Economic Impact of the Commercial Halibut Fisheries in Areas 2C and 3A

Prepared for:
The Halibut Coalition

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Juneau
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April 2007

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Executive Summary

The commercial halibut fisheries in Areas 2C and 3A accounted for nearly two-thirds of Alaska's commercial halibut harvest in 2006. These fisheries, in the waters off Southeast Alaska and the central Gulf of Alaska coast, respectively, are part of the annual work of thousands of fishermen and processing workers. They fuel activity in the fishery support sector and beyond.

The Halibut Coalition contracted with the McDowell Group for a study of the economic impact of these fisheries. This work examines regional and local impacts of the fisheries and considers their contribution in a larger context. Study area communities included the City and Borough of Yakutat, Haines, Juneau, Sitka, Petersburg, Wrangell, Ketchikan, Craig, Valdez, Cordova, Seward, Kenai/Soldotna, Homer, and the Kodiak Island Borough.

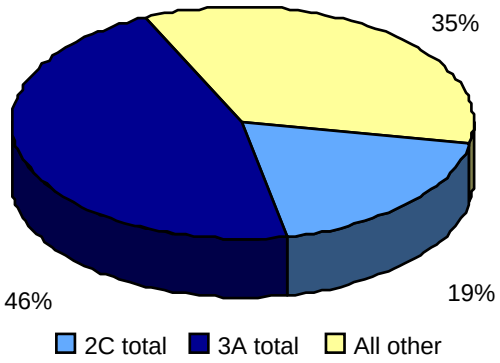
Findings from this research are summarized below.

Landings and Value

Halibut are landed in ports throughout much of coastal Alaska. Ports in Southeast and Southcentral Alaska receive deliveries of halibut harvested in the waters near their communities as well as a small amount of halibut from fisheries farther from home. Fishermen may choose to deliver fish to a far-off port to secure a higher price or because of convenience if transiting from one area of the state to another.

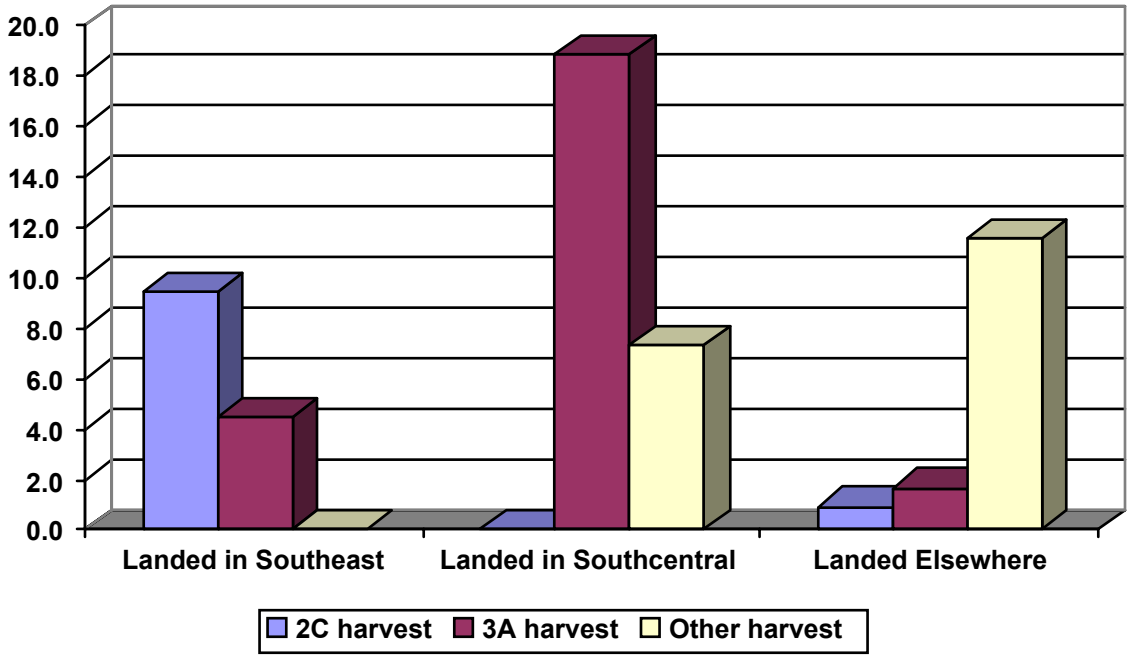
- The commercial halibut harvest for all Alaska fisheries totaled 52.2 million pounds in 2006, of which close to 100 percent was delivered in the state. Halibut landed in Southeast and Southcentral Alaska ports totaled 40 million pounds in 2006, or approximately 80 percent of all landings in Alaska ports.
- Of the halibut landed in Southeast and Southcentral ports, 9.4 million pounds were harvested in Area 2C (Southeastern waters) and 23.2 million pounds in Area 3A (central Gulf of Alaska). Another 7.3 million pounds were harvested in other management areas (this was primarily fish from Area 3B delivered to Kodiak or ports on the Kenai Peninsula).

Figure ES-1
Halibut Harvest in Alaska, by Region, 2006



- More than 90 percent of the halibut harvested in Areas 2C and 3A (a total of 35 million pounds in 2006) is delivered to ports in Southeast Alaska and the Central Gulf coast.
- The estimated ex-vessel value of the 2C and 3A halibut fisheries delivered to ports in Southeast and Southcentral Alaska in 2006 was $83 million.

Figure ES-2
Statewide Halibut Harvest by Landing Location
(millions of pounds)



Regional Employment and Income

Employment and Participation

- The total number of commercial fishermen participating in the Area 2C halibut fishery in 2006 could have been as high as 2,000, including crew and skippers. In the Area 3A fishery, participation could have been as high as 2,600, including crew and skippers' jobs. (This does not include quota holders who do not actually fish.) These estimates are based upon the number of vessels participating in the fishery and assumptions about the number of crew aboard per vessel. They do not consider potential overlap of crew between fishing vessels.

- The only official government estimate of halibut fishery employment is from the Alaska Department of Labor and Workforce Development. ADOLWD estimated 2004 annual average employment in the 2C halibut fishery at 633 jobs and at 529 jobs in Area 3A.[1] These numbers are the 12-month average for 2004 (including months when no fishing occurred). Based on ADOLWD data, during the peak month, employment in the 2C halibut fishery totaled approximately 1,060, while employment in the 3C fishery peaked at approximately 880 fishermen. May, June and August are when halibut fishing employment was at its highest levels.

- Approximately 445 people have taken ownership of quota shares in the Area 2C halibut fishery since the original issuance of quota. This is 33 percent of the total number of people owning quota in Area 2C. This quota was purchased, gifted, or inherited. Approximately 430 individuals have entered the 3A program. This is 24 percent of the individuals owning quota in the fishery. Individuals may hold quota in both areas, so the total number of new entrants into the program will be lower than the sum of these numbers.

Income

As self-employed business people, fishermen's total gross income exceeds the amount of money that they actually retain as personal income. Vessel owners incur expenses on vessel provisioning (fuel, food, bait) and maintenance, gear, insurance, interest payments on loans, and other such items. The amount that is left after these business expenditures is personal income for the vessel owner, quota holder, skipper and crew members. This is comparable to the salary of a person who is an employee rather than self-employed.

- An estimated 75 percent of ex-vessel earnings become personal income for halibut fishery participants. This includes earnings for quota holders, skippers (if different than the quota holder), and crew.

[1] Annual average employment is the 12-month average of the monthly total number of full-time and part-time jobs. This differs from "full time equivalents" (FTE) which is the number of working hours spent by all workers divided by 2,080, or the number of hours in the work year of a person working 40 hours per week. Measurement in terms of annual averages is consistent with ADOLWD reporting for employment in other sectors of the economy.

- Total personal income for vessel owners, quota holders, skippers and crew in Area 2C was an estimated $24 million in 2005. In Area 3A it totaled approximately $58 million.

- Labor income associated with halibut processing totaled an estimated $1.3 million in Area 2C, and $2.5 million in Area 3A. Processing workers are employees, rather than self-employed, so this represents their wage or salary earnings.

