacts are likely to be concentrated among owners of relatively small vessels in a limited number of communities.

References:

Wolfe RJ, Scott CL, Simeone WE, Utermohle CJ, Pete MC. 2010. The "super-household" in Alaska Native subsistence economies. National Science Foundation, Washington, D.C.

Wolfe RJ, Walker RJ. 1987. Subsistence economies in Alaska: productivity, geography, and development impacts. Arctic Anthropology 24:56–81.

[81] This general point is also developed on the ADF&G website Subsistence FAQ at http://www.adfg.alaska.gov/index.cfm?adfg= subsistence.faqs#QA5.