Total Economic Output

The total economic activity associated with commercial halibut harvest in Alaska includes the income earned by Alaskan quota owners, skippers and their crew. It also includes the purchases of goods and services in Alaska by resident and non-resident quota owners, skippers and crew. Wages paid to processing plant employees who handle halibut are a component of this total activity, as are the profits for Alaskan owners of plants that process halibut. Also included are in-state purchases of goods and services (including local and state tax payments) made in support of halibut processing operations. Finally, it includes the multiplier effects of this money circulating through the Alaska economy.

While there are no definitive estimates of this total economic activity, or customized Alaska-models with which to predict total economic activity associated with the commercial halibut harvest, it is possible to provide order-of-magnitude estimates. Based on the IMPLAN model (a model widely used to measure or predict the economic impact of industry activity), the total economic "output" of the 2C and 3A halibut fisheries was approximately $210 million in 2005. This includes the value of the halibut after processing as it leaves the state plus all secondary economic activity.

Local Economic Impacts

- Residents of study area communities owned 74 percent of the individual fishing quota (IFQ) in Area 2C and 50 percent in Area 3A. Another 9 percent of the 2C quota and 11 percent of the 3A quota were owned by other Alaska residents.

- The total estimated asset value of the Area 2C and Area 3A quota held by Alaska residents was $454 million in October 2006. This included $146 million in 2C quota owned by study community residents, and $249 million in 3A quota.

- Quota holders in the study area communities typically hold relatively small amounts of quota. In most communities, the majority of resident quota holders hold less than 5,000 pounds of Area 2C and Area 3A quota, combined. Looking beyond the study area, of individuals or corporations holding Area 2C or 3A quota as of the end of 2006, 67 percent owned less than 10,000 pounds of 2C and 3A quota combined. Forty-nine percent owned less than 5,000 pounds, and 27 percent owned less than 1,000 pounds. It is reasonable to assume that for most quota owners halibut is either a part of a more diversified fishing operation, or provides additional income to individuals with other non-fishery employment.

- Essentially every community in Southeast Alaska is linked to the commercial fishing industry. In 2006 halibut deliveries were made to 17 different Southeast Alaska ports. Only extremely small towns and villages or those neighboring other processing ports were excluded from this list. As a result, employment resulting from halibut buying and processing exists throughout the region. Sitka had the most halibut-related processing employment, followed by Juneau and Petersburg. Sitka's halibut-related processing employment was estimated to generate just under $500,000 in labor income in 2006.

- Among the Gulf Coast communities, the highest level of halibut processing employment is in Homer and Seward (from where large volumes of halibut are trucked to lower 48 markets). Fewer ports in the Gulf Coast region had halibut deliveries (seven in 2006) but these ports saw some of the most significant volumes of buying in the state. Although vessels and residents from most Gulf Coast communities participate in the halibut fishery, buying in the region is generally centralized in a handful of major ports. Halibut processing labor in Homer was the greatest in this region, and exceeded an estimated $600,000.

- Halibut contributes to the total fishing portfolio of many fishermen around the state. As in any business, diversification adds strength to fishing businesses, large and small. Commercial halibut fishing plays a role in crew recruitment and retention for other fisheries. For example, in the Gulf of Alaska, wintertime jobs fishing for Pacific cod are often paired with spring halibut longlining jobs, in order to attract the best possible crew for the less lucrative cod seasons.

Incremental Economic Impacts

- Based on 2005 prices (average of $3.08 and $3.07 in Areas 2C and 3A respectively) and the labor income estimates described above, the economic impact of reallocation of 100,000 pounds of halibut would be approximately $360,000 in personal income in Area 2C and $300,000 in Area 3C. In terms of total economic output, the impact would be just under $600,000 in both 2C and 3A.

- In Area 2C, the total economic output per dollar of ex-vessel value ranges over the six-year period considered in this study between $1.80 and $2.00, while for Area 3A, the range is generally between $1.70 and $1.90.

Introduction

Alaska's commercial halibut fishery is conducted in coastal and off-shore waters from Southeast Alaska to Norton Sound. Since 1995, the fishery has been managed under an individual fishing quota (IFQ) system, in which fishermen own the harvest rights to a percentage of each year's total allowable catch. Quota is split into management regions, meaning that a fisherman's quota is associated with a specific geographic area.

The Halibut Coalition contracted with the McDowell Group for a study of the economic impact of the commercial halibut fisheries in Areas 2C and 3A—which generally describe the waters of Southeast Alaska and the central Gulf of Alaska. These fisheries include all the commercially harvested halibut from Alaska's southeastern-most tip to the waters off the southwestern corner of Kodiak Island. This area of ocean is adjacent to dozens of communities with fishery-dependent economies, as well as several with more diverse economies such as Juneau and Anchorage.

This research examines the direct economic impact of halibut harvesting and processing activity on the economies of Southcentral and Southeast Alaska, and estimates additional indirect and induced impacts that result. It also gives particular attention to the economies of the following communities: the City and Borough of Yakutat, Haines, Juneau, Sitka, Petersburg, Wrangell, Ketchikan, Craig, Valdez, Cordova, Seward, Kenai/Soldotna, Homer, and the Kodiak Island Borough.

Methodology and Data Sources

This research involved data collection from a number of state and federal agencies, as well as estimates based on agency data. Data on halibut landings were available through National Marine Fisheries Service, Restricted Access Management (RAM). This data is considered to be very precise, as it is collected electronically at the time of delivery and drives the individual catch accounting upon which the IFQ system is based. Landings reported by NMFS are in net pounds (headed and gutted). RAM also provided data on quota ownership and residence of quota owners. Data presented in this report represent quota holdings (ownership) as of October 30, 2006 unless otherwise noted.

The Alaska Department of Labor and Workforce Development provided estimates of harvesting employment. The Alaska Department of Revenue provided data on tax revenues generated through the harvest and sale of commercial halibut resources.

Various State of Alaska data sources provide insight into the ex-vessel value of the commercial harvest of halibut. The Commercial Fisheries Entry Commission (CFEC) provides estimates of the gross earnings of residents of all Alaska communities as well as out-of-state residents, by fishing permit type. However, this data does not consider the port of delivery. Additionally, the same halibut permit can be used to harvest halibut anywhere in Alaska, so no information can be gleaned

from this data set about the harvest location of the fish—an important consideration in this research, which aims to assess the impacts of the 2C and 3A fisheries, specifically.

The Alaska Department of Fish and Game receives year-end reports from seafood processors and exporters, called the Commercial Operators Annual Report (COAR). These entities report the pounds purchased and price paid (ex-vessel value), again providing a measure of the gross value of the resource. These reports collect data by processing and harvesting region, adding a useful layer of information to the data available from the CFEC. However, caution must be used with COAR data. Fish purchased in one port and shipped to another for processing are sometimes reported in the second. Companies with multiple processing locations may not be precise in distinguishing the activities of their various operations. Plus, year-end data is inherently less precise than data collected in real-time. This quality of this data is limited to the accuracy with which a company's employees fill out the reporting form.

Nevertheless, the COAR data provides the only available data on the processing activities in a given region. Using COAR data in combination with halibut landing data from the National Marine Fisheries Service, the research team estimated the value of the 2C and 3A landings to the regional ports.

The National Marine Fisheries Service recently created an estimated dataset of ex-vessel prices, by harvesting area, from 1992 to 2005. The NMFS estimates are based on Commercial Fishery Entry Commission data. Prices paid for halibut are paid on the net weight of the halibut product (headed and gutted). All price data, including ADF&G COAR data and NMFS data, is presented on the net weight basis.

Estimates of the total value of IFQ holdings in Areas 2C and 3A were produced. These are based on National Marine Fisheries Service ownership data and IFQ broker price estimates published monthly in *Pacific Fishing* magazine.

The research team also developed an economic model to estimate the labor income for halibut harvesters and processors and total economic output related to halibut harvesting and processing. Inputs to this model were drawn from the sources described above. The model links ex-vessel volume and value data, Alaska Department of Labor and Workforce Development (ADOLWD) employment and payroll data, first wholesale value data and other information to generate estimates of annual average and peak season employment estimates, annual labor income, and total output for the 2C and 3A halibut fisheries. Multipliers are drawn from IMPLAN, a widely-used input-output model useful in measuring the direct, indirect and induced economic impact of industry and infrastructure development.

Regional Harvest and Value

Participants in the halibut fisheries in Areas 2C and 3A include fishermen from around Alaska as well as outside of the state. The composition of the commercial fishing fleet is diverse. Some fishermen may participate for just a few days a year, landing fish from skiffs, small vessels, or vessels that primarily target other species. Others may fish 10 months a year or longer on more industrial operations that harvest hundreds of thousands of pounds annually. Some fishermen fish close to, and deliver to, plants in their home ports. Others work a circuit throughout the state, harvesting and landing fish from Southeast to Western Alaska over the course of the fishing season.

Halibut contributes to the total fishing portfolio of many fishermen around the state. As in any business, diversification adds strength to fishing businesses, large and small. In any given year, one fishery may yield poor results for a fishing operation, and another may carry the business.

Fishery management regimes have been trending toward controlled access, where fishermen must have dedicated rights to participate in a given fishery. While these measures can improve the biological sustainability of fish stocks or address other significant challenges in a fishery, they also reduce the fisherman's flexibility to respond to shifts in market conditions and biological availability of fish stocks.

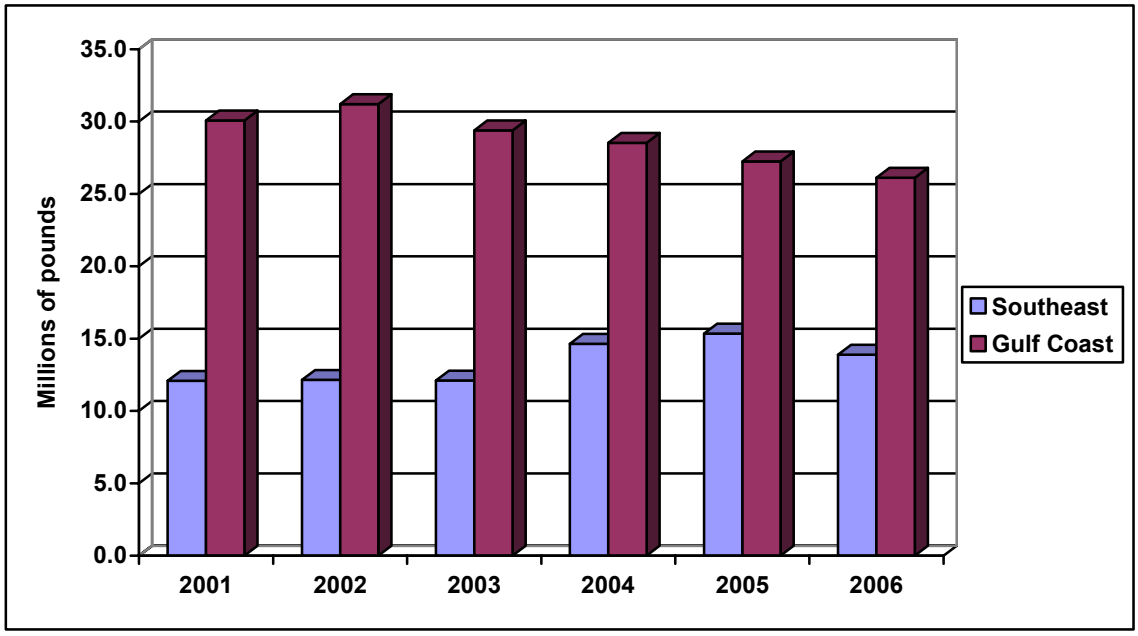
The halibut fishery is structurally different than nearly every other fishery in the state, as it is managed with an individual fishing quota system. Under this system, quota owners are allocated a set portion of the total allowable catch of halibut annually. Harvesters can fish for their quota at any time during the fishing season. This system offers fishing businesses a level of certainty and stability that is otherwise absent from competitive commercial fisheries. The long harvesting season also gives vessels the opportunity to optimize their harvest according to market conditions, and to use the fishery to keep vessels and crew working during periods between competitive fisheries.

It is reasonable to assume that the commercial halibut fishery plays a role in crew recruitment and retention for other fisheries. While individual fisheries are managed discretely, a valuable fishing job may extend through multiple fisheries and seasons, and may combine somewhat less lucrative fishing seasons with those that create more value to crew and owners. For example, in the Gulf of Alaska, wintertime jobs fishing for Pacific cod are often paired with spring halibut longlining jobs, in order to attract the best possible crew for the less lucrative cod seasons. Likewise salmon crew jobs, which significantly decreased in earning opportunity in the late 1990s and early 2000s, are commonly paired with fall halibut fishing jobs as a way to retain crew throughout the salmon season.

Halibut Landings

In 2006, 40 million pounds of halibut were landed in ports in Southeast and Southcentral Alaska. Of the 40 million pounds, 32.6 million pounds was harvested in Areas 2C and 3A (9.4 million and 23.2 million respectively). Less than 10 percent of the halibut harvested in Areas 2C and 3A was delivered outside the two regions, with most of that going to ports in Washington State.

Figure 1
Halibut Delivered to Ports in Southeast and the Central Gulf Coast, 2001 to 2006



Ex-Vessel Value

The ex-vessel value of a fishery is the payment received by seafood harvesters upon sale of their catch to a buyer (commonly a primary processor). The ex-vessel value is a measure of the gross value of the fishery resource. It represents all the income to skippers and crew, plus all the maintenance and operational costs associated with running a fishing business, ranging from food, fuel and bait to the cost of purchasing vessels, quota, gear, insurance, and any other business inputs. The total value of Area 2C and 3A deliveries in the study region was $83 million in 2005.

Table 1
Estimated Ex-vessel Value of 2C and 3A Halibut Delivered, 2001 to 2005

Processing Region*	2001	2002	2003	2004	2005
Yakutat	$2,779,000	$2,247,000	Confidential	$1,119,000	$4,813,000
Juneau/Haines	$9,125,000	$10,180,000	$12,838,000	$16,653,000	$16,298,000
Sitka/Pelican	$6,119,000	$5,813,000	$10,476,000	$11,766,000	$12,299,000
Petersburg/Wrangell	$6,008,000	$6,628,000	$8,791,000	$10,617,000	$11,782,000
Ketchikan/Craig	$2,184,000	$2,455,000	$1,576,000	$3,151,000	$2,371,000
Prince William Sound	$3,446,000	$5,336,000	$15,946,000	$10,222,000	$4,519,000
Lower Cook Inlet	$8,769,000	$8,361,000	$8,373,000	$10,194,000	$12,564,000
Upper Cook Inlet	Confidential	Confidential	$2,143,000	$2,113,000	$3,857,000
Kodiak	$11,227,000	$10,914,000	$13,705,000	$12,720,000	$14,579,000
Totals	**$49,657,000**	**$51,934,000**	**$73,848,000**	**$78,555,000**	**$83,082,000**

*The processing regions include ports in addition to those named. For example, the Juneau/Haines processing region also includes processing activity in regional ports such as Elfin Cove and Excursion Inlet. The boundaries of processing regions are based upon salmon management areas.

Ex-Vessel Prices

The ex-vessel price of a fishery resource is the price per pound paid to fishermen for their landed fishery resource. Alaska Department of Fish and Game COAR data show that ex-vessel values have trended upward over the last decade, with more stable and consistent increases over the last five years with the continued development of the fresh halibut market. (A price shock hit the industry in 1998, perhaps partially due to a 49 percent increase in the Pacific halibut quota over a two-year period. Another significant price decline occurred in late 2001 and early 2002, following the September 11, 2001 attacks.)

Table 2
Halibut Ex-Vessel Price per Pound, 1996 to 2005

Area	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
2C	$2.26	$2.24	$1.39	$1.99	$2.62	$2.11	$2.22	$2.95	$3.04	$3.08
3A	$2.24	$2.16	$1.36	$2.09	$2.60	$2.03	$2.23	$2.89	$3.04	$3.07

Source: National Marine Fisheries Service, Annual Ex-Vessel Prices estimates.

Regional Halibut Fishery Employment and Income

The Alaska halibut resource—like all of the state's commercial fishery resources—provides inputs to the Alaska economy in terms of employment and labor income. Related labor includes harvesting and processing activities in the direct production of the seafood, as well as support service employment.

Precise data on seafood harvesting labor is largely unavailable, as fishing vessel crew and skippers are self-employed and therefore exempt from reporting requirements for unemployment insurance and other employee programs. This data shortage provides significant challenges to researchers and policymakers who attempt to quantify the employment impacts of seafood harvesting activity.

The Alaska Department of Labor and Workforce Development has worked to develop employment estimates in the seafood harvesting sector. Economists at the department have combined a set of assumptions and data to estimate the harvesting manpower necessary to participate in fisheries around the state. The intent of the department's efforts is to generate employment data that is comparable to that for Alaska's other industries.

Participation and Employment

The halibut fishery is open for about ten months per year. Therefore, annual averages necessarily overestimate employment during the months the fishery is closed. Additionally, they underestimate activity during peak harvest months. Typically, between 70 and 80 percent of the statewide halibut harvest is landed in the five-month period from roughly late spring (May) to early fall (September), and the fishery is open from the beginning of March to the middle of November (exact dates vary annually). Table 3 provides ADOLWD estimates for annual processing employment averages and for all of Alaska for 2000 to 2005. Table 4 below presents monthly averages for 2005 and shows the seasonal variation in employment.

Table 3
Statewide Halibut Harvesting
Employment, 12-Month Averages, 2000 to 2005

Year	Annual Average
2000	1,413
2001	1,383
2002	1,356
2003	1,327
2004	1,279
2005	1,242

Source: Alaska Department of Labor and Workforce Development.

Table 4
Statewide Commercial Fisheries
Halibut Employment, by Month, 2005

2005	Employment
January	0
February	3
March	1,045
April	1,434
May	2,346
June	2,372
July	1,853
August	2,310
September	1,634
October	1,299
November	606
December	0
Average	**1,242**

Source: Alaska Department of Labor and Workforce Development.

The ADOLWD fisheries labor work includes halibut harvesting estimates by region. The Southeast and Gulf Coast regions align generally with the boundaries for the 2C and 3A fisheries. However, it is important to note that large volumes of 3B halibut are harvested from the port of Kodiak, which is included in the Gulf Coast estimate. ADOLWD estimates 12-month average employment in the 2C halibut fishery at 633 jobs, and employment in 3A at 529 jobs, in 2004. More recent regional employment estimates are not yet available. Though specific data is not available, peak month employment in 2C in 2004 was likely around 1,200, and approximately 1,000 in 3A.

ADOLWD estimates show that employment has vacillated in the Area 2C fishery, while it has generally trended downward in Area 3A. Employment numbers in 2004 were up from lows in 2002 (2C) and 2003 (3A), but more recent data is not available to assess whether this represented a trend. The relative stability in employment in Area 2C compared to Area 3A may be due in part to differences in regulations between the two fisheries that have resulted in greater consolidation of the 3A fleet.

Table 5
12-Month Average Halibut Harvesting Employment, 2000-2004

Area	2000	2001	2002	2003	2004
Southeast (≈2C)	545	486	465	557	554
Gulf Coast (≈3A)	565	553	539	455	463

Source: Alaska Department of Labor and Workforce Development

There are other data that provide an indication of the number of people earning income from commercial harvest of halibut, but none provides a full measure. The following table presents data on the number of vessels fished in 2C and 3A, and the number of unique quota holders and hired masters associated with those vessels in each region. Data provided by NOAA indicates that 672 vessels were used to fish halibut in Area 2C and 670 vessels in Area 3A. There is overlap between these two fleets so the total number of vessels engaged in fishing in the two regions is less than the sum of the regions.

NOAA data also indicate that 1,001 quota holders and hired skippers fished halibut in Area 2C in 2006, while 1,163 quota holders and hired skippers fished in Area 3A. It is important to note that in Area 3A, quota holders who received quota through initial issuance are able to hire skippers to fish their quota, and need not be on board. Additionally, corporations that hold quota are able to designate a hired skipper, provided the hired skipper is in the employ of the corporation. The total number of quota holders for Area 2C is 1,358, and for Area 3A, 1,793.[2] As the data suggests, a significant number of quota holders did not fish their (typically small) quota holdings. The number of persons who hold quota share in either or both 2C and 3A is 2,849, according to NOAA.

Table 6
Participation in Area 2C and Area 3A Commercial Halibut Fisheries, 2006

	Area 2C	Area 3A
Number of Vessels Fished	672	670
Number of Unique Quota Holders & Hired Masters Associated with Vessels Fished	1,001	1,163
Total Number of Unique Quota Holders	1,358	1,793
Estimated Maximum Participation, Skippers and Crew	2,016	2,680

Source: National Marine Fisheries Service, McDowell Group estimates.

To estimate total active participation in the commercial halibut fishery, it can be assumed that each vessel fishing in 2C operates with a crew of three (including the skipper). Based on that assumption, total participation in the 2C fishery could be as high as 2,016. If the assumption for 3A is an average crew size of four, participation could be as high as 2,680. These estimates ignore the fact that a crewman could work on more than one vessel. These estimates do not include Area 3A quota holders that do not actively fish, either on their own boat or as crew on someone else's boat, but rather hire skippers to fish their quota for them.

New Entrants in the Halibut Fishery

The IFQ system that is the foundation for the current management of the commercial halibut fishery in Alaska was established in 1995. At that time, quota was issued to individuals and corporations with historical participation in the halibut fishery. Under the system, quota shares are transferable. They can be bought, sold, traded, inherited and gifted to qualified recipients. (To be a qualified recipient, an individual must hold a Transfer Eligibility Certificate, issued by the National Marine Fisheries Service.)

[2] Counts of unique quota holders are as of February 27, 2007.

The National Marine Fisheries Service tracks the number of "new" entrants to the halibut fishery who presently hold quota. Anyone who was not issued original quota but who now holds it is considered a "new" entrant, so it is important to note that this group includes individuals who have been involved in the fishery as quota holders for more than a decade, and who may own significant amounts of quota.

As of year-end 2006, 33 percent of the quota holders for Area 2C (approximately 445 people) and 24 percent of the quota holders for Area 3A (approximately 430 people) were new entrants to the halibut quota program—individuals who did not receive quota during the original issue at program inception.[3] Some individuals may own quota in both areas, so the total count of new entrants is likely lower than the sum of these numbers. These people either purchased their quota or received it by gift or inheritance. It is not possible to determine what portion of the total asset value of their individual fishing quota is presently financed.

Income from Halibut Fishing

In the commercial fishing sector, fishermen (including crew) are self-employed. As a result, they are exempt from Alaska's unemployment insurance program and other wage reporting requirements. Fishermen are generally paid based on a percentage of the vessel gross. As self-employed business people, fishermen's total pay may exceed the amount of money that they actually retain as personal income. For vessel owners, expenses such as vessel provisioning and maintenance, gear, insurance, interest payments on loans, and other such items all take away from the gross earnings. For crew, business expenditures on things such as personal gear, work-related travel, training and other necessary items also detract from the total earnings. The amount that is left after these business expenditures is the personal income, and is comparable to the salary of a person who is an employee rather than self-employed.

Though there is wide variability among participants and vessels in the fishery, on average approximately 75 percent of ex-vessel earnings become personal income for participants in the fishery. The remaining 25 percent is spent in support of fishing operations, including purchases of fuel, bait, groceries, vessel and equipment repairs, insurance, taxes, interest payments on loans other expenses. Based on this assumption, personal income (equivalent to payroll in other industries) from the 2C fishery totaled approximately $24 million in 2005. This is an estimate of income to Alaska resident and non-resident quota owners, hired skippers and crew. It does not include personal income or payroll generated in the support sector as a result of purchases of goods and services in support of fishing operations. Based on the same assumptions, personal income generated in the 3A fishery totaled approximately $58 million in 2005.

[3] This excludes a very small number of people who hold catcher-processor shares who did not receive them at original issuance.

Table 7
Personal Income Generated Directly from Commercial Halibut Fisheries in Area 2C

	2000	2001	2002	2003	2004	2005
Harvest (Ex-vessel value)	$21,462,000	$17,239,000	$18,720,000	$24,316,000	$30,670,000	$32,215,000
Direct Personal Income	$16,097,000	$12,929,000	$14,040,000	$18,237,000	$23,002,000	$24,161,000

Table 8
Personal Income Generated Directly from Commercial Halibut Fisheries in Area 3A

	2000	2001	2002	2003	2004	2005
Harvest (Ex-vessel value)	$46,972,000	$42,775,000	$50,309,000	$64,395,000	$74,789,000	$76,913,000
Direct Personal Income	$35,229,000	$32,081,000	$37,732,000	$48,296,000	$56,091,000	$57,685,000

Halibut processing employment data is equally elusive. Very few workers engaged in halibut processing handle only halibut. Employment and payroll related to processing halibut is only one component of plant activity that can include processing of salmon, crab, black cod, groundfish and other species. However, by modeling the labor income generated by halibut processing, it is possible to develop estimates of annual average employment and peak employment.

The following tables provide estimates of processing labor income and employment generated from processing 2C and 3A halibut. The model developed to estimate employment links labor income to the volume of fish landed and employment to labor income. Labor income is estimated to average approximately $0.12 per gross pound in Southeast and $0.10 in the Gulf Coast. Estimated total annual labor income is divided by the average annual wage paid in Alaska's seafood processing sector, based on DOLWD data: $2,651 per month in 2005, or $31,812 annually. Peak employment is calculated with a factor derived from DOLWD monthly halibut commercial fishing employment data (which indicates that annual average employment is approximately 52 percent of peak month employment).

In the following table, employment is presented in terms of annual average and peak month employment. Peak months are typically May, June and August. Employment related to processing halibut harvested in Area 2C averaged 39 workers in 2005, with a peak monthly employment of 75 workers. During the March through November period, monthly employment averaged approximately 52 workers. Approximately $1.3 million in payroll for these workers can be attributed to 2C halibut processing.

Table 9
Labor Income Generated Directly from Processing of Halibut Harvested in Area 2C

	2000	2001	2002	2003	2004	2005
Harvest Volume	8,192,000	8,170,000	8,432,000	8,243,000	10,089,000	10,459,000
Production Volume	7,864,000	7,843,000	8,095,000	7,913,000	9,685,000	10,041,000
Direct Processing Labor Income	$983,000	$980,000	$1,012,000	$989,000	$1,211,000	$1,255,000
Annual Average Employment	31	31	32	31	38	39
Peak Employment	59	59	61	59	73	75

Employment related to processing halibut harvested in Area 3A averaged 79 workers in 2005, with a peak monthly employment of 150 workers. During the March through November period, monthly employment averaged approximately 105 workers. Approximately $2.5 million in payroll for these workers can be attributed to 3A halibut processing.

Table 10
Labor Income Generated Directly from Processing of Halibut Harvested in Area 3A

	2000	2001	2002	2003	2004	2005
Harvest Volume	18,066,000	21,071,000	22,560,000	22,282,000	24,602,000	25,053,000
Production Volume	17,343,000	20,229,000	21,658,000	21,391,000	23,617,000	24,051,000
Direct Processing Labor Income	$1,807,000	$2,107,000	$2,256,000	$2,228,000	$2,460,000	$2,505,000
Annual Average Employment	57	66	71	70	77	79
Peak Employment	108	126	135	134	148	150

Impact of Shifts in Commercial Harvest

In order to gauge the impacts of increases or decreases in the commercial halibut quota in Areas 2C and 3A for such reasons as changes in biomass or resource allocation, the study team estimated the labor income and total output per 100,000 pounds of halibut in each area. In Area 2C, each 100,000 pounds of halibut had an estimated direct labor impact for processors, harvesters and support sector workers of $308,000 in 2005, and created a total output of approximately $594,000. In Area 3A, the estimated labor income per 100,000 pounds was $307,000, with a total output of $590,000.

Another way to interpret these estimates is to consider the total economic impact per dollar of ex-vessel value. Harvesting income is a direct function of ex-vessel value, while processing labor income is not. Therefore, the relationship between ex-vessel value and total output, for example, varies from year to year. As presented in the following table, in Area 2C, the total economic output per dollar of ex-vessel value ranges between $1.80 and $2.00, while for Area 3A, the range is generally between $1.70 and $1.90. Given the uncertainty in some of the assumptions and multipliers driving this analysis, these ranges should be viewed as approximate only.

Table 11
Economic Value per 100,000 Pounds of Halibut, 2000 to 2005

	2000	2001	2002	2003	2004	2005
Area 2C						
Ex-vessel Value	$262,000	$211,000	$222,000	$295,000	$304,000	$308,000
First Wholesale Value	$326,400	$278,400	$295,680	$353,280	$367,680	$398,400
Total Personal Income	$305,000	$252,000	$265,000	$339,000	$349,000	$360,000
Total Economic Output	$487,000	$415,000	$441,000	$527,000	$549,000	$594,000
Output per Ex-vessel Dollar	1.86	1.97	1.99	1.79	1.80	1.93
Area 3A						
Ex-vessel Value	$260,000	$203,000	$223,000	$289,000	$304,000	$307,000
First Wholesale Value	$301,440	$256,320	$279,360	$339,840	$351,360	$395,520
Total Personal Income	$252,000	$201,000	$217,000	$273,000	$288,000	$302,000
Total Economic Output	$450,000	$382,000	$417,000	$507,000	$524,000	$590,000
Output per Ex-vessel Dollar	1.73	1.88	1.87	1.75	1.72	1.92

Commercial Halibut as One Part of a Total Fishing Picture

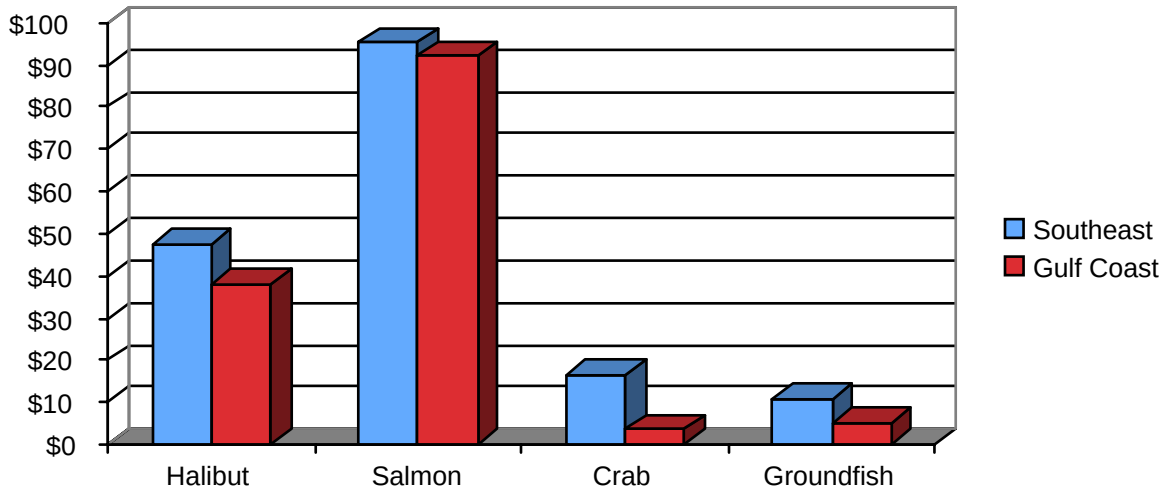
The commercial halibut industry is a component of the larger commercial fishing industry in Alaska, which is second to oil in its impact on the Alaska economy. The ADOLWD reports the seafood industry workforce included more than 27,000 people in 2005. Because fisheries are frequently managed independently—with allocations and resource management handled differently for the halibut IFQ fishery than the Southeast Dungeness fishery, for example—there are important interdependencies across the industry that must be addressed in any consideration of the overall impact of any individual fishery. Many seafood harvesters in Alaska—and nearly all processing companies—include many species of fish or fisheries in their annual portfolio of activities. One vessel may exclusively harvest halibut for ten months a year, while another may harvest shrimp, crab, salmon, herring, halibut, sablefish, and sea urchins during the same period.

Summary of Regional Impacts

Personal income generated directly by commercial harvest of halibut in Area 2C, combined with labor income associated with halibut processing, totaled approximately $25 million in 2005. As some of this money enters the Alaska economy, it creates additional personal income in the support sector. (For example, a portion of the income earned by a commercial fisherman and spent in a marine supply store will reenter the economy as the wages of marine supply store employees.) As a result, total direct and indirect income totaled $37 million.

An analysis of the economic impact of other regional fisheries is beyond the scope of this research. However, the following chart provides a basis for comparison of the scale of the halibut fishery when compared to other key fisheries in the Southeast and Southcentral regions.

Figure 2
Ex-Vessel Value of Commercial Fisheries in Southeast and Gulf Coast Regions, 2006*
(millions of dollars)



Sources: Alaska Department of Fish and Game. Data for salmon, crab and groundfish comes from ADF&G reports on preliminary catch and exvessel values and are based on COAR data. Halibut value information is direct COAR request by McDowell Group.

Notes: All data is preliminary. Data for groundfish is from 2005.

Table 12
Income Generated Directly from Harvesting and Processing of Halibut Harvested in Area 2C

	2000	2001	2002	2003	2004	2005
Direct Harvesting Income	$16,097,000	$12,929,000	$14,040,000	$18,237,000	$23,003,000	$24,161,000
Direct Processing Labor Income	$983,000	$980,000	$1,012,000	$989,000	$1,211,000	$1,255,000
Total Direct Income	$17,080,000	$13,910,000	$15,052,000	$19,226,000	$24,213,000	$25,416,000
Total Direct and Indirect Income	$24,993,000	$20,580,000	$22,352,000	$27,902,000	$35,247,000	$37,674,000

In Area 3A, the combined income generated by commercial halibut harvesting and halibut processing totaled approximately $60 million in 2005. As with the income created in Area 2C, a portion of this income re-circulates in the Alaska economy through the support sector, so that total direct and indirect income was $76 million.

Table 13
Income Generated Directly from Harvesting and Processing of Halibut Harvested in Area 3A

	2000	2001	2002	2003	2004	2005
Direct Harvesting Income	$35,229,000	$32,081,000	$37,732,000	$48,296,000	$56,091,000	$57,685,000
Direct Processing Labor Income	$1,807,000	$2,107,000	$2,256,000	$2,228,000	$2,460,000	$2,505,000
Total Direct Income	$37,035,000	$34,188,000	$39,988,000	$50,524,000	$58,552,000	$60,190,000
Total Direct and Indirect Income	$45,495,000	$42,273,000	$48,894,000	$60,811,000	$70,876,000	$75,590,000

Total economic output is a measure of the direct and indirect effect of a basic economic activity. The direct output of the halibut fishery includes the first wholesale value and the indirect output includes economic effects related to local spending of wages earned by harvesters and processors, and other secondary effects.

Table 14
Total Economic Output of Halibut Harvesting and Processing in Areas 2C and 3A

	2000	2001	2002	2003	2004	2005
Total Output for Area 2C	$39,893,000	$33,937,000	$37,200,000	$43,446,000	$55,346,000	$62,172,000
Total Output for Area 3A	$81,252,000	$80,583,000	$94,032,000	$112,978,000	$128,968,000	$147,842,000
Total for Both Areas	$121,145,000	$114,520,000	$131,232,000	$156,424,000	$184,314,000	$210,014,000

It is beyond the scope of this study to measure the economic output of other commercial fisheries in Alaska; however, earlier research provides an indication of the relative importance of the halibut fishery. In 2001, the Alaska seafood industry created total output of $3 billion, including about $1.1 billion from pollock and approximately $660 million from all salmon fisheries, and about $1.25 billion from all other fisheries combined. The statewide halibut fishery contributed approximately $200 million in total output, or about 7 percent of the total.[4]

[4] "Economic Impact of the Seafood Industry on Alaska's Economy," prepared by Northern Economics, Inc, February 2003.

Local Economic Impact from Commercial Halibut Fisheries

The local economic impact of commercial harvest of halibut from Areas 2C and 3A includes income for local quota holders, jobs and income for local crew and hired skippers, jobs and income for processing plant workers, and tax revenues for local governments.

Fully quantifying the community-level economic impact of the 2C and 3A commercial halibut fisheries is beyond the scope of this study. A broad range of factors affect local economic impact, in addition to volume of fish caught by local quota holders and processed in local plants. This includes the residency of vessel crews and processing plant workers and the size of the local service sector and the value and type of local purchases made in support of fishing and processing operations. These factors determine the "multiplier effects" of the fishery, which include all the direct, indirect and induced economic impacts. While measuring these multiplier effects is beyond the scope of this project, it is possible to provide data that reflects the scale of local-level impacts.

IFQ Ownership by Place of Residence

There are 2,849 unique owners of halibut IFQ in areas 2C and 3A.[5] In area 2C, ownership is concentrated in the study communities, residents of which own 74 percent of all 2C quota.[6] In area 3A, approximately half of the quota is held by study area residents, though an additional 40 percent is owned by individuals who live outside of Alaska (non-residents). Quota ownership changes constantly as owners buy and sell quota. Data presented here is as of October 30, 2006 unless otherwise noted.

Of the study community residents, those in Petersburg own the greatest portion of the 2C quota (25.6 percent), with Sitka residents owning another 17.5 percent. For Area 3A, Kodiak Island Borough residents own the greatest portion of the quota, at 17.0 percent. This is relatively low when compared to area 2C, and reflects the higher proportion of non-resident ownership. ("Owner-on-board" regulations differ between the two management regions, with those in area 2C favoring Alaska resident ownership.)

[5] This count is as of February 27, 2007. Provided by National Marine Fisheries Service through special request.
[6] This is as of October 30, 2006.

Table 15
Halibut Quota Ownership by Residence, October 30, 2006
Study Area Ports, Other Alaska Communities, and Non-Resident

	2006 Pounds		Percent	
Residence	2C	3A	2C	3A
Non-resident	**1,838,287**	**9,977,555**	**17.6%**	**39.6%**
Other AK	**921,819**	**2,682,104**	**8.7%**	**10.6%**
Study area	**7,867,319**	**12,537,126**	**74.0%**	**49.8%**
Sitka	1,862,278	920,532	17.5%	3.7%
Juneau	1,131,744	652,521	10.7%	2.6%
Haines	282,887	72,570	2.7%	<1%
Petersburg	2,722,600	1,753,936	25.6%	7.0%
Wrangell	804,105	83,477	7.6%	<1%
Ketchikan	706,117	130,906	6.6%	<1%
Craig	342,074	-	3.2%	-
Homer	10,882	2,320,822	<1%	9.2%
Seward	233	412,425	<1%	1.6%
Kenai/Soldotna	615	703,796	<1%	2.8%
Valdez	-	105,289	<1%	<1%
Cordova	742	927,552	<1%	3.7%
Yakutat Borough	194	167,891	<1%	0.1%
Kodiak Island Borough	2,848	4,285,408	<1%	17.0%
Unknown address	**2,501**	**3,045**	**<1%**	**<1%**
Totals	**10,629,927**	**25,199,830**		

Source: National Marine Fisheries Service

Of all individuals or corporations holding Area 2C or 3A quota as of the end of 2006, 67 percent owned less than 10,000 pounds of 2C and 3A quota combined. Forty-nine percent owned less than 5,000 pounds, and 27 percent owned less than 1,000 pounds.

Table 16
Residence of Holders of Area 2C and 3A Quota Size of Holdings
December 31, 2006

Quota holding (pounds)	Alaskan	Non-resident	Total
<10,000	71%	50%	67%
<5,000	52%	36%	49%
<1,000	29%	22%	27%

Source: National Marine Fisheries Service

Note: Residents' holdings of quota for Areas 2C and 3A were considered in combination. Other quota holdings were excluded from this analysis.

Looking at study area community residents, quota holders typically hold relatively small amounts of quota. In most communities, the majority of resident quota holders hold less than 5,000 pounds of Area 2C and Area 3A quota, combined. It is reasonable to assume that for most quota owners halibut is either a part of a more diversified fishing operation, or provides additional income to individuals with other non-fishery employment.

Table 17
Number of Owners of Area 2C and Area 3A Quota
and Size of Combined 2C and 3A Holdings, by Percentage
Year End 2006*

	Totals	Number of quota holders With <1,000	with <5,000 pounds	With <10,000 pounds
Southeast				
Yakutat City and Borough	35	17%	63%	91%
Haines	44	20%	43%	64%
Juneau	187	27%	51%	68%
Sitka	271	22%	47%	70%
Petersburg	224	8%	23%	47%
Wrangell	78	19%	54%	74%
Ketchikan	100	36%	56%	69%
Craig	54	22%	52%	85%
Southcentral				
Valdez	23	35%	78%	91%
Cordova	73	25%	41%	73%
Seward	37	30%	59%	73%
Homer	192	17%	37%	60%
Kenai/Soldotna	97	41%	57%	80%
Kodiak Island Borough	249	26%	48%	64%

Source: National Marine Fisheries Service

* Quota holdings change daily as it changes hands between individuals. Data in this report is as of October 30,2006 unless otherwise noted.

Fishermen in the study communities on average fished more than one permit in 2006. Of the total number of fishermen in each community, the percent who fished for halibut ranged from a low of 17 percent in Cordova to a high of 52 percent in Petersburg.

These permit counts support the hypothesis that halibut one of multiple fisheries pursued by numerous fishermen in the study area communities.

Table 18
Fishing Activity by Community, Including Number of Fishermen, Number of Halibut Fishermen, Average Number of Permits per Fisherman, and Percent of Fishermen Fishing Halibut, 2006

	Number of fishermen who fished*	Average number of permits fished	Number of fishermen who fished halibut*	% fishing halibut
Southeast				
Yakutat City and Borough	124	1.5	26	21%
Haines	71	1.4	29	41%
Juneau	200	1.5	93	47%
Sitka	447	1.6	193	43%
Petersburg	377	2.0	197	52%
Wrangell	151	1.7	55	36%
Ketchikan	207	1.6	53	26%
Craig	113	1.7	45	40%
Southcentral				
Valdez	22	1.3	10	45%
Cordova	284	1.3	49	17%
Seward	36	1.5	15	42%
Homer	241	1.1	44	18%
Kenai/Soldotna	324	1.6	147	45%
Kodiak Island Borough	398	1.7	137	34%

Source: Commercial Fisheries Entry Commission

* This is the number of permit holders who fished. A permit holder is typically, but not always, the skipper. This count does not include crew.

As an asset that can be bought and sold, IFQ have a market value. This value can be an important component of the total value of an owner's fishing operation portfolio. As a tradable asset, IFQ can be leveraged to finance additional business or personal investments.

IFQ purchases are also financed, and many IFQ owners have outstanding debt on their IFQ, either from commercial or agency lenders. Information on the portfolios of all lending institutions is not available, but some available data is illustrative. For example, the Alaska Division of Investments had an IFQ loan portfolio of approximately $11.1 million in February 2007, with approximately 120 borrowers. Division staff estimated that about 80 percent of the loan portfolio was for Area 2C and 3A shares, but noted that the estimate was based on staff expertise rather than data.

The National Marine Fisheries Service also operates an IFQ loan program targeted toward new fishery entrants and people with relatively small amounts of quota. NMFS provides $5 million in loans annually. The program has been in place since 1999. NMFS staff indicated that the full available amount has been loaned out each year since program inception, and that most lenders finance the loans for a 25-year term. Therefore, it is reasonable to assume that the agency currently holds close to $40 million in IFQ loans.

Halibut quota values have trended significantly upward since the implementation of the IFQ program. Values differ by area and quota type, but presently trade at about four to five times ex-vessel value. This is a higher ratio than was seen earlier in the IFQ program, when quota traded for about three to four times ex-vessel price. The following estimates of total quota value are based on National Marine Fisheries Service ownership data and IFQ broker price estimates published monthly in *Pacific Fishing* magazine. The prices vary broadly depending on the number of pounds of quota being sold and other regulatory nuances such as vessel class restrictions and whether quota is blocked or unblocked, but generally ranged in 2006 from $15 per pound on the low end to $22 per pound on the high end. It is noteworthy that prices in 2007 have continued to increase, by as much as several dollars.

Table 19
Estimated IFQ Holdings Value, 2006

	2006 Value		Percent	
Residence	**2C**	**3A**	**2C**	**3A**
Non-resident	**$34,145,000**	**$204,457,000**	**17.8%**	**40.9%**
Other AK	**$12,243,000**	**$47,511,000**	**6.3%**	**9.5%**
Study area	**$145,694,000**	**$248,539,000**	**75.8%**	**49.7%**
Sitka	$34,201,000	$17,848,000	17.8%	3.6%
Juneau	$19,998,000	$12,661,000	10.4%	2.5%
Haines	$4,730,000	$1,434,000	2.5%	0.3%
Petersburg	$51,728,000	$36,048,000	26.9%	7.2%
Wrangell	$15,416,000	$1,515,000	8.0%	<1%
Ketchikan	$13,353,000	$2,657,000	7.0%	<1%
Craig	$5,995,000	-	3.1%	<1%
Homer	$182,000	$47,527,000	<1%	9.5%
Seward	$4,000	$8,136,000	<1%	1.6%
Kenai/Soldotna	$9,000	$12,614,000	<1%	2.5%
Valdez	-	$1,862,000	<1%	<1%
Cordova	$16,000	$17,824,000	<1%	3.6%
Yakutat Borough	$3,000	$2,586,000	<1%	<1%
Kodiak Island Borough	$60,000	$85,827,000	<1%	17.2%
Unknown address	**$38,000**	**$47,000**	**<1%**	**<1%**
Totals	**$192,120,000**	**$ 500,553,000**		

Source: McDowell Group estimates from National Marine Fisheries Service data and *Pacific Fishing* quota values.

Landings by Community

Table 2 provides Area 2C and Area 3A landings for 14 coastal communities for the years 1997 through 2006. This data provides a measure of the volume of halibut processed annually in these communities. For some communities the data provides only a partial measure. (For example, Kodiak also processes a significant volume of Area 3B halibut.)

Table 20
Landings of 2C and 3A Halibut in Study Area Communities, 1997 to 2006 (pounds)

Port	Area	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Southeast											
Yakutat	2C	22,818	29,918	19,647	5,644	4,876	3,339	6,693	148	12,639	13,967
	3A	1,186,934	959,744	1,284,624	916,721	1,012,014	832,603	423,158	337,918	1,284,000	1,582,632
Haines	2C	73,358	377,612	384,011	264,572	139,001	114,015	106,886	37,373	18,012	17,233
	3A	14,808	480,205	216,178	107,692	36,087	52,713	43,883	1,180	-	-
Juneau	2C	900,657	1,069,567	1,692,119	1,463,360	1,153,125	1,358,607	1,342,489	1,646,056	1,971,969	1,688,329
	3A	693,159	785,675	1,293,845	1,084,251	1,192,107	1,406,380	1,269,262	1,624,641	1,699,105	1,373,832
Sitka	2C	2,225,036	2,327,557	2,050,557	1,687,900	1,858,087	1,739,736	1,926,184	2,618,741	2,740,406	2,769,523
	3A	1,242,976	1,085,963	739,636	602,574	623,789	509,248	900,099	1,023,649	918,600	1,087,692
Petersburg	2C	2,252,547	2,425,798	2,110,468	1,655,448	2,023,610	1,874,349	1,722,618	2,578,520	3,011,086	2,735,137
	3A	305,859	268,838	194,922	38,414	190,099	319,135	188,072	386,880	380,483	278,448
Wrangell	2C	945,200	851,451	1,166,337	1,047,817	894,499	1,167,173	912,702	1,112,244	1,076,878	1,245,209
	3A	70,626	-	12,269	2,918	3,551	13,249	23,481	117,273	***	103,895
Ketchikan	2C	537,071	456,008	565,436	616,371	615,025	598,897	481,407	548,828	408,782	474,900
	3A	58,081	125,099	10,156	26,500	97,836	11,500	85,741	-	-	-
Craig	2C	490,299	471,776	393,945	217,020	227,001	323,738	338,731	388,357	317,440	329,270
	3A	15,619	9,439	5,810	-	-	-	-	-	-	-
Gulf Coast											
Valdez	2C	183	-	-	-	-	-	-	-	-	-
	3A	86,482	89,755	116,192	43,857	66,056	109,763	81,936	208,427	573,972	584,571
Cordova	2C	-	715	-	1,355				4,123	***	-
	3A	1,310,717	1,163,915	1,443,297	1,051,853	1,388,709	1,324,849	1,498,915	1,492,924	1,546,381	1,389,765
Kenai	2C	-	-	-	-	-	-	-	-	-	-
	3A	216,582	246,542	170,689	153,560	164,527	187,892	233,030	273,282	184,913	138,561
Seward	2C	21,315	21,767	9,167	7,544	1,499	30,051	33,286	31,397	***	-
	3A	3,523,409	3,741,159	5,091,337	3,904,536	4,440,288	5,681,337	5,952,945	6,006,488	5,007,210	5,502,930
Homer	2C	-	313	-	-	-	2,247	-	-	-	-
	3A	4,041,928	6,294,674	5,358,666	3,839,245	5,328,115	5,724,236	5,400,249	6,023,657	6,469,543	6,114,400
Kodiak Island	2C	13,078	100	-	1,325	-	-	-	-	-	-
Borough	3A	7,138,357	5,252,805	5,630,881	4,133,163	3,988,195	3,522,176	3,508,979	4,103,739	4,593,854	5,006,026

*** *Data restricted due to confidentiality limitations.*

Source: National Marine Fisheries Service

Based on the volume of halibut landed in each port, it is possible to estimate labor income related to this local processing activity. The following table provides estimates of annual labor income for 2005 and 2006. In Southeast Alaska, Sitka has the most halibut-related processing employment and labor income, followed by Juneau and Petersburg. Among the Gulf Coast communities, the highest level of halibut processing employment and labor income is in Homer and Seward (from where large volumes of halibut are trucked to Lower 48 markets).

Commercial fishermen's spending in support of their commercial fishing activity and in support of their households also generates economic activity in Alaska's coastal communities. The following table provides annual gross (ex-vessel) earnings for halibut fishermen, by community of residence. This data includes earnings from all management regions, not just 2C and 3A, though most of the quota held by Southeast and Southcentral Alaska residents is in these two areas.

Some of these gross earnings enter the local economy as payroll for local crew, take-home pay for the skipper or quota owner (if someone other than the skipper), and purchases of goods and services such as fuel, food, bait and gear. Halibut-related income might also go to fishing related expenses such as vessel repair, moorage, boat and quota loan payments, etc. The take-home pay of skippers and crew flows through all sectors of the local economy: in stores, gas stations, doctors' offices, as tax payments to local governments, and to other parts of the economy.

It is important to note that not all ex-vessel earnings flow through the hometown of the quota holder. Fuel and supplies are sometimes purchased elsewhere (in other study area communities). Loan payments may go to non-local lenders, vessels repairs may occur in Lower 48 yards and some crew maybe non-residents (with much of their income never entering the local economy).

Table 21
Estimated Gross Earnings from Commercial Halibut Harvest
by Quota Holder's Place of Residence

	2001	2002	2003	2004	2005
Southeast					
Yakutat	*$210,976*	*$231,041*	*$179,124*	$410,839	$389,055
Haines	$421,179	*$514,970*	$699,913	$840,685	$878,173
Juneau	$1,880,927	*$2,608,218*	$3,531,447	$4,556,407	$4,808,497
Sitka	$5,483,303	$6,869,634	*$8,981,767*	*$9,583,595*	$10,393,640
Petersburg	$7,786,260	$8,408,313	$11,227,975	$13,462,133	$14,331,136
Wrangell	$1,672,669	*$1,409,912*	*$1,921,836*	*$2,285,993*	*$2,216,641*
Ketchikan	$1,546,190	$1,549,923	*$1,760,147*	*$2,137,254*	*$2,098,651*
Craig	*$540,234*	$612,441	*$769,201*	*$1,005,860*	*$ 914,251*
Gulf Coast					
Valdez	$87,962	*$127,392*	$227,229	$250,009	$213,269
Cordova	$1,369,925	*$1,001,667*	$2,584,716	$2,822,421	$3,411,002
Seward	$1,772,728	$2,024,992	$2,756,058	$2,799,493	$1,982,336
Kenai/Soldotna	*$738,283*	$1,083,634	$1,276,680	$1,667,520	$1,824,583
Homer	$8,788,833	*$10,567,809*	$14,392,122	$15,606,408	*$12,836,788*
Kodiak Island Borough	$20,522,846	$24,670,460	$32,727,711	$31,361,558	*$ 28,442,733*

Source: Commercial Fisheries Entry Commission

Note: Italicized numbers exclude confidential data. Confidential values resulted when three or fewer fishermen harvested halibut with a given gear type. In most cases in these data, confidentiality constraints were caused by three or fewer fishermen making landings with a halibut jig card. In these cases, excluded values are expected to be minimal, and very small relative to the total harvest by community residents in a given years. In a limited number of cases confidential values resulted from longline harvests of halibut, most frequently in small communities where three or fewer fishermen landed halibut on longline vessels <60 feet in length.

Tax Revenue Generated by Halibut Harvesting

The Alaska Department of Revenue (DOR) collects a fisheries business tax on seafood products processed in Alaska or exported from the state. This tax is levied on the ex-vessel value of the seafood resource and paid by the primary processor or exporter. The tax rate varies depending on the operation, but established shore-based plants or buying operations generally pay a 3 percent tax.

The State of Alaska also shares revenue from the Fisheries Business Tax with communities in which it is collected. The sharing rate varies somewhat depending on the type of local government system in place, but is typically 50 percent of the collected taxes. Revenues reported below are totals collected by the State of Alaska. These revenues will typically have been split between the State and the communities.

Table 22
Fisheries Business Tax Generated by IFQ Halibut Landings, 2003 to 2006

Location	2003	2004	2005	2006
Southeast				
Yakutat	$53,891	$26,355	$2,362	$131,428
Haines	$914	$587	$10,826	$14,036
Juneau	$149,208	$179,029	$231,720	$262,502
Sitka	$148,830	$234,506	$138,934	$351,167
Petersburg	$143,178	$164,397	$265,056	$308,536
Wrangell	$9,148	$10,935	$110,547	$105,695
Ketchikan	$64,481	$62,544	$49,520	$66,085
Craig	-	$18,534	$15,542	$19,297
Gulf Coast				
Valdez	$7,464	$10,098	$21,523	$55,549
Homer	$214,298	$416,419	$102,075	$166,309
Seward	$429,339	$552,526	$505,917	$617,728
Kenai/Soldotna	$11,539	$11,299	$19,589	$15,079
Cordova	$89,973	$113,636	$354,434	$200,987
Kodiak Island Borough	$525,452	$695,815	$761,869	$784,474
Totals	**$1,847,715**	**$2,496,680**	**$2,589,914**	**$3,098,872**

Source: Alaska Department of Revenue, special data request.

As a point of comparison, the total fisheries business tax collected for all species in all of Alaska in 2006 was $32 million